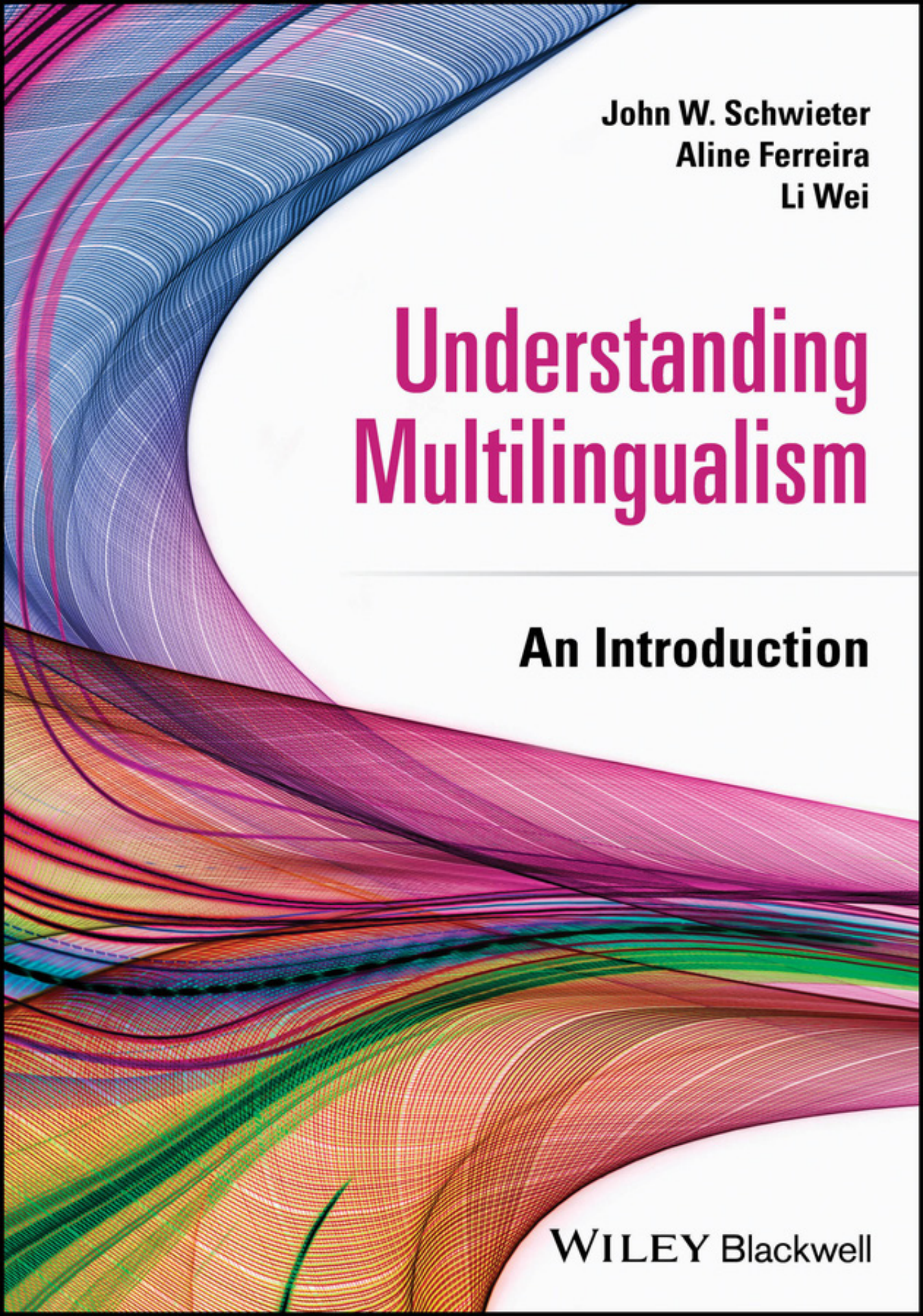




**John W. Schwieter
Aline Ferreira
Li Wei**

Understanding Multilingualism

An Introduction

WILEY Blackwell

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Contents

About the Authors *x*

Preface *xi*

Acknowledgments *xiii*

1 Defining Multilingualism *1*

- 1.1 Introduction *1*
- 1.2 Evolutionary Roots of Language *3*
- 1.3 Theoretical Perspectives of Multilingualism *5*
 - 1.3.1 Linguistic Perspectives *5*
 - 1.3.2 Sociolinguistic Perspectives *6*
 - 1.3.3 Cognitive Perspectives *6*
- 1.4 Various Forms of Multilingualism *8*
 - 1.4.1 Individual Multilingualism *8*
 - 1.4.2 Societal Multilingualism *8*
 - 1.4.3 Transnational Multilingualism *9*
- Summary *10*
- Further Reading *10*
- Study Questions *11*
- References *11*

