

# Chapter 1

## Bilingualism: A Short Introduction

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The words “bilingual” and “bilingualism” have many different meanings depending on the context they are used in. They can include the knowledge and use of two or more languages, the presentation of information in two languages, the need for two languages, the recognition of two or more languages, and so on. Since this book focuses on the psycholinguistics of bilingual adults and children, we will define bilingualism, and indeed multilingualism, as the use of two or more languages (or dialects) in everyday life.

This chapter has several aims. The first is to introduce readers to basic concepts concerning bilingualism and bilinguals so as to help them understand more specialized chapters later in the book. Readers bring with them knowledge of language and cognition but they may know less about bilingualism. Hopefully this chapter will help fill this gap. The second aim is to describe what it is that bilingual participants bring to the studies they take part in. In everyday life, they are “regular bilinguals” with specific language knowledge and language use which they bring to this research as participants. Some of the aspects that will be mentioned are studied specifically or manipulated directly by psycholinguists whilst others simply accompany bilingual participants into the research environment. We need to understand these phenomena so as to be able to make sense of the data that are obtained.

A third aim, which is not restricted to this chapter alone, will be to clarify some misconceptions that surround bilingualism and bilinguals, such as that bilinguals have equal and perfect knowledge of their two or more languages, that they have no accent in any of their languages, that they acquired their languages in childhood, that they are all competent translators, and so on. When it comes to children, we hear that bilingualism will delay their language acquisition, that children will invariably mix their languages, and that being bilingual will have negative effects on their development (see Grosjean, 2010, for a discussion of many of these misconceptions). Some of these will be dispelled in this chapter and others in later chapters.

We will begin with a description of the extent of bilingualism and the reasons that underlie it. Next, we will describe bilinguals in terms of language use and language fluency, and show how these factors can change over time; we will call this the wax and wane of languages. This will be followed by a discussion of the functions of languages, which will revolve around what is now known as the Complementarity Principle. We will then describe what happens when bilinguals are interacting with other bilinguals who share their languages and how this is different from when they are addressing monolinguals; we will do this by means of the language mode concept. We will end with a discussion of biculturalism in bilinguals and the impact it has on bilingual language knowledge and language processing.

## 1.1 The Extent of Bilingualism

Researchers on bilingualism have repeated over the years that half of the world's population, if not more, is bilingual. Unfortunately, there are no clear data for the whole world but it is clear that bilingualism is found in all age groups, in all levels of society, and in most countries. For example, a European Commission report (2006) showed that some 56% of the inhabitants of 25 European countries speak a second language well enough to have a conversation in it. They may not all lead their lives with two or more languages but the percentage gives an idea of how extensive bilingualism can be. In North America, some 35% of the population of Canada is bilingual. The percentage is smaller in the United States (around 18–20%) but this still amounts to some 55 million inhabitants. The proportion of bilinguals is much higher in other parts of the world such as Asia and Africa where it is normal to know and use several languages in one's everyday life.

How can we explain the extent of bilingualism? First, there are many more languages (some 7000 according to Gordon, 2005) than there are countries (193 in 2011). Some countries house numerous languages and this leads to language contact between the inhabitants, and hence bilingualism. For example, there are 516 languages in Nigeria, 427 in India, 200 in Brazil, and so on. Most such countries have one or two languages of communication (*lingua francas*) which people use along with their more local language, hence the presence of bi- or multilingualism. A second reason, which goes back to the origins of mankind, is that people have always traveled for trade, commerce, business, employment, religion, politics, conflicts, and so on. The populations of many countries today are the result of immigration – examples are the United States, Canada, Australia, and many South American nations. Other countries, which witnessed the emigration of its populations some while back, are now seeing the influx of new immigrants. In the majority of cases, migrants acquire the language of the host country and hence become bilingual; there are also many cases where the original inhabitants adopt the new language, such as with American Indians in North America.

Another important reason for the extent of bilingualism is education and culture. Many students pursue their studies in a region or country with a different language

to their own and hence become bilingual. Other events such as intermarriage or professional opportunities – diplomacy, business, foreign journalism, language teaching, and so on – lead to the development of language contact. The phenomenon is far more frequent than one imagines at first and it is only natural, therefore, that the language sciences have given bilingual studies much more room in recent years.

## 1.2 Describing Bilinguals

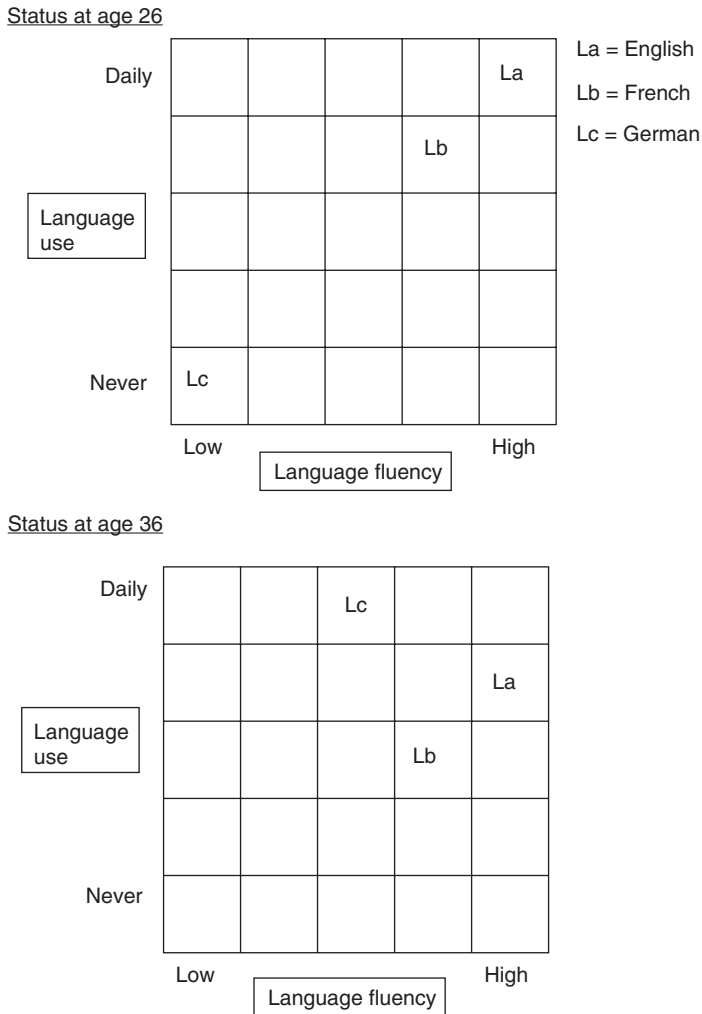
In this part, we will first examine two important defining factors of bilingualism – language fluency and language use – and we will then observe how the languages of bilinguals can wax and wane over time.

