1 Introduction

The Research Domain of Applied Bilingual Studies

1.1 Defining Bilingual

Question: Who is bilingual?
Answer: Somebody who speaks two languages.

Very simple. Or not? In one respect, knowing two languages, not necessarily to the same degree, can be a criterion for saying that somebody is bilingual. However, a more precise definition is required, since we cannot really claim that an adult English speaker, for instance, who has just embarked on a beginner's course in French is bilingual in the same way as somebody who has been speaking both French and English from birth. We normally think of bilinguals as people with a substantial degree of knowledge and competence in two languages. Finding a proper definition of what 'substantial' means in the context of bilingualism is no small task. A very high level of competence in any two languages, with similar frequency of use in both, is a possible criterion that we can use to qualify a speaker as bilingual. On the other hand, all second-language learners are bilingual to different degrees, so the term 'bilingual' could apply to them as well, probably to more advanced learners rather than those who are just starting to learn a second language (an L2).

In addition, there are different classification systems for bilingualism based on how and when the two languages were acquired: early vs. late, simultaneously vs. consecutively, selectively (e.g. specialised competence related to a professional field) or generally, with or without formal classroom instruction, and so on. In this book the aim is to provide a framework for bilingualism that takes into account all the different types of bilingual speakers that have so far received varying degrees of academic attention. I will consider bilingualism to be a *cline*, comprising a spectrum of linguistic histories of different speakers and their abilities, which are not fixed and constant but rather flexible and malleable both in the short term (e.g. conditioned by different communicative situations) and long term, over the lifespan.

The real challenge for an inclusive approach such as this is to find a way to compare, and contrast, research findings about bilingualism that include very different methodologies, and that report on different language types, speaker types and communicative situation types. For a start, categorising bilinguals into dichotomous groups is somewhat artificial. Speakers may have very different capabilities in the two languages even when they are put in the same category: they may differ substantially with respect to how often and in what contexts they use each of their two languages (e.g. daily vs. a few times a year, at home vs. at work, etc.). Bilingualism changes over the lifespan, and proficiency in a language that was learnt early can diminish or be lost, whilst language proficiency in the weaker language can be enhanced through continuous use. Psycholinguistics has only relatively recently come to appreciate that individual differences must take centre stage in bilingualism research (see Hulstijn, 2018 for a recent inspiring overview).

In some respects, early and late bilinguals exhibit the same linguistic behaviour, but in others, their outputs differ significantly (see Chapter 2 for details). It has been reported that certain cognitive benefits are available to both early and late bilinguals who are very fluent in both languages, but not to those who do not have equal command in their two languages (Luk, De Sa & Bialystok, 2011). It may be the case that in some respects, all bilinguals are similar whereas in others they are quite different. The field of bilingualism research needs to address bilingualism in a more finely grained manner than it has hitherto, and at the same time, offer a more holistic perspective that takes into consideration all the relevant factors that may impact outcomes in bilingual communication. I make an attempt to do this here.

In this book I focus on the more *explanatory side of things* (the why), rather than the descriptive (the what). I draw on the invaluable descriptions in the previous literature and in my own research of what different bilinguals do on different occasions when they use their language(s), and I show how a variety of (sometimes conflicting) insights (Chapter 2) can be incorporated into a unified model of bilingual language processing (Chapter 3) that can help us account for why bilinguals do the different things that they do (Chapter 4). At the same time, we will see the effects of *bilingualism in action*; that is, in normal everyday conversations with other bilinguals or with monolinguals, as well as in more specific types of situations, for example when witnessing events, passing a judgement or employing their linguistic skills as language professionals (Chapters 5 and 6). *Bilingualism in Action* is an *interdisciplinary study of what happens within and across bilingual minds* when they are engaged in different activities that are performed using their languages explicitly or implicitly.