2 Learning More than One Language *13*

- 2.1 Introduction *13*
- 2.2 Similarities and Differences Between L1 and L2 Acquisition *14*
- 2.3 Linguistic Development of Multiple Languages *15*
 - 2.3.1 Acquisition of L2 Phonology *15*
 - 2.3.2 Acquisition of L2 Morphology *17*
 - 2.3.3 Acquisition of L2 Syntax *17*
 - 2.3.4 Acquisition of L2 Communicative and Pragmatic Competences *20*
- 2.4 Factors Affecting L2 Acquisition *22*
 - 2.4.1 Learning Style *22*
 - 2.4.2 Cross-Linguistic Influences *22*
 - 2.4.3 Age *24*
 - 2.4.4 Language Aptitude *24*
 - 2.4.5 Working Memory Capacity *25*
 - 2.4.6 Gender *25*

2.4.7	Affective Factors	25
2.4.8	Learning Environment	26
2.5	Classroom Pedagogies Used by L2 Educators	27
2.5.1	Early Approaches to L2 Teaching and Learning	27
2.5.2	Communicative Approaches to L2 Teaching	28
2.5.3	Sociocultural Approaches to L2 Teaching	29
2.5.4	Processing Instruction	30
2.5.5	Immersion Programs	31
2.5.6	Technology-Enhanced L2 Teaching	31
	Summary	32
	Further Reading	33
	Study Questions	33
	References	34
3	Psycholinguistic Models of Multilingualism	38
3.1	Introduction	38
3.2	Speech Production Models	39
3.2.1	Foundations from Monolingual Speech Production	39
3.2.1.1	Dell's (1986) Spreading Activation Model	40
3.2.1.2	Levelt's (1989) Modular Speaking Model	41
3.2.2	Developments in Multilingualism	42
3.2.2.1	Kormos' (2006) Bilingual Speech Production Model	42
3.3	Comprehension Models	44
3.3.1	Foundations from Monolingual Comprehension	44
3.3.1.1	Interactive Activation Model	44
3.3.1.2	The TRACE Model	45
3.3.2	Developments in Multilingualism	46
3.3.2.1	Bilingual Interactive Activation Model	46
3.3.2.2	Bilingual Model of Lexical Access	47
3.4	Multilingual Models of Lexical and Conceptual Memory	48
3.4.1	Revised Hierarchical Model	49
3.4.2	Modified Hierarchical Model	50
3.5	Multilingual Models of Language Control	50
3.5.1	Inhibitory Control Model	51
3.5.2	Adaptive Control Hypothesis	52
3.5.3	Cognitive Effects of Language Switching	53
	Summary	54
	Further Reading	55
	Study Questions	55
	References	55
4	The Multilingual Brain	58
4.1	Introduction	58
4.2	Where Are Languages Located in the Brain?	59
4.3	Multilingualism and Changes to the Brain	60
4.3.1	Neuroplasticity	60
4.3.2	Structural Changes to the Brain	61

4.3.3	Neural Remodeling	62
4.4	What Happens to Languages After Brain Trauma?	63
4.4.1	How Does Damage to Brain Areas Affect Languages?	63
4.4.2	What Premorbid Factors Influence Aphasia in Multilinguals?	63
4.5	Clinical Assessment and Treatment of Aphasia Among Multilinguals	66
4.5.1	How Is Aphasia Diagnosed in Multilingual Patients?	66
4.5.2	Language Rehabilitation in Multilingual Aphasics	67
4.6	Clinical Recovery Patterns of Languages in Multilingual Patients	70
	Summary	71
	Further Reading	72
	Study Questions	72
	References	72
5	Cognitive Effects of Multilingualism	77
5.1	Introduction	77
5.2	Cognitive Processes of Multilingualism: A Look at Inhibitory Control in Language Switching	78
5.3	Multilingualism in Children, Adults, and Older Adults	80
5.3.1	Multilingual Children	80
5.3.2	Multilingual Adults	80
5.3.3	Multilingual Older Adults	81
5.4	Cognitive Effects of Multilingualism Across the Lifespan	82
5.4.1	Children	82
5.4.2	Adults	83
5.4.3	Older Adults	85
	Summary	86
	Further Reading	87
	Study Questions	87
	References	87
6	Multilingualism Across the Lifespan	91
6.1	Introduction	91
6.2	Early Research and Views on Multilingualism	92
6.3	Multilingual Children	94
6.4	Multilingual Adolescents	97
6.5	Multilingual Middle and Older Adults	98
	Summary	100
	Further Reading	100
	Study Questions	100
	References	101
7	Language Attrition and Maintenance	104
7.1	Introduction	104
7.2	Language Attrition	105
7.3	Language Attrition Across Linguistic Domains	107
7.3.1	Sound	107
7.3.2	Vocabulary	108