### 1.2.1 Language fluency and language use

A common misconception is that bilinguals master two languages fluently. Some will then add that bilinguals do not have an accent in either language and others will propose that they must have learned their languages in childhood. In a sense, bilinguals are seen as two monolinguals in one person. In fact, the majority of bilinguals do not have equal fluency in their languages, many have an accent in at least one of their languages, and many acquired their other language(s) when they were adolescents or adults. As we will see, bilinguals use their languages for different purposes, in different domains of life, to accomplish different things. Their level of fluency in a language depends on their need for that language. Hence many bilinguals are more fluent in a given language, and some cannot read or write one of their languages.

To get around the problem of fluency as a defining criterion (how fluent does one have to be in one's languages to be bilingual?), many researchers, starting with Weinreich (1968) and Mackey (2000), have put the stress on language use as the defining factor. This explains the definition given at the beginning of this chapter: bilingualism is the use of two or more languages (or dialects) in everyday life. Note that this definition includes dialects, and encompasses two or more languages (covering trilingualism, quadrilingualism, etc.). This definition accounts for many more speakers of languages than one based on fluency alone – especially if balanced fluency in the two languages is required – and hence is more realistic.

This said, it is important to also take into account the level of fluency in the bilinguals' different languages (and language skills), whatever that level may be. To do so, the grid approach that this author has developed can be helpful. Figure 1.1 presents the bilingualism of a person (MC) at two moments in time: at age 26 and at age 36. Language use is presented along the vertical axis of each grid (Never used to Daily use) and language fluency along the horizontal axis (Low fluency to High fluency).



**Figure 1.1:** Describing a bilingual in terms of language use and language fluency at two moments in time: age 26 and age 36.

We see in the top grid that MC's most used and most fluent language at age 26 was La (English). His other language, Lb (French), was used on a regular basis although slightly less frequently than La; he was also slightly less fluent in it. MC also had some knowledge of a third language he learned at school (Lc; German) but he never used it. Hence, MC was bilingual in English and French, with a slight dominance in English, and had some knowledge of another language. This is frequent in bilinguals who, in addition to the languages they use on a regular basis, know one or two other languages which they employ more rarely. (It should be noted that we use the symbols La, Lb, and Lc for MC's three languages. This is because we are not

interested here in pointing out which was his first language [L1], his second language [L2], and his third language [L3]. Both types of symbols will be used in this book).

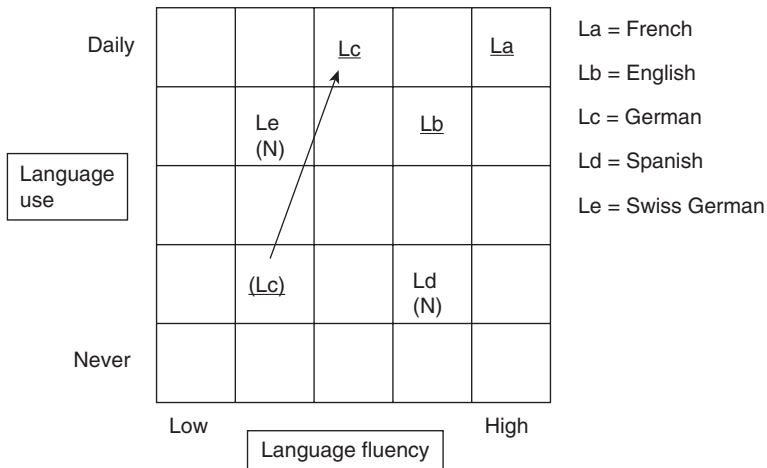
Of course, this first description of the language status of a bilingual is very general as it does not take into account the domains (situations) in which the languages are used (see Section 1.3) or the modalities of a language (the oral, written or signed modalities). To make the description more complete, this kind of grid can be duplicated and used, for instance, for each of the bilingual's four language skills: speaking, listening, reading, writing. This allows one to delve more deeply into the bilingual's language configuration, as is normally done with a language questionnaire (see, for example, the questionnaire in Li, Sepanski, & Zhao, 2006). One often finds that the proficiency bilinguals have in the four skills is not the same for their different languages: some may have very good oral comprehension of a language but may not speak it very well; others may know how to read and write one of their languages but not the other, and so on.

The grid approach presented here can also encourage us to examine the relationship between the bilingual's languages: some languages can be quite close (e.g., Spanish and Italian) and some quite distant (e.g., English and Chinese). It is a well-known fact that closely related languages will influence one another more than will distant languages.