Fortunately for the work presented in this book, bilingualism has been gaining in popularity as a research area within the various disciplines and sub-

disciplines of the language sciences. For instance, research in the area of *applied language typology* (Filipović, 2017a, 2017b) has focused on certain parameters of typological contrast between languages that have *significant real-life consequences*, and on the ways in which different types of bilinguals resolve these contrasts in concrete communicative situations and in different contexts of use (e.g. in translation of suspect narratives or witness memory elicitation; see Filipović, 2019a; Filipović & Hijazo-Gascón, 2018; Hijazo-Gascón, 2019). Psycholinguistic research has always been interested in the ways in which bilinguals remember things *about* their languages; for example, how they process their two languages, and store and retrieve form–meaning mappings in each language. More recently a different type of research on bilingual memory has been gaining pace and prominence, involving the effects of bilingualism on how events are remembered, with empirical studies in autobiographical bilingual memory (see Pavlenko, 2014 for a detailed overview) and bilingual witness memory (Filipović, 2011, 2018, 2019b). These kinds of studies offer us invaluable insights into the role of the particular language in which the memory was created and the role of the language used to access it in later recall. Translation studies have also seen the development of an applied perspective building on their earlier theoretical and more philosophical origins. This applied turn has been driven by empirical research on how interpreting and translating may be affected by the differences between the two languages of a bilingual language professional; by an improved understanding of the different professional and practical circumstances that may affect the process and the product of translation; and by increasing awareness of how translation can impact real-life outcomes, for example in legal and medical contexts (e.g. see Filipović, 2007a, 2019a; Trbojević, 2012).

In other words, *Bilingualism in Action* unifies a number of *cross-cutting theoretical and empirical issues that arise in the study of bilingual communication*. I provide examples from the fields of forensic linguistics, translation and second-language learning and teaching in order to highlight the effects that language contrasts can have on bilingual information exchange. Certain contrasts can have very real practical consequences both for the everyday lives of bilinguals and for the numerous professional contexts in which bilingual interactions feature prominently. The findings presented and discussed here are by no means limited to the areas that are highlighted. In fact, this book is an attempt to bring together theory and empirical findings from many different areas of bilingualism research in order to create a framework that can be used much more broadly in *applied bilingualism research*; thus, it is a study of bilingualism and its concrete effects in different personal and professional environments.

I deliberately do not enter into the debates here on certain important aspects of language processing, such as the differences between language production

and comprehension and the implications of any differences between these two mechanisms for bilingualism, though I do include discussion of examples from both types of study. This is not because I think such analysis is not warranted or relevant – these types of debates have been amongst the fundamental battlegrounds in psycholinguistics for many years – but rather I feel that these discussions do not quite fall within the interdisciplinary remit of this book. When bringing multiple fields together we cannot encompass everything that constitutes each discipline. This is neither necessary, nor indeed possible. We should rather try to combine and integrate those aspects and established findings from each field that help us answer our specific interdisciplinary research questions. In the present case, we want to discover *how any two languages interact in different bilingual minds when bilinguals actively use one or both their languages, and what the real and potential consequences of these interactions may be in different social or communicative contexts*.

1.2 What Unites and What Divides Different Bilinguals

When we look at how different types of bilingual speakers are categorised and defined in various studies, we see very little unanimous agreement. For example, what some researchers classify as early bilingualism others consider to be late bilingualism (see Myers-Scotton, 2006). To make matters more complex, more than one parameter may be considered as significant in this context; for example, age of onset for each language, or age of arrival into the speech community (Bylund, 2011). And then there are so many other factors that affect bilingual development, bilingual linguistic behaviour and the potential cognitive consequences of bilingualism. For example, the level of proficiency in each language is clearly a very significant factor (Abutalebi, Cappa & Perani, 2009) as is language dominance (Silva-Corvalán & Treffers-Daller, 2015).

Finally, with even a fleeting browse through the literature on bilingualism, one is overwhelmed by the number of different and often opposing claims that pervade the field. In some studies, it is the language used for speaking in the experiment that guides bilingual linguistic responses and affects aspects of non-linguistic behaviour, such as the grouping together of events based on perceived similarities among them (e.g. Athanasopoulos et al., 2015). In other studies, it is the overall dominant language of the environment where the bilingual speakers live and work that drives their decision-making, not the language used in the experiment (e.g. Dussias, 2001; Dussias & Sagarra, 2007). There are also studies that show how neither the language spoken in the task nor the language of the living environment guide bilingual linguistic and non-linguistic behaviour; rather, it is some common language pattern shared by both languages that is used by some bilinguals (early and balanced) in the task, regardless of which one is being spoken (e.g. Filipović, 2011; Kersten et al.,