7.3.3	Grammar	109
7.4	Language Maintenance and Revitalization	110
	Summary	114
	Further Reading	114
	Study Questions	114
	References	115
8	Multilingual Communities and Families in Society	117
8.1	Introduction	117
8.2	Societal Multilingualism	118
8.3	Multilingual Communities	121
8.4	Multilingual Families	125
8.4.1	New Family Structures and Relations: Cross-Linguistic Adoption	130
8.5	Tensions Between Societal Policy and Everyday Lived Experiences of Multilinguals	131
	Summary	132
	Further Reading	132
	Study Questions	132
	References	133
9	Multilingualism in Education	134
9.1	Introduction	134
9.2	Types of Multilingual Education Programs	135
9.3	Medium of Instruction Policies and Multilingual Pedagogies	138
9.4	Multilingual Classroom Interaction	141
9.5	Multilingual Assessment	144
9.6	Multilingual Education and Social Justice	145
	Summary	147
	Further Reading	147
	Study Questions	147
	References	148
10	Digital Technology, Media, and Multilingualism	149
10.1	Introduction	149
10.2	Digital Transformation of Multilingualism: In What Way Has the World Become More Multilingual?	150
10.3	Multilingual Internet	153
10.4	Social Media and Multilingual Interaction	156
10.5	AI, Future Technologies, and Multilingual Futures	163
	Summary	164
	Further Reading	165
	Study Questions	165
	References	165
11	Beyond Multilingualism: Rethinking Practice, Policy, and Theory from a Translingual Perspective	166
11.1	Introduction	166
11.2	From Multi- to Trans-Lingual: More than a Terminological Shift	167

11.3	Examples of Post-Multilingualism	169
11.3.1	<i>Trans-Scripting/Transcribing</i>	169
11.3.2	Kongish	170
11.4	The Nature of Languages from a Translanguaging Perspective	173
11.5	Implications for Education Policy and Practice	176
	Summary	178
	Further Reading	179
	Study Questions	179
	References	179
12	Designing and Conducting Research in Multilingualism	181
12.1	Introduction	181
12.1.1	Defining Research Questions	182
12.1.2	Choosing a Research Design	183
12.1.3	Collecting Data	183
12.1.4	Analyzing Findings	183
12.1.5	Ethical Considerations	184
12.2	Methods Examining Multilingual Development in Classroom Settings	184
12.2.1	Observational Research	184
12.2.2	Quasi-Experimental Research	186
12.2.3	Longitudinal vs. Cross-Sectional Research	186
12.2.4	Action Research	188
12.2.5	Introspective Research	188
12.3	Methods Examining Individual Differences	189
12.4	Methods Examining Corpora of Multilingual Use	190
12.5	Methods Examining Language Processing and the Brain	191
12.5.1	Eyetracking	191
12.5.2	Electroencephalography	192
12.5.3	Brain Imaging	194
12.6	Methods of Sociolinguistic Aspects of Multilingualism	198
12.6.1	Ethnographies	198
12.6.2	Case Studies	199
12.6.3	Interviews: Natural and Controlled Language Elicitation	199
12.7	Methods of Pragmatics Aspects of Multilingualism	200
	Summary	203
	Further Reading	203
	Study Questions	204
	References	204
	Glossary	206
	Index	223

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Preface

Multilingualism as a social phenomenon is by no means new; many communities across the world have been multilingual for generations. Systematic studies of multilingualism, though, have been a more recent development. Research interest in multilingualism was prompted in part by global migration and technological advancement that impacted significantly on travel and learning in particular. As a result, there are more opportunities for users of different languages to get into contact with each other, giving rise to more opportunities for people to become multilingual.

Interdisciplinary, empirical research on multilingualism over the last two decades has enriched our understanding of how multilingualism is defined and assessed, along with how it functions in society, in educational settings, and in the human mind. *Understanding Multilingualism: An Introduction* aims to be an accessible overview of the state-of-the-science of research that addresses various orientations of the field of multilingualism. It is intended to serve as an essential and comprehensive guide to various dimensions of multilingualism, ranging from the cognitive benefits of multilingualism and multilingual development across the lifespan, to multilingual education and intersections with digital technology and media. The book also contains a research designs and methods chapter that prepares readers for empirical work. Throughout the chapters, study activities and questions are included, in addition to further readings that both expand and complement the material covered.

The book is structured into 12 chapters. Chapter 1, *Defining Multilingualism*, describes the different ways multilingualism is defined. Building on historical and contemporary examples of multilingual communities and individuals, the chapter introduces various aspects of multilingualism to be dealt with in the rest of the book.

Chapter 2, *Learning More Than One Language*, provides an overview of how humans come to learn more than one language – both simultaneous language acquisition from birth or very early in life and sequential language acquisition in which one language is learned after another. The chapter looks at multilingual routes to multilingualism along with different processes and outcomes. Taking into account different aspects of multilingualism that will later be discussed in the book, the chapter illustrates the many individual learner differences that have been found to affect multilingual acquisition.

Chapter 3, *Psycholinguistic Models of Multilingualism*, discusses how theoretical models can explain processes involved in multilingual production and comprehension. It also reviews models of lexical and conceptual memory and of language control.

Chapter 4, *The Multilingual Brain*, explores how the brain represents multiple languages. It first looks at neural representations and language areas in the multilingual brain followed by a discussion on multilingualism and brain plasticity. The chapter also details what happens to a multilingual's languages after brain trauma and discusses the language recovery patterns and how these can be affected by rehabilitation in one, some, or all of the languages.

Chapter 5, *Cognitive Effects of Multilingualism*, examines the interaction of different languages in one mind and the effects, both positive and negative, that multilingualism has on human cognition. Topics include code switching, word-to-concept mapping, executive functions, parallel language activation and competition, and the ongoing debate suggesting that multilingualism leads to long-lasting, cognitive benefits.