### 1.2.2 The wax and wane of languages

If we go back to Figure 1.1 and examine the bottom grid, we see MC's present bilingual configuration (at age 36), that is, 10 years after that of the top grid. We note a striking change: La (English) and Lb (French) are still the best known languages but each one is used slightly less frequently now. Lc (German), however, which was a dormant language acquired in school, has moved up in the grid (it is now used daily) and it has also moved to the right (MC is more fluent in it). The reason is that MC moved to Germany during the 10-year interval and German has become his everyday language, used more frequently than La or Lb. This exemplifies the importance of knowing the language history of bilinguals: which languages are acquired, when and how; what the pattern of fluency and use is over the years; whether some languages go through periods of restructuring under the influence of another, stronger, language, or even become dormant and are slowly forgotten in later years.

Figure 1.2 merges two grids into one and presents the case of a 30-year-old bilingual (EP) who, between the ages of 20 and 30, not only changed his language configuration (as had MC) but, in addition, acquired two new languages. The languages present at age 20 (La: French; Lb: English; Lc: German) are underlined. If they changed position in the 10-year interval this is shown by an arrow going from the original position to the new position. The new languages (Ld: Spanish; Le: Swiss German) are marked (N).



**Figure 1.2:** A bilingual who, at age 20, knew three languages (La, Lb, Lc) to varying degrees. Between age 20 and 30, two new languages (Ld, Le) were acquired (marked N) and one language (Lc) changed its status (marked by the arrow).

What we observe is that La and Lb have stayed in the same position over the 10-year interval, but Lc is now being used daily and is more fluent. In addition, two new languages have been acquired: Ld (Spanish), which is now known quite well but is not used much, and Le (Swiss German), which is used almost daily but not yet known well. A 1-year stay in another country and then movement within a country (in this case, Switzerland) accounts for these changes.

As illustrated by EP (above), a bilingual's language history can be quite complex due to life events that reduce or increase the importance of a language (e.g., meeting a companion, losing a family member with whom one spoke a language exclusively, moving to another language region or country, and so on). The process is dynamic and leads to a change in a person's language configuration and hence language processing. Thus, a bilingual's languages have moments of stability (the language pattern is relatively stable) and moments of change where one language suddenly acquires new importance and another language may remain stable or have less of a role to play. If one assesses a person's languages (and language skills) or one undertakes a psycholinguistic study, one must keep in mind the transition periods which can last several years. During these periods, the level of communication attained by the bilingual may not be optimal while the languages reorganize themselves. But when stability is attained, the bilingual will usually regain the level of communication achieved before the change, even if the language configuration is now very different.

Although the examples given above do not exemplify it, language forgetting (called "language loss" or "language attrition") can also take place during a bilingual's lifespan. It is a frequent phenomenon, as frequent as language learning, but it has received far less attention (see, for example, Schmid, Köpke, Keijzer, &

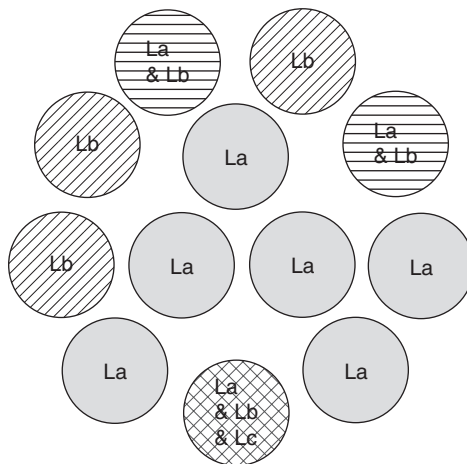
Weilemar, 2004). During language forgetting, the domains of use of the language are greatly reduced, or sometimes even disappear, and signs of loss appear over time: language production is filled with word finding problems and hesitations; the person's accent is influenced by the other, stronger, language(s), as is the syntax; the speaker calls on the other language(s) more and more for a word or a phrase, and so on. In addition, bilinguals become very unsure of themselves when they have to use the language and often state that they do not know it any more. Oral comprehension suffers too but less so than production.

In sum, the bilingual's languages will wax and wane over the years and the different stages will have an impact on psycholinguistic processes. Thus, starting with the early years, the age at which a language is acquired, how it is acquired (for example, in a natural setting or more formally such as in school, or a combination of the two), and the amount of use it is given over the years all play a role on how well the language is known, how it is processed, and even on the way the brain stores and deals with it. And, when, with the passing of time, languages are restructured, or even fade away, psycholinguistic and cognitive operations will also be influenced by this.

In the following sections we examine other important characteristics of bilinguals that the student of psycholinguistics should know about.

### 1.3 The Functions of Languages

Were one to ask a bilingual which languages she uses in different domains of life (e.g., with parents, siblings, relatives, friends, at work, for sport, when going out, when reading a newspaper, when writing reports, etc.), one might obtain the kind of pattern that is shown in Figure 1.3.



**Figure 1.3:** The domains covered by a bilingual's three languages (La, Lb, and Lc).

The domains are represented by circles and can be covered by one language (see the circles marked with La or Lb only), two languages (see the two circles marked La & Lb) or even, in this case, three languages (one such circle here). The pattern shown is a visual representation of the Complementarity Principle (Grosjean, 1997), which can be stated as follows:

Bilinguals usually acquire and use their languages for different purposes, in different domains of life, with different people. Different aspects of life often require different languages.

Thus, in the example above, which only presents a subset of domains, we find that the bilingual in question covers six domains with La only, three domains with Lb, two domains with La and Lb, and one domain with La, Lb, and Lc. A pattern of this type can be drawn up for any bilingual. Rare are the bilinguals who cover all their domains of life with all their languages. If that were the case, there would be little reason to be bilingual as one language would suffice. It should be noted that diglossia is a form of societal bilingualism where two languages or two varieties of a language have very precise domains of use. Thus the principle stated above is rigidified in diglossia – very few (if any) domains are covered by two or more languages.