2010; Lai, Rodriguez & Narasimhan, 2014). Numerous different experimental approaches and methods (e.g. self-paced reading, eye-tracking, recognition and recall memory elicitation tasks, similarity judgment triads, etc.) as well different aspects of the lexicon and grammar (colour, gender, tense, aspect, motion constructions, etc.) have been discussed and studied, but no unifying approach has been proposed that can encompass all the different results and outcomes, and contextualise them within a systematic overview of bilingualism and its different manifestations. Crucially, there has been no comprehensive account of what the different studies can tell us about the similarities and differences between different bilinguals. There is also a lack of information about the different linguistic behaviours of one and the same bilingual under different communicative conditions.

Some notable attempts have been made towards accounting for different outputs of different bilinguals. For instance, Pavlenko (2005) provides a clear account of the kinds of cross-linguistic influences that are found in various studies and offers a systematisation of the different outcomes (e.g. with L1 influencing L2, or vice versa, etc.). However, we still need an account that enables us *to predict and explain when and why certain outcomes are more or less likely* based on the different factors that play a role in bilingual acquisition and use.

To this end, I introduce in this book an integrated **multifactor model CASP for Bilingualism** (as proposed in Filipović & Hawkins, 2018) and illustrate how it captures all bilingual linguistic behaviour and enables us to predict, and account for, linguistic behaviours by different bilingual speaker types and in different communicative situations. I show (in Chapter 3) that the underlying bilingual processing mechanisms modelled here are fundamentally the same for all bilinguals, regardless of their respective linguistic backgrounds, histories and abilities. Specifically, levels of proficiency, interlocutor type or communicative situation type may all differ, but the underlying mechanisms of language processing and language use are shared by all speakers and driven by their goal of getting their intended meanings across. The ways in which this is done, and the outputs produced on each occasion, will differ, but this is not because different general mechanisms are at play: rather it is because *the same mechanisms interact differently with one another under different circumstances and contexts of use*. Just as with monolingual exchanges, the ultimate goal of bilingual communication is to understand and be understood.

The different circumstances that affect bilingual linguistic behaviour are created by both internal and external factors. The **internal (variability) factors** are those of *bilingualism within minds*. They condition variability among bilinguals, and involve age of acquisition, proficiency and dominance, which characterise the linguistic profiles of bilingual individuals or groups. The **external (adjustability) factors**, which *calibrate bilingualism across minds*,

are the different conditions under which bilinguals use their languages, to which each bilingual adjusts (monolingual vs. bilingual interactions, formal vs. informal communication, etc.). Internal factors are also termed 'variability factors' within the CASP model of bilingualism (Chapter 3) in order to reflect the nature of these factors: they vary across bilingual groups and consequently classification of those groups varies in accordance with these factors. Some of them (proficiency) can also vary over time for a single speaker. External factors are termed 'adjustability factors' in Filipović and Hawkins (2018) because bilinguals adjust their behaviour to different communicative environments and circumstances. The variability and adjustability factors are interconnected: the ability of bilinguals to adjust their linguistic behaviour to the demands of each communicative situation ultimately depends on their linguistic profiles as characterised by the variability factors.

All of these factors have been discussed extensively in the literature on bilingualism, though variability factors have been studied significantly more than adjustability factors. I provide a succinct overview of the key ideas and empirical findings for both factor types (Chapter 2). The central novelty and advantage of the present approach is its integration of findings from many different studies, which have usually investigated one factor at a time, and their synthesis into a multifactor model that explains how, when and why the different factors interact and what the outcome is likely to be in a particular interaction involving a particular bilingual. The processing mechanisms that bilinguals use can be seen a *complex adaptive system*, ever evolving and constantly in flux (see Chapter 3 for details). This means that a single factor does not govern bilingual behaviour; rather it is *the interplay of multiple factors that sometimes compete and sometimes collaborate* that produces the linguistic outputs that we observe (see Filipović & Hawkins, 2013, 2018).