Chapter 6, *Multilingualism Across the Lifespan*, takes the perspective of language development as a life-long process. Over the lifespan, language use, and contact – and therefore language learning – will be shaped by the communicative setting and activities in interaction between speakers. From this perspective, we ask question: what is the effect of age-related changes in accessibility of linguistic elements and processing speed with regard to multilingual language users, and to what extent are some languages in a multilingual more easily affected than others.

Chapter 7, *Language Attrition and Maintenance*, addresses what happens when there is a loss of language proficiency over time. We discuss several manifestations of language attrition in various linguistic domains (phonological, lexical, grammatical) and examine some of the factors (age, frequency of use, age of arrival) that affect whether languages are lost. We also consider efforts that help to maintain and/or revitalize languages.

Chapter 8, *Multilingual Communities and Families in Society*, turns attention to the social aspects of multilingualism and examines different types of societal multilingualism, different kinds of multilingual community structures, and different family configurations and dynamics. A central focus is on language and social policies regarding multilingualism in society, including the tensions between policies and the everyday lived experiences of multilinguals in communities and families.

Chapter 9, *Multilingualism in Education*, examines how multilingualism plays out in different educational settings. It introduces various types of multilingual education programmes and discusses issues of medium of instruction policies and multilingual pedagogies, multilingual classroom interaction, and multilingual assessment. These are highly contentious and politically charged issues. The chapter also explores the links between multilingual education and social justice.

Chapter 10, *Digital Technology, Media, and Multilingualism*, reviews the emerging trends on how multilingualism is presented in media and digital social media. The chapter also explores how multilingualism is affected by multimodalities that modify our current communicative channels in an increasingly globalized and interconnected world.

Chapter 11, *Beyond Multilingualism: Rethinking Practice, Policy, and Theory from a Translingual Perspective*, builds on the discussions in Chapter 10 and looks at the implications socio-technological changes for multilingualism research. It raises the critical question: is the world entering a post-multilingualism era where the boundaries between named languages are blurred and human communication goes beyond the conventional divides between language and other cognitive and semiotic means? In turn, implications for the way we conceptualize language and human communication/cognition as well as the way we do research on multilingualism are considered.

Chapter 12, *Designing and Conducting Research in Multilingualism*, offers an overview of research designs and methods examining multilingual development in classroom settings, individual differences, corpora of multilingual use, language processing and the brain, and sociolinguistic and pragmatic aspects of multilingualism.

As the world changes, multilingualism will inevitably change in its manifestation. Our understanding of multilingualism will also change. We hope that this belief is reflected in this book, which serves as a comprehensive introduction to the field as it stands now. We also hope that we will be able to keep it up-to-date with future editions as research on multilingualism develops.

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We received detailed feedback from nine peer reviewers of this book. Their comments and suggestions have greatly enhanced the quality of the book. We are also extremely grateful for the endorsements from senior scholars in the field which readers can see on the back cover of the book and online.

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Li Wei wishes to thank all those who contributed to and participated in the module, Bilingualism and Multilingualism, taught as part of the MA in Applied Linguistics, MA in TESOL, and MA in Intercultural Communication, at the Institute of Education, University College London. Their feedback on the teaching material which formed the basis of parts of the book was invaluable.

1

Defining Multilingualism

OBJECTIVES

- Learn about how multilingualism is defined by reading about its characteristics and why it is important.
- Understand the historical context, relevant theories, and key concepts in multilingualism including how the field has evolved over time.
- Read about how theoretical perspectives from linguistic, sociolinguistic, and cognitive frameworks have informed our understanding of multilingualism.
- Explore the variability found in different types of multilingualism (individual multilingualism, societal multilingualism, and transnational multilingualism).

1.1 Introduction

Jerry was an English-speaking monolingual from the United States who had just graduated with an undergraduate degree in business. As a reward for his hard work, Jerry decided to go backpacking in Europe. His journey took him to several countries where he was able to visit important sites that he never dreamed of seeing in person. Jerry also enjoyed the local cuisines and met many new friends in the several hostels where he stayed. When Jerry returned home, he started to reflect on his travel experiences and on all the friends he had made along the way. With the exception of a few students from Australia and England, all of his new friends had spoken English as their second (or third or fourth!) language. This worked out fine for Jerry, who only knew English, but what type of experience would it have been, Jerry wondered, if he had been able to interact with these individuals in *their* languages, or at least a mixture of theirs and his. Would they have shared different stories? Would they have had a “better” or “worse” time? Would the connection they made still be the same? Jerry decided that he would learn a second language, and what better way than to begin practicing it than with some of the new friends he had made while abroad! Jerry knew that they would be pleasantly surprised, and perhaps even feel honoured, to see his interest in their language.