The Complementarity Principle refers to what has been known for many years as the functions of languages (see Mackey, 2000, for example) and it explains a number of interesting phenomena in the linguistics and psycholinguistics of bilingualism. The first concerns a bilingual's level of fluency and use of a language. Although the fluency/use grid presented earlier is different from the language domain pattern shown here, there is a close link between the two. When a language is used in a very restricted number of domains, then there is every chance that it will be used less frequently and that it will have a lower fluency (bottom left-hand area of the grid in Figures 1.1 and 1.2). The reverse is also true: the more domains a language is used in, the greater the frequency of use and hence, usually, the greater the fluency (top right-hand area of the grid in Figures 1.1 and 1.2). In addition, if a domain is not covered by a language (e.g., a person never talks about work in a given language), then there is every chance that the bilingual will not have the vocabulary, the variety of language, or the style of language needed for that specific domain. (This is true despite the fact that some people still believe that for any given concept, all bilinguals know two words, one in each language, and hence that they have roughly twice as many words as monolinguals). All bilinguals have been in a situation where they have had to talk about a particular topic in the "wrong" language. They don't know or can't find the right words or expressions, they hesitate a lot, and, if the situation allows it, they resort to the other language to help them out (Grosjean, 2008, describes a number of studies that show this clearly). Well-learned behaviors such as counting, praying, giving phone numbers, and so on, are extreme cases of language specificity and can create problems when conducted in the wrong language.



The Complementarity Principle can also explain the phenomenon of language dominance, in part at least. If we examine Figure 1.3 again, we see that the bilingual in question is dominant in La. Not only is it the sole language of six domains but it also covers another three domains, two with Lb and one with Lb and Lc, for a total of nine domains. The other languages cover fewer domains: Lb, by itself or with other languages, covers six domains and Lc just one domain (along with La and Lb). Thus one could say that the bilingual in question is dominant in La. Care should be taken, though, when using only a global measure of dominance such as counting domains of use. This is because for some domains the “non dominant” language can be the sole language and it is, *de facto*, the dominant language for that particular domain. In what is a rather old study now, Cooper (1971) showed that Spanish-English bilinguals had very different word naming scores depending on the domain referred to (family, neighborhood, school, religion, etc.). In some, they showed balance (they did as well in Spanish as in English) whereas in others they showed dominance in one language. Close to 40 years later, some aspects of the results of word naming studies in psycholinguistics, among other experimental studies, may be explained by the Complementarity Principle (a point also made by Ivanova & Costa, 2008).

At this point, it is important to note that language dominance in a bilingual (measured in terms of overall use of a language, overall fluency, domains covered by a language, or a combination of all of these) can change over time. Thus, a person’s first language may not always be his or her dominant language. Grosjean (2010) describes a person whose dominance has changed four times over a stretch of some 50 years, with two periods, both some 10 years long, where the second language was the person’s dominant language. One should be careful, therefore, not to assume that a person’s first language or “mother tongue” is automatically their dominant language. Personal language history may show quite different bilingual configurations at different moments in time.

Two additional impacts of the Complementarity Principle should be mentioned. The first concerns translation. Even though bilinguals are thought to be natural translators (yet one more myth that surrounds bilingualism), they often have difficulties translating when the domains are specialized. This makes a lot of sense since their two or more languages do not cover all domains of life. Hence, bilinguals often find themselves doing less well than second language learners who have systematically learned the translation equivalents of words and expressions in their second language. Of course, bilinguals are no less bilingual for this; they are simply reflecting the fact that their languages are distributed across different domains. The second impact concerns memory of events. Marian and Neisser (2000) showed in an experimental study that events are better recalled if the language used to recall them is the language in which the event took place (see Chapter 8 for a description of the study). They called this “language-dependent” recall. They illustrated it with a real-life example reported by Aneta Pavlenko, a multilingual researcher in this field. When she was asked, in Russian, for the number of her apartment in the United States, she gave the

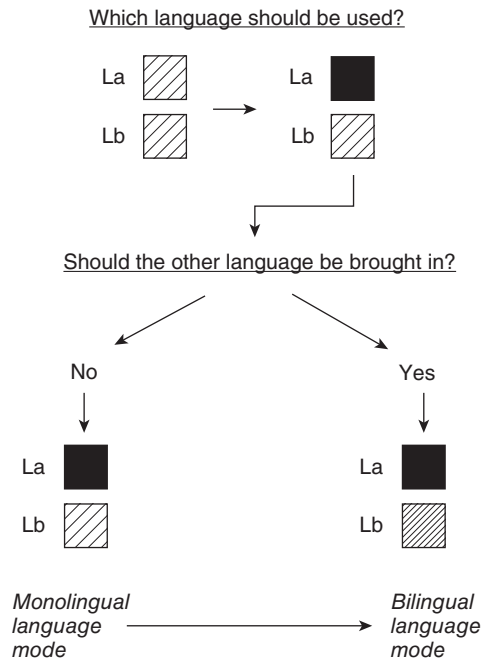
number of her former apartment in her native European country, which she knew in Russian!

In sum, the Complementarity Principle is an important part of a bilingual's life. It is present at all times and it can explain many aspects of a bilingual's language knowledge and language processing.

## 1.4 Language Mode

When interacting with an interlocutor but also when using language in other situations (e.g., writing to someone, reading a book, doing a language task in a laboratory, etc.), bilinguals have to ask themselves two questions, most of the time subconsciously: Which language should be used? and Should the other language be brought in? Figure 1.4 takes up these questions and shows the consequences they have on the bilingual's languages and processing mechanisms.