1.3 Bilinguals in Action: Remembering, Judging, Translating

The reason for this book's focus on bilingual memory, judgments and professional language services as the principal contexts for examining bilinguals in action is not solely because the author's expertise covers these areas. The inherent connection between forensic linguistics, translation and psycholinguistics has only partially been made explicit and described in the literature, and more systematic attention is needed. Psycholinguistic aspects of translation have been researched most notably by de Groot (1997, 2011). Forensic linguistics and translation have been linked together in the discussion of non-native speakers and the law (e.g. Berk-Seligson, 2002 [1990], 2009, 2011; Filipović, 2007a, 2008, 2009, 2010a, 2013a, 2019a; Gibbons, 2003). But forensic linguistics and psycholinguistics have not yet been connected as much as they should be, and there is much potential for

innovative research at the intersection of these two areas. The current lack of interdisciplinary interaction between them may be at least in part because forensic linguistics has mainly focused on themes and methodologies adopted from discourse analysis and sociolinguistics, whilst psycholinguistics favours experimental approaches to the study of language and the mind more generally, methodologies which have not been widely adopted in forensic linguistic research. The author of this book (Filipović, 2010a, 2010b, 2011, 2013b, 2016, 2018, 2019a, 2019b) has been one of the pioneers in bringing forensic linguistics and psycholinguistics closer together, and she has also added translation and language typology to the mix, with the goal of investigating empirically the real-life consequences of language contrasts and translation on witness memory and jury judgment.

Nowadays, we live in bilingual and multilingual societies throughout the world. Indeed, more people are bilingual than monolingual and the behaviour of bilinguals is fundamental to any interdisciplinary research in the language sciences. For example, in contexts relevant for forensic linguistic research, we can note that the chances of having a bilingual witness, victim or a suspect are now greater than ever. The same is true when it comes to the composition of juries in court. Therefore, addressing the practical consequences of bilingualism in authentic interactive situations is of considerable social importance, in addition to enabling us to understand bilingualism better by providing insights into what happens when bilinguals are in action. The current book is a contribution to the knowledge base of both the theory and practice of bilingualism.

1.4 Bilingualism Within and Across Minds: What Is This All About?

Many phenomena discussed in different areas of psycholinguistics and sociolinguistics are actually the product of language contact within minds and across minds, types of contact which need to be brought together under one model of bilingual processing, as proposed and exemplified in this book (Chapter 3). We will see how both psycholinguistic and sociolinguistic factors jointly affect the linguistic outputs of bilinguals and lead them to behave very differently in different contexts. There needs to be a closer co-operation between the vast fields within which bilingualism is studied. As Benmamoun, Montrul and Polinsky (2013a: 11) emphasise:

> It seems to us that psycholinguists studying bilingualism and sociolinguists studying language acquisition and change in ethnic minority communities often look at different populations. The two research communities need to come together to understand the reasons behind their divergent findings.

Psycholinguistics has traditionally been interested in bilingual lexical storage and retrieval (e.g. is the meaning and conceptual content of a certain word shared by the two languages and to what extent: always, sometimes or never?) and in bilingual syntactic processing (e.g. are syntactic representations shared or separate: always, sometimes or never?). More recently, bilingualism has begun to be seen as a vital source of information about language and cognition more generally, for example in the study of cognitive functions such as categorisation and memory (see Bassetti & Cook, 2011; Altarriba & Isurin, 2013; Pavlenko, 2014). Bilingualism has also been explored from numerous sociolinguistic perspectives in studies that have had different foci, for example language change (Heine & Kuteva, 2005; Trudgill, 2010, 2011), code-switching (Silva-Corvalán, 1994, 2014) or code-mixing (Muysken, 2000). It is the findings from these and other similar studies that have been most valuable for the current enterprise, in part because they have made clear what still remains to be done in order to get a fuller picture of bilingualism.

We will also look in some detail at the sociolinguistic factors that modulate the interactions amongst psycholinguistic principles of language processing, and consider how they affect bilingual linguistic outputs. For instance, the processing principle of **efficiency** in bilingual production encourages the use of the same structures in both languages, but how this takes place exactly depends on sociolinguistic factors, such as what the majority language is in a social group and what the social relationships are among the group members (Trudgill, 2010, 2011). We shall see that bilinguals can sometimes 'gain' and sometimes 'lose' grammatical and semantic features in one of their languages, depending on a number of factors (typological features of the two languages involved, linguistic profiles of bilingual individuals and characteristics of the social situations in which bilinguals communicate). Ultimately, these factors will affect the directions in which languages can change as a result of language contact through bilingualism. I shall also discuss examples of how bilingualism leads to language change through time and explain how psycholinguistic and sociolinguistic factors come together within and across bilingual minds to create both short-term and long-term change in one or both of bilinguals' languages (Chapters 3 and 4).