Jerry's story shows us that **multilingualism** forms an important part of today's interconnected world, and understanding the complicated characteristics of multilingualism, while challenging, can be beneficial in a number of ways. Multilingualism can help individuals navigate linguistic diversity, fostering better communication and comprehension in various settings such as academic

and social systems. Multilingualism is often intertwined with cultural richness, by opening up a window into the linguistic aspects that shape and reflect diverse cultures. Moreover, it helps promote more inclusive and informed perspectives. In other words, multilingualism is not just a theoretical concept; it has practical implications in various domains such as education, business, society, politics, and media, among many others.

In this chapter, we will talk about insights and real-world scenarios in which multilingualism plays a vital role in the interconnectedness of languages, cultures, and societies on a global scale. In doing so, we look at how the field of multilingualism has developed through interdisciplinary synergies with other fields such as linguistics, psychology, and sociology. For instance, in linguistics, the dynamic nature of multilingualism can be seen through the various possibilities of conceptual and linguistic restructurings in multilingual minds. The use of multiple languages, or the speaker's **multicompetence**, is related to communicative competence, or the concrete usage of a language, which comprehends "different and typologically distant varieties" (p. 348). In sociolinguistics, multilingualism is viewed as "various forms of social, institutional, and individual ways that we go about using more than one language" (Franceschini 2011, p. 344), including not only official languages but also minoritized languages, sign languages, and dialects. In cognitive psychology, multilingualism has become an important area of investigation since the discovery that the regular use of two or more languages may lead to cognitive benefits not seen in monolinguals (Bialystok et al. 2004). Bialystok et al. (2007) found that multilingualism delays the onset of symptoms of cognitive decline among patients with dementia. In the study, for multilingual patients, dementia symptoms emerged around four years after those observed in monolingual patients. While several studies have found that multilingualism may lead to cognitive benefits not seen in monolingual individuals, others have found contrary evidence. Research is ongoing in this interesting area of inquiry.

As we will see in this chapter, multilingualism is not just a linguistic phenomenon, but it is also deeply intertwined with social and cultural factors. For instance, researchers have shown great interest in describing how language choice reflects identity, community belonging, and power dynamics within multilingual societies. There are also ongoing efforts to identify and design best practices that foster learning outcomes among multilingual learners in educational settings. These efforts often consider the role of the first language in second language learning settings (Ferreira et al. 2016) and can inform the development of effective bilingual education programs and language policies. Furthermore, because of technological advances, understanding multilingual practices is very important in digital media and communication. Accessing and analyzing the diverse linguistic interactions that have been recorded in large databanks called language corpora show us how new patterns and expressions in languages have evolved hand-in-hand with other developments in society, digital technology, and how humans interact in general.

Study Activity 1.1

If you speak more than one language, do you use them (mostly) in different contexts and places? For instance, do you use one language at home and one language at school and work? What are some of the benefits and challenges of living in a multilingual environment? How or where did you learn those languages? At home? At school? By watching movies? On the Internet? If you do not know more than one language, ask someone who does.

1.2 Evolutionary Roots of Language

The skulls of **Neanderthals** suggest that their brains had significantly smaller frontal lobes, areas that are crucial for expressive language and managing higher-level executive functions. This suggests that our ancestors did not have the same degree of biological capacity for language as we do today. In fact, it has been argued that spoken human language may have emerged from simple gestures (Fay et al. 2022), including pointing at things and grunting. As our brain developed, so did our abilities for languages, and over time, those gestures and non-language sounds evolved into more complex articulations and eventually formed a sophisticated and elaborate system of language. The need for communication was crucial for survival and collaboration. To early humans, developing a language must have been like creating a superpower.

Neubauer et al. (2018) argue that by around 300 000 years ago, “*H. sapiens*’ brain size already fell within the range of present-day humans” (p. 1). The human brain consists of three main parts: the cerebrum, brainstem, and cerebellum. The cerebellum is associated with language, working memory, spatial processing, affective processing, and social cognition. The cerebellum grows at the highest rate of all brain parts in the first three months of life, and researchers speculate that this early growth phase may play a crucial role in setting the foundation for the birth of language. The cerebellum has also been associated with “verbal fluency (both semantic and formal) expressive and receptive grammar processing, the ability to identify and correct language mistakes, and writing skills” (Starowicz-Filip et al. 2017, p. 661). The idea of the cerebellum forming a basis of the regulation of cognitive and emotional functions (see Dow 1974) has been supported in several studies examining working memory, learning, executive and visuospatial functions, and emotion regulation. Studies are continuously published to unravel the complexities of early brain development and its capacity to learn and process languages.

Alongside the evolutionary changes of the brain, when humans were developing ways of farming and creating settlements, they began to use livestock and grains for trading. This task required them to keep tabs on what materials were taken in and which ones were traded or sold. Ancient accountants used various shapes of small tokens that were formed out of clay to track everything they had, such as bushels of grain, sheep, and goats. Schmandt-Besserat (2014) states that: “Unlike spoken language, the token system made no use of syntax. ‘Three cones and three ovoids,’ scattered in any way, were to be translated as ‘three baskets of grain, three jars of oil’ ” (p. 1). The fact that the same shapes of tokens were used across an expansive territory in the Near East suggests that tokens, and thus, users of tokens, did not involve phonetics. They worked very well to track numbers, but not for expressing complex or unclear ideas. Nonetheless, they served their purpose. Our human nature drives us toward communication and telling stories, and these processes become more and more complex as our capacity to express them also develops. Schmandt-Besserat argues that “the evolution of writing from tokens to pictography, syllabary, and alphabet illustrates the development of information processing to deal with larger amounts of data in ever greater abstraction” (p. 1). It is believed that writing systems may have been invented in different parts of the world, including Mesoamerica, the Near East, and China.