In the figure, which, to simplify things, covers just two languages (though the same applies to three or more languages), we see that the bilingual has to choose between language a (La) and language b (Lb). Both are inactive, or deactivated, at first, and this is represented with squares filled with light diagonal lines. To the first question, "Which language should be used?", the bilingual in our example answers



**Figure 1.4:** The two questions bilinguals have to ask themselves, often subconsciously, when communicating with others.

with La. It becomes activated and the square changes over to black, representing full activation. This first operation is called “language choice” and the language chosen is termed the “base language.”

Now comes the second question: “Should the other language be brought in?” If the answer is “no” (imagine that the bilingual is speaking to someone who only knows one of her languages), then the other language remains inactive and only one language will be used. This is called the monolingual mode (represented in the bottom left area of the diagram). Examples of a monolingual mode are reading a book in a particular language, listening to a radio program which only uses one language, speaking to a monolingual adult or child, and so on. In this mode, the bilingual will usually only use one language and deactivate the other (see Section 1.5.2). If the answer to the second question is “yes” (for example, the bilingual is speaking to bilingual friends who share her languages), then the other language is activated, but less so than the base language (compare the two squares on the right), in case the bilingual needs it during the interaction. Here, the bilingual is in a bilingual mode and can bring in elements of the other language (see Section 1.5.1) or even change base language completely. Other examples of a bilingual mode are listening to a conversation between bilinguals where two languages are used interchangeably, doing an experimental study which requires, overtly or covertly, the use of two languages, interpreting from one language to another, and so on.

So far we have accounted for the two endpoints of a continuum – the language mode continuum – which ranges from a monolingual mode to a bilingual mode (see the bottom area of the figure). In fact, in their everyday lives, bilinguals find themselves at various points along the continuum. For example, bilinguals can be in an intermediary language mode – in other words, between the two endpoints. This is the case when they are speaking to a bilingual who shares their languages but who prefers to stick to one language, or when they are speaking about something which really demands the other language (see the discussion of the Complementarity Principle in Section 1.3) but which cannot be used. This may happen, for example, when a French-English bilingual has to speak about a typically American event such as Thanksgiving in French instead of in English.

Language mode can be defined as the state of activation of the bilingual’s languages and language processing mechanisms at a given point in time (see Grosjean, 2008, for an extensive review of the concept). Several points can be made about it. First, bilinguals may differ from one another as to how much they move along the language mode continuum. Some, who live in bilingual communities where the two languages are used together extensively, may rarely find themselves at the monolingual end of the continuum. Others, who are surrounded by monolinguals during their everyday activities, may never move to the bilingual endpoint and bring in the other language in their interactions. It is fair to say, though, that many bilinguals navigate along the continuum depending on the person they are speaking to, the situation they are in, the topic of discourse, and so on.

A second point is that movement along the continuum can take place at any time and in any place, and can be very rapid. Thus, one person may start at the bilingual

end but realize as the conversation is taking place that his interlocutor, even though she is bilingual, does not seem to accept that he slips into the other language for a word, phrase, or sentence. He will then deactivate the other, unwanted language, and hence move to the monolingual end of the continuum. Similarly, a bilingual may start interacting monolingually with someone but then realize, as the conversation continues, that the person shares the same two languages. This will induce some movement along the continuum in case the bilingual needs the other language in the interaction, even if only to signal, with a few words, that they share the fact of being bilingual. The same is true of a participant in an experiment who suddenly hears or sees a word from the other language; she will immediately activate that language and hence move toward the bilingual end of the continuum (see Chapter 2).

A third point concerns the bilingual mode. Since the other language is also active, but less so than the base language, it can be brought in for a few words, as indicated above, or it can quite simply take over the role of base language (something that simply can't happen in a monolingual mode unless the interlocutor changes, of course). When the base language does change, the activation pattern shown in Figure 1.4 also changes; Lb becomes the most active language and La is less active. Note also that there are cases where both languages can be fully active in a bilingual mode. Two instances come to mind: the first is when a bilingual is listening to two people, each one speaking a different language; the second is when someone is interpreting from one language to another. Here, the person needs both languages, the source language – the language being heard – and the target language – the language being produced (Grosjean, 2008).

A fourth point pertains to the language that is not being used in the monolingual mode. Researchers such as Green (1998) propose that it is inhibited whereas others prefer the notion of deactivation. There are two reasons to lean toward the latter. First, the bilingual language system has to be able to change base languages rapidly; a language that is deactivated will be “on line” more rapidly than if it is inhibited. Second, there is some slippage in the monolingual mode in that the other language can slip through in the form of dynamic interferences (see Section 1.5). This can be explained more readily with the notion of deactivation than with inhibition.

A final point that needs to be mentioned concerns processing. Until very recently, most psycholinguists have claimed that perceptual processing is nonselective, that is, all the bilingual's languages are involved in the processes that take place during the acts of listening to or reading just one language. In terms of language mode, it has been argued that listeners and readers, even though in a monolingual mode, call on their two or more languages to do the task asked of them (see Chapter 2). The same has been said of language production in bilinguals (see Chapter 3). The problem with this view, discussed in Grosjean (1998), is that the only way to study whether processing is nonselective is to put the participants in a truly monolingual mode. (No one would counter the claim that processing is indeed nonselective when bilinguals are hearing or reading two languages in a bilingual mode; processing couldn't take place otherwise). Putting a bilingual in a monolingual mode is

relatively easy to do in a natural speaking situation (basically, just make sure that the bilingual's interlocutor does not know the language that is not being used) but it is much more difficult in experimental perception tasks.