I can summarise the central goals of *Bilingualism in Action* as follows:

1) to provide **a unifying account of bilingualism** informed by a) **typological information** about different languages, b) **psycholinguistic evidence** for language processing mechanisms and principles, and for relevant factors that emerge from a variety of empirical studies and c) **sociolinguistic findings** on the long-term outcomes of bilingual interactions and their impact on language change through time;

2) to explain the **effects of bilingualism in different situations** in which bilingual language use occurs, when bilinguals are in action witnessing and reporting events, making judgements or providing professional language services.

We will transcend the confines of one specific methodology or disciplinary approach, which often blocks a comprehensive view of the problems. In other words, I will offer a 'forest view' that is based on broad, general and unifying patterns in bilingual language processing that emerge from very different studies. We will see that similar kinds of linguistic behaviour have been previously labelled using different terminology, just because they involved different kinds of bilinguals (e.g. simultaneous bilinguals vs. L2 speakers vs. heritage speakers). As mentioned earlier, different bilingual groups can and often do exhibit the same kinds of linguistic behaviour. Athanasopoulos (2011: 29) captures this unfortunate phenomenon in bilingualism research by noting that *the same kinds of outputs may be labelled differently just because different bilinguals were producing them*. This is one of the reasons why I will use more unifying terminology here when I discuss all the different bilingual types and their outputs.

I begin by discussing some past and current trends in bilingualism research in order to illustrate how a common platform needs to be found for the interpretation of different results from different methodological perspectives. Our discussion of previous research is not meant to be exhaustive. In fact, there is a vast body of literature that could have been included but is not because the goal is not to provide the most detailed or definitive summary for each relevant factor separately (for exemplary work of that kind, see De Groot, 2011). Rather, I use some key results and findings in order to make connections across fields that have previously gone unnoticed, which can then be further supported by other research findings, past and future.

I must acknowledge here that there is a recent trend in the literature of talking of multilingualism rather than bilingualism. This is because a growing number of people today speak more than two languages and our field is catching up with this development. For example, the acquisition of a third language (L3) is now a subfield in its own right, and there are conferences dedicated solely to it. However, given the goals of this book, using the term 'multilingualism' gives no added value here and we can readily substitute 'multilingualism' for 'bilingualism' in our discussion, adapting our claims and predictions in line with relevant information about acquisition, proficiency and usage of each language.

This book has seven chapters. After this introductory chapter, I present an overview of bilingualism research in Chapter 2, selective as it must be, adhering to our focus on language processing and language effects on memory, judgement and translation and on the sociolinguistic contexts of bilingual language use. Chapter 3 introduces the new model for bilingual language

processing, the **Complex Adaptive System Principles (CASP) for Bilingualism** (Filipović & Hawkins, 2018), which captures *bilingualism within and across minds* and shows how different principles of bilingual language processing interact, sometimes competing and sometimes collaborating. Chapter 4 offers a detailed discussion of numerous studies on bilingual lexicon(s) and grammar(s) and shows how CASP for Bilingualism helps us explain the different kinds of bilingual linguistic behaviours reported. In Chapter 5, we see what kind of witnesses bilinguals are in a forensic linguistic context, and whether and how their witness reports and memories of events may differ from those of monolinguals. Chapter 6 illustrates what happens when bilinguals are engaging in translating and interpreting. We see here that the context of bilingual communication creates a communicative environment with very specific restrictions, whereby certain aspects of communication are prioritised (sounding natural in each language) over certain others (expressing an exactly equivalent meaning), with potentially substantial consequences in terms of understanding what was actually said in the original vs. the translation. Chapter 7 connects all the discussion strands, summarises the findings and opens pathways for further investigation.

In summary, theory, empirical research and practice in the field of bilingualism all join forces in this book with a goal of finding unifying generalisations in the many different types of bilingual outputs and interactions reported in the increasingly vast literature. In this way we avoid giving an account of bilingualism that is narrow, partial, or overly complicated by a focus on the apparent extreme variability observed in bilingual language processing and use.