Around 3500 BCE, Elam (present-day Iran) was under Sumerian domination. Clay tokens, probably representing debts, were stored in envelopes. By pressing the tokens on the envelope, their shape was imprinted on the envelope to be seen from the outside. Some scholars suggest that this practice could represent one of the things that led to written forms of language. Clay artifacts that had impressions of tokens eventually replaced the envelopes. Measures of grain were represented through the impressions. Ideograms were, therefore, created, to represent each concept (e.g. wheat). Pictographs showed up around 3100 BCE, representing plurality with numbers. For instance,

“33 jars of oil” were represented by “the incised pictographic sign ‘jar of oil,’ preceded by three impressed circles and three wedges, the numerical standing, respectively, for ‘10’ and ‘1’ ” (Schmandt-Besserat 2014, p. 1). Phonetic signs were created about 3000 BCE, when “writing shifted from a conceptual framework of real goods to the world of speech sounds” (p. 6). Logograms were created to represent words in a specific tongue when an easy-to-draw picture was associated with a sound close enough to that image. After 2600 BCE, a repertory of around 400 signs had been created to represent various concepts.

Only by about 1500 BCE was the alphabet invented in the ancient Near East. The Proto-Sinaitic or Proto-Canaanite alphabet has 22 letters, and each stood for a single sound, that could be combined in several ways. The Etruscans (modern-day Italy) adopted the Greek alphabet and modified the shape of the letters to some extent. There, the alphabet followed the Roman armies who brought the alphabet to all nations under its empire. Orally, soldiers and officials communicated in Latin, creating a linguistic environment that influenced the local populations. This oral transmission occurred through daily interactions, trade, and the presence of Roman administrators in newly conquered territories. In terms of written language, Latin became the language of administration and governance throughout the Roman Empire (27 BCE–395 CE). Official documents, laws, and inscriptions on public buildings were often written in Latin. The Roman road network, built for military and logistical purposes, facilitated the movement of people and ideas, including the languages they spoke. This facilitated the spread of written materials and the dissemination of Latin as a common language used across a vast territory.

When the Roman Empire crumbled, Latin evolved into the modern romance languages of French, Italian, Portuguese, Romanian, and Spanish, among others. Migration and contact among different groups of humans living in various regions led to the development of unique languages. As societies expanded and interacted with one another, so did their use of more than one language. Today, many regions across the globe have a history of having diverse cultures and civilizations that have long coexisted and interacted in multiple languages. Furthermore, due to trade, colonization, or other reasons, multilingualism is more typical among the world’s population than is monolingualism, with some estimates suggesting that 60% of humans speak two or more languages. This percentage has no doubt gone up due to globalization and advancements in technology, which have facilitated communication and interaction between people from different linguistic backgrounds across the world. This has led to using multiple languages in various contexts, and the selection of a *lingua franca* (i.e. a language that is widely used, many times as a second language, and which carries high prestige, e.g. English). In essence, the linguistic landscape of a region is often shaped by historical, cultural, economic, and political factors that influence the coexistence and usage of multiple languages.

Study Activity 1.2

Can you think of a single word that has the same spelling and/or pronunciation in several languages from the same language family (e.g. Romance languages)? For example, we have *hospital* in Spanish, Portuguese, and Galician; *ospedale* in Italian; and *hôpital* in French. Although the word is not the same in *all* of these Romance languages, are the similarities a coincidence? You probably said “no.” As the Romance languages evolved from Latin, many words retained their original roots, especially in fields like medicine, where Latin terminology had a strong influence. This linguistic similarity is a testament to the historical and linguistic connections among these languages. Try to find another example like *hospital*.

1.3 Theoretical Perspectives of Multilingualism

1.3.1 Linguistic Perspectives

The field of linguistics was revolutionized in the 1950s by the scholar Noam Chomsky, often referred to as the father of modern linguistics. Given that many of Chomsky's theories have psychological and biological foundations, the Chomskyan revolution has led to a partnership between linguistics and psychology (Segalowitz 2001), two fields which had been quite disconnected due to differences in competing theories. In this partnership between linguistics and psychology, **applied linguistics** emerged, an area of research that involves language education, translation, and language policy, among other disciplines. This applied focus brings together insights from linguistics and psychology to address practical challenges.

Nowadays, there has been a growing recognition of the synergy between linguistics and psychology, leading to collaborative efforts and interdisciplinary research. For instance, studies on code-switching and coding mixing have shown how and why we navigate between different languages in a single conversation or even within a sentence. Research has also demonstrated that multilingualism can clearly lead to language interference in which features of one language influence the usage of another (e.g., a “foreign” accent in a second language may reveal an individual's first language). This body of work shows that these effects can manifest themselves in any domain of language, including pronunciation, grammar, vocabulary, and pragmatics. On the other hand, transferring prior knowledge and skills from one language to another can serve as a linguistic toolkit which can be applied across various languages, helping multilingual individuals acquire new ones. This research has implications not just for language acquisition but also for education policies and teaching approaches.