Grosjean (1998) reviews two perception studies, among others, that attempted to put their participants in a monolingual mode, but failed to do so (Spivey & Marian, 1999; Dijkstra & Van Hell, 2003). The reason for this failure is that a number of factors invariably push the bilingual toward a bilingual mode. Among them we find: the knowledge the participant has that the study relates to bilingualism; a laboratory that works on bilingual research; a bilingual university environment; the bilingual task that is used and/or the instructions that are bilingual; the presence of elements of the other language in the stimuli (e.g., code-switches); the use of cross-language homophones; a high density of interlingual homographs and/or cognates, and so on (see Grosjean, 2008, for a full discussion). Until these factors have all been controlled for, it appears premature to state categorically that language processing is nonselective when bilinguals are in a monolingual mode. As we will see in the first chapters of this book, notably Chapters 2 and 3, the picture that is emerging is both more subtle and more interesting. Processing can be selective at times and nonselective at other times.

## 1.5 Interacting with Bilinguals and Monolinguals

The psycholinguistics of bilingualism also studies the processes concerned when bilinguals communicate with one another in a bilingual mode, as well as with monolinguals in a monolingual mode (see Chapters 2 & 3). It is important, therefore, to survey the many phenomena that are involved, most notably language choice, code-switching, borrowing, and interferences.

### 1.5.1 Interacting with bilinguals

In this section we will first examine language choice, then discuss code-switching and borrowing. Interferences will be covered in the next section.

*Language choice* We saw in Figure 1.4 that the first thing a bilingual has to do during an interaction or a specific task such as reading or writing is to choose a base language. This is a rather simple operation in a monolingual mode (if it is truly monolingual!) but it is much more complex in a bilingual mode. Basically, the question is which language to use when more than one is possible. Much has been written about language choice and researchers seem to agree that the factors which determine choice can be organized into four main categories: participants, situation, content of discourse, and function of the interaction. Concerning participants, an important factor is the language proficiency of the two or more interlocutors. They will tend to use a language which each commands sufficiently well. There is also the

language history between the participants; bilinguals often have a preferred language with a bilingual interactant whom they know. The attitude one has toward a language or a group may also account for language choice; thus, members of stigmatized minorities may refrain from using the minority language with others. Additional factors include age, socio-economic status, the degree of intimacy of the participants, the power relation between the two, and so on.

As concerns situation, the place where the interaction takes place is an important factor. In some countries, such as in Paraguay, for example, a particular language is used in the countryside and another one in the cities. There is also the formality of the situation; some languages are simply not used in very formal surroundings (e.g., Swiss German in Switzerland). The presence of monolinguals will also impact on the language to use; one usually wants to include them, even if momentarily, by choosing the appropriate language. As for content of discourse, we have seen its importance when discussing the Complementarity Principle (see Section 1.3). Some topics are better dealt with in a particular language, and if both speakers share that language, they will slip into it. Finally, the function of the interaction plays a large role in language choice. Depending on what one is trying to achieve (e.g., raise one's status, create a social distance, exclude someone, request something, etc.), one will choose the most suitable language.

Of course, several factors taken together usually explain the final language choice. The decision is rapid and it is usually just right. That said, language accommodation, that is, finding the most appropriate language for all concerned, may not always be achieved. This is the case, for example, when several bilinguals and monolinguals meet and there is no common language. A bilingual may then volunteer to translate so as to include everyone in the interaction.

*Code-switching and borrowing* When in a bilingual mode, that is, interacting with someone who shares the bilingual's languages, there is always the possibility of bringing in the language, or languages, that have not been chosen as the base language. This happens if the need arises and if the interactants feel comfortable doing so. (Some bilinguals do not resort to the other language(s) and hence the interactants may stick to just one language.) There are two ways of calling in the other, guest, language – through code-switching or through borrowing. Code-switching is the alternate use of two languages, that is, the speaker makes a complete shift to the other language and then reverts back to the base language. Borrowing, on the other hand, is the integration of one language into another. Figure 1.5 illustrates the difference between the two.



**Figure 1.5:** The difference between a code-switch (the alternate use of two languages) and a borrowing (the integration of one language into the other).

In the left area of the figure, where a code-switch is depicted, the person speaking the base language shifts over completely to the other language before shifting back to the base language. In the right area, where a borrowing is illustrated, an element from the other language is brought in and integrated into the language being spoken (discontinuous line). It should be noted that in the bilingual child language literature, both code-switching and borrowing are covered by the term “code-mixing” (see Chapter 6). Each type of guest element will be taken up separately in the examples that follow.

Code-switching may involve a word, a phrase or a sentence. Here are two examples taken from Grosjean (1982) where French is the base language and English the guest language:

- Va chercher Marc *and bribe him* avec un chocolat chaud *with cream on top*  
(Go fetch Marc and bribe him with a hot chocolate with cream on top)
- Des *wild guys* à cheval  
(Some wild guys on horseback)

In the next example, taken from Poplack (1980), the base language is English and the guest language is Spanish:

- But I wanted to fight her *con los puños*, you know  
(But I wanted to fight her with my fists, you know)

Even though code-switching has been looked down upon by many (they deplore the mixing of languages, among other things), it is frequently used by bilinguals with one another. In the last 30 years or so, many aspects of code-switching have been studied by linguists, sociolinguists, and psycholinguists (for a review, see Gardner-Chloros, 2009). It is now clear that code-switching is not simply a haphazard behavior due to some form of semilingualism but that it is, instead, a well-governed process used as a communicative stratagem to convey linguistic and social information. The reasons for code-switching are many: using the right word or expression, filling a linguistic need (see the Complementarity Principle among other causes), marking group identity, excluding or including someone, raising your status, and so on.