Hirosh and Degani (2018) reviewed recent studies that showed how multilinguals may differ from monolinguals in specific aspects of language learning. For instance, multilinguals tend to perform better than monolinguals in different aspects of the new language, including vocabulary (Kalashnikova et al. 2014), phonology (Antonioni et al. 2015), grammar (Sanz 2000, 2007), and literacy (Kahn-Horwitz et al. 2014). Multilinguals tend to outperform monolinguals in vocabulary acquisition, which suggests that having knowledge of multiple languages might serve as a foundation that facilitates learning new words in another language. The cross-linguistic connections could contribute to a richer and more versatile vocabulary. The advantage extends to phonology. Multilinguals show superior skills in mastering the phonetic nuances of a new language. This might be attributed to their experience in distinguishing and producing a variety of sounds in different languages. Similarly, from a grammatical perspective, multilinguals might be better at awareness of language structure, previously gained from experiences in managing multiple linguistic systems. Furthermore, the ability to navigate different writing systems and linguistic conventions may contribute to enhanced literacy in general. It is not only about reading and writing in one language that is important, but the ability to transfer these skills across multiple languages is also critical.

This body of research examining linguistic domains in multilingualism shows that the field is not only concerned with *using* languages, but that it is also important to study how multilingual experiences *shape* cognitive processes. These findings can have practical implications for language teaching and learning and for our understanding of the interactions between languages and cognition.

1.3.2 Sociolinguistic Perspectives

In the area of sociolinguistics, studies on language variation and identity among multilingual populations demonstrate that the languages we speak are tied to our identities. Multilingual individuals may choose to speak different languages in various social contexts, reflecting aspects of their cultural background, education, or social status. It may not be surprising to hear that multilingual societies often grapple with language policies. Sociolinguists and policy makers analyze how these language issues impact linguistic diversity, education, and access to resources.

Multilinguals often make conscious choices about which language to use in different social situations, and the variety of that language is influenced by the formality of the setting, the people present, or cultural norms. These language choices are a way for individuals to navigate and express their identity within a social context. As pointed out by Ferreira et al. (2019): “multilingual individuals who live within the same national borders use the official language of the country in addition to their own to survive socially and economically” (p. 696). Linguistic adjustments may be even more necessary for a newcomer immigrant, who needs to deal with enculturation and adjust to the norms of a new culture, which include, in some cases, learning a new language. These adjustments are also related to **acculturation** processes, in which “changes in the pattern of affiliation to one of both cultures that results from intergroup contact” (Jia et al. 2017). Ferreira et al. argue that these social and psychological adjustments are made “intrinsically along with language development and competence” (p. 697).

Minority languages in many parts of the world have been historically marginalized. A case in point are Galician and Basque in Spain (Ferreira et al. 2019). Similarly, heritage languages in North America (e.g. Spanish, Chinese, etc.), and Indigenous languages of the Americas (e.g. Navajo, Guaraní, etc.) also face a lack of prestige every day, leading to language loss. The authors explained that, in the case of minority speakers in their own country, such as speakers of Galician and Basque in Spain, “new policies are decisive in keeping languages alive in places where they have a secondary and inferior legal status compared to the language of the majority” (p. 698). Both heritage language speakers and minority language speakers tend to be placed in a similar degree of intolerance when it comes to linguistic diversity. As explained by the authors, this intolerance “was also reflected in the rise of the English-only movement in the United States and the repeal of bilingual education in several states with high numbers of Spanish-speaking immigrants” (pp. 700–701) (see Montrul (2015) for a review).

Multilingualism can foster inclusivity by providing a means for individuals from diverse linguistic backgrounds to engage with and better understand one another. It helps to break down language barriers and to promote a sense of belonging among community members. Each language carries its own cultural nuances and, in multilingual settings, individuals have the opportunity to acquire a wider range of cultural perspectives through meaningful interactions in more than one language.

1.3.3 Cognitive Perspectives

Scholars in psycholinguistics explore the mental processes underlying language use. They investigate how language is processed and represented in the mind, and what cognitive processes facilitate the production and comprehension of language. In psycholinguistics, which directly bridges linguistics and psychology, and is often considered a subfield of both, studies have used sensitive experimental methods to measure behavioral performance (e.g. reaction times and accuracy rates) among other techniques such as electroencephalography (EEG), a non-invasive

measure of the electrical activity of the brain. In the area of neurolinguistics, scholars examine the neural bases of language processing. By utilizing techniques such as neuroimaging, we can understand how the brain processes languages in real-time and how linguistic abilities are represented across neural structures. Researchers in multilingualism employ these same methods and ask similar research questions that examine how one mind or brain processes, represents, and manages multiple languages.