Borrowing, which involves integrating elements of one language into the other language, can be of two types (see Treffers-Daller, 2007, for a review). In the first – a loanword – both the form and content of a word are borrowed. For example, in the sentence:

- Ca m'étonnerait qu'on ait *code-switché* autant que ça  
(I can't believe we code-switched as often as that)

the English word “code-switch” has been brought in and integrated into the French sentence. A second type of borrowing, called a loanshift, consists in either taking a

word in the base language and extending its meaning to correspond to that of a word in the other language, or rearranging words in the base language along a pattern provided by the other language and thus creating a new meaning. An example of the first kind of loanshift would be the use of “humoroso” by Portuguese-Americans to mean “humorous” when the original meaning is “capricious.” An example of the second kind is the use of idiomatic expressions that are translated literally from the other language, such as “I put myself to think about it” said by a Spanish-English bilingual, based on “Me puse a pensarlo.”

The reasons for borrowing are very similar to those for code-switching. The two most important ones are using the right word and using a word from a domain normally covered by the other, guest, language (the Complementarity Principle is again one of the causes). It is important to distinguish between idiosyncratic loans used on an individual basis by bilinguals, as illustrated above, and words which have become part of a community’s vocabulary and which monolinguals also use (the latter are often referred to as “established loans”). Thus, in English, the following words are now well established in the language and yet were originally borrowed from French: “poet,” “duke,” “paint,” “music,” “poem,” “companion,” and so on.

### 1.5.2 Interacting with monolinguals

We saw in Figure 1.4 that a first decision bilinguals have to make relates to the language to use for the interaction or task at hand. When they are in a monolingual mode, this appears to be a relatively simple task. Basically, the bilingual deactivates other languages, and sticks to the language of the monolingual interlocutor(s) or situation. Bilinguals who speak the language fluently, and have no accent in it, can then pass as monolinguals. It should be noted though that many bilinguals *do* have an accent in at least one of their languages (some of them, in all their languages) and so their bilingual identity often comes through.

If the person being spoken to is monolingual or shares only one language with the bilingual, isn’t it always the case that the bilingual stays totally within one language? This is most often the case but there can be some exceptions. First, there is the fact that some minimal code-switching may take place, although it is rare. It can happen for proper nouns, for example, or when bilinguals do not have a word or expression needed in the language they are speaking (see the Complementarity Principle). They may then say the word or expression and add an explanation if their interlocutor does not give them the equivalent in the language being spoken. Second, and more importantly, the other language can seep through in the form of interferences, that is, deviations from the language being spoken (or written) due to the influence of the other language(s). Interferences can occur at all levels of language – from the phonetic to the pragmatic. Here are just a few examples taken from Grosjean (1982):

- “Look at the *camion*”: the form and meaning of French “camion” (truck) are brought in and are pronounced like “canyon.”



- “Look at the *corns*”: the French meaning of “corne” (horn) has been attached to the English word “corn.”
- “On *the* page five,” based on the French “Sur la page cinq” (instead of “On page five”).
- “I’m telling myself stories”: the literal translation of “Je me raconte des histoires” (the equivalent of “I’m kidding myself”).
- In writing: “adress” or “apartment,” based on the French near homographs “adresse” and “appartement.”

Interferences must be distinguished from intra-language deviations such as over-generalizations, simplifications, hypercorrections, the avoidance of words and expressions, and so on. These are often due to a low or medium level of fluency in a language and not to the direct influence of the other language, as in the case of interferences. They must also be distinguished from code-switching and borrowing since these, especially borrowings, can greatly resemble interferences. Those interested in studying interferences must make sure the bilingual is in a monolingual mode; it is only then, with the absence, or quasi-absence, of code-switches and borrowings, that the interferences will appear – a bit like a landscape emerging when the fog lifts.

Interferences, which are termed “transfers” by many, are of two types. There are static interferences which reflect permanent traces of one language (La) on the other (Lb), such as an accent or the permanent use of a syntactic structure. These interferences are linked to the person’s competence in Lb (they are part of language knowledge), and can involve all linguistic levels. It has been proposed recently to reserve the name “transfer” for these static interferences (Grosjean, 2012). The other type of interferences are dynamic interferences, which are the ephemeral intrusions of the other language. These interferences (as opposed to more permanent transfers) can take the form of the accidental slip on the stress pattern of a word because of the stress rules of the other language, the one-time use of a word from the other language (but produced phonetically in the language being spoken), the momentary use of a syntactic structure taken from the other language, and so on. Dynamic interferences are linked to processing and have to be accounted for by encoding mechanisms as studied in psycholinguistics. Bilinguals often report making interferences when they are stressed, tired or emotional. What is normally under control (pronunciation, prosody, lexical access, the choice of syntax, etc.) can break down under certain conditions.

## 1.6 Biculturalism

If there is one domain that is poorly studied in the large field of bilingualism, it is that of biculturalism. And yet, it has a large impact on bilinguals who are also

bicultural, both on a personal level (psychological, cultural) and on their cognition, language knowledge, and language processing.

Biculturals can be characterized in the following way (Grosjean, 2008; see also Nguyen and Benet-Martinez, 2007):

1. They take part, to varying degrees, in the life of two or more cultures.
2. They adapt, in part at least, their attitudes, behaviors, values, languages, etc. to these cultures.
3. They combine and blend aspects of the cultures involved. Some of these come from one or the other culture(s) whereas others are blends of the cultures. Hence, some aspects of the bicultural are adaptable and controllable (this allows the bicultural to adapt to the context and situation) but other aspects are more static; they are blends of the cultures and cannot be adapted as easily.

Bilingualism and biculturalism are not necessarily coextensive. Thus, you often find bilinguals who are not bicultural. They have always lived in one culture but they know and use two or more languages. This is the case, for example, of Swiss Germans who speak both Swiss German and standard German but who are culturally Swiss. You also find biculturals who are not bilinguals such as British expatriates in the United States. And, of course, you find people who are both bicultural and bilingual as in the case of immigrants, many of whom have acquired their second language in their country of adoption and who have acculturated into their new culture.

The psycholinguistics of bilingualism is starting to manipulate or control for the biculturalism of participants in observational and experimental studies. This is because many aspects of cognition and language are influenced by biculturalism. In what follows, we will concentrate on biculturals who are also bilingual (often called bicultural bilinguals) and discuss two aspects of their biculturalism that involve language. The first concerns bicultural behavior. In their everyday lives, bicultural bilinguals find themselves at various points along a continuum – a cultural one this time – marked by two endpoints: a monocultural mode and a bicultural mode. In the first, they are with monoculturals or are with biculturals who share only one of their cultures, and they must deactivate their other culture(s) as best they can. In the second, they find themselves with other biculturals who share their cultures; they will choose a cultural base to interact in and will then bring in the other culture(s) when they need to. This is very similar to the language mode concept discussed in Section 1.4. One main difference with the latter, though, is that certain attitudes, feelings, behaviors, and so on may not be totally adaptable because of the blending component discussed above. Thus, such aspects as body language, distance to leave between interlocutors, the management of time, greeting and leaving behaviors, the way to express emotions, and so on, may not all be as monocultural as the biculturals would like them to be in certain monocultural situations.

This said, bicultural bilinguals manage to adapt their behavior to quite an extent, so much so that when a change of language is also concerned, a myth has developed

that changing languages leads to a change in personality (see, for example, Luna, Ringberg, & Peracchio, 2008). Could there be some truth to the Czech proverb, “Learn a new language and get a new soul”? Clearly, this does not concern monocultural bilinguals as they remain within one culture. But how about bicultural bilinguals? Although the idea is terribly appealing (see the many bilinguals who report being “different” when speaking the one or the other language), there is a rather simple explanation that has been around for many years (Grosjean, 1982). Basically, what is seen as a change of personality is simply a shift in behavior and attitudes corresponding to a shift in situation or context (a change of cultural base to use an expression employed above). That is, bicultural bilinguals adapt to the cultural context they are in, as do monolinguals with their one language. Different situations and interlocutors may trigger different attitudes, impressions, behaviors but also language in bicultural bilinguals. In sum, it is not language as such that triggers these changes but the context. Another way of seeing this is to look at biculturals who are monolingual. With just one language, they behave like biculturals who are bilingual, that is, they adapt to the environment they are in but in their case, a different language is not involved.

We will end this chapter with a few words concerning the bilingual lexicon and the impact biculturalism may have on its organization. Let us take a very simple example, that of English “bread” and French “pain.” A bilingual who has only known one type of bread (i.e., a bilingual who is not bicultural) will refer to the same reality when he or she hears, or uses, “pain” and “bread.” Since this bilingual has interacted with just one culture, and its various component subcultures, there is every chance that the meaning of the two words will be very similar. A bicultural bilingual, on the other hand, who has lived both in the United States and France, for example, will have very different concepts for these words since the “pain” reality and the “bread” reality is very different (“pain” refers to the baguette type bread in many bicultural bilinguals whereas “bread” refers to a larger loaf baked in a bread pan). The same case can be made for French “café” and English “coffee” – probably very similar meanings in monocultural bilinguals but very different meanings in bicultural bilinguals.

This influence of biculturalism on the nature of the bilingual’s lexicon was acknowledged by the pioneering bilingualism researcher Uriel Weinreich (1968). He proposed that in coordinative (type A) bilingualism, the meanings of words in the two languages are kept separate, that is, that each word has its own meaning, whereas in compound (type B) bilingualism, the words share a common meaning – they conjure up the same reality. Weinreich also stated that each bilingual (he no doubt meant each bicultural bilingual) could show a combination of the coordinative and compound type of bilingualism. (Just to be complete, Weinreich proposed a third type of bilingualism, subordinative bilingualism (type C), where words in the weaker language are interpreted through the words of the stronger language.) Keeping in mind that bilinguals do not reflect just one type of bilingualism as defined by Weinreich, it is also true that different cultural realities may be reflected in bicultural bilinguals. Some aspects of life in the one and in the other culture will lead to words referring to meanings with different cultural

underpinnings; other aspects of life will lead to words sharing meaning components or traits; and still other aspects will produce words with totally overlapping meanings (see Chapter 8).

The message to retain from all of this is that bilinguals who are also bicultural will differ from bilinguals who are monocultural, both culturally and linguistically. If we add to this the fact that bilinguals will differ from one another on many other aspects mentioned in this chapter (languages, language fluency, language use, language history, language mode, etc.), we can expect the results from the psycholinguistic studies of bilinguals to be both fascinating and diverse – but sometimes also difficult to interpret, as we will see at various times in the chapters to come.

### Research Questions

1. Discuss the aspects of language processing that will be influenced by a bilingual's language history as described in Section 1.2.
2. It is reported that bilinguals have more word searching (tip of the tongue) difficulties than monolinguals. Can this result be explained in part by the Complementarity Principle (Section 1.3) which states that different domains of life often require different languages? If so, how?
3. What kind of study could be designed to show that language processing is sometimes selective despite what is stated by many researchers (see Section 1.4)?
4. Bicultural bilinguals are clearly different from monocultural bilinguals (see Section 1.6). Discuss the impact this has on language perception, production, and memorization.

### Further Readings

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