One of the interesting findings arising from research on multilingualism is the notion that the regular use of more than one language may offer cognitive benefits. As explained by Marian and Shook (2012) “to maintain relative balance between two languages, the bilingual brain relies on executive functions, a regulatory system of general cognitive abilities that includes processes such as attention and inhibition” (p. 4). The authors explain that multilinguals tend to perform better on tasks that require conflict management compared to their monolingual counterparts. In a study by Krizman et al. (2012), the authors compared bilingual and monolingual adolescents while listening to the speech syllable [da], and results showed that bilinguals presented “enhanced encoding of the fundamental frequency” (p. 7877). According to the authors, through experience, the “bilingual auditory system becomes highly efficient in automatically processing sound” (p. 7877). Thus, managing multiple languages could potentially enhance cognitive abilities due to the constant need for controlling interference from the language not currently being used. For instance, proficient multilinguals appear to be able to seamlessly code-switch within conversations or even within sentences. Of course, the representation of two languages in one mind can lead to interference effects, which can be notably manifested in all language domains, including pronunciation, grammar, and vocabulary. Understanding the cognitive mechanisms behind these practices sheds light on how the brain navigates and organizes linguistic information.

Results from cognitive studies on multilingualism have practical implications. If we can uncover the specific cognitive advantages that come with certain multilingual backgrounds and practices, this may allow us to draw implications that inform effective language teaching methods. For instance, insights into how bilingual individuals excel in conflict management tasks could be used to develop learning activities that bolster these effects (e.g. language education programs might incorporate tasks that can both enhance executive functions and improve language abilities). Such tasks can help educators and learners to utilize effective language strategies. Furthermore, highlighting the cognitive benefits of managing multiple languages may encourage a more positive attitude toward multilingualism in society, promoting the value of being proficient in more than one language. Finally, and perhaps even more encouraging, is that language learning has the potential to benefit patients with degenerative diseases, a notion that we discussed in Section 1.1. Caregivers, including nursing facilities, should consider incorporating simple language learning tasks into their treatment programs.

The recent acknowledgment of a possible cognitive advantage from learning additional languages could be a game-changer in the fields of linguistics, multilingualism, psychology, and neurology. This area of inquiry fascinates researchers from different fields, precisely because the way our brains handle multiple languages is indeed an intriguing, yet complex topic. It may be the case that for the brain, the constant juggling of multiple languages presents a cognitive workout that strengthens executive functions. By studying these effects, researchers not only can shed light on the practical benefits of being multilingual but they can also delve into the cognitive mechanisms at play. Moreover, the notion of indirect influences, such as more general changes to the cognitive-linguistic system, adds another layer to our understanding of how multilingualism shapes the way our brains process language.

Study Activity 1.3

- How do you think the evolving synergy between linguistics and psychology contributes to our understanding of multilingualism and human cognition?
- What are two possible impacts that multilingualism can have on individuals and societies?

1.4 Various Forms of Multilingualism

1.4.1 Individual Multilingualism

A multilingual, according to Ludi and Py (2009), is an individual “currently practicing two (or more) languages, and able, when necessary, to switch from one language to the other without major difficulty” (p. 158). An individual can have different levels of multilingualism: they can understand other languages better than they can speak them, or they can have similar proficiency levels in all their languages, both in receptive (e.g. listening, reading) and productive (e.g. speaking, writing) abilities. Cenoz (2013) explained how Scandinavians use their respective first languages when communicating with each other, whether it is Swedish, Norwegian, or Danish, as these languages are typologically similar enough to be somewhat mutually intelligible. Similarly, among the border between Portugal and Spain, it is common to see Portuguese and Spanish speakers interacting with one another in their first language, for the same reasons as seen in Scandinavia. “Multilingual speakers use the languages at their disposal as a resource in communication, and as their repertoire is wider, they usually have more resources available than monolingual speakers” (Cenoz 2013, p. 11). They may be able to read a novel in one language, and a technical report in another language, or may exclusively use one language with certain individuals and another language with others. In this sense, “a holistic approach to multilingualism does not look at each ideal native speaker of each of the languages, but at the multilingual person as a whole” (p. 12).

1.4.2 Societal Multilingualism

A situation of societal multilingualism can emerge in a number of ways, with “virtually all of them as a result of cross-cultural contact and social necessity. It can have a long-term existence where – for example – political union has brought different language communities under one roof. It can be less permanent in others, as in situations where patterns of migration and assimilation lead, over time, to language erosion” (Edwards 2022, p. 29). Societal multilingualism may also be a product of formal instruction, or it can happen in home or non-academic settings. In cosmopolitan regions such as the Greater Toronto Area (population 6 372 000 in 2023), most individuals grow up speaking more than one language. For instance, they may speak to one caregiver in Mandarin and the other caregiver in Cantonese, while learning one or more languages at school (e.g. English and French). It is believed that nearly 60% of individuals in the Greater Toronto Area speak at least two languages. This number is even higher in Montreal, where around 70% of individuals are multilingual.

Widespread multilingualism in societies is often linked to immigration in which mobility of populations and language contact bring multilingual people together in the same space. Immigration is a significant factor contributing to multilingualism in places like Toronto, New York City, and Los Angeles. People bring their languages and cultural practices with them, contributing