The Blackwell Guide to Research Methods in Bilingualism and Multilingualism

Edited by Li Wei and Melissa G. Moyer

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Acknowledgments

Preface

The *Blackwell Guide to Research Methods in Bilingualism and Multilingualism* was inspired by our belief that there is an urgent need for a "know-how" book that enables students and researchers to carry out a research project by themselves. The number of "know-what" publications on bilingualism and multilingualism is overwhelming for both the novice and the experienced. Yet, there is almost nothing that specifically deals with methodology in a comprehensive and systematic way. Nor is there anything that addresses the links between theory, method, and data for student use. A student of bilingualism and multilingualism is expected to "pick up" much in the way of knowledge and skills: the most effective way to collect data, how best to analyze and interpret them, what variables to consider in designing an experiment or case study, and what are workable or unworkable topics for a research project.

This essential guide to research methods in bilingualism and multilingualism is aimed at advanced undergraduates and postgraduate students as well as new researchers in a variety of disciplines, especially in linguistics, psychology, speech and language pathology, sociology, anthropology, and education. It guides the reader through a wide range of research topics, key concepts and approaches, methods and tools for collecting and analyzing data. It also contains valuable information about research resources, conference presentation, and journal publication. The chapters are written by an international team of established and young researchers with first-hand experience in bilingualism and multilingualism research.

The Guide consists of three parts. Part I contains two chapters. The first contextualizes the field of bilingualism and multilingualism by reviewing the major theoretical strands and the questions and hypotheses that researchers are currently investigating. The second chapter introduces bilingualism and multilingualism research as practice, offering practical advice on the process of doing research and the way theory, methods, and data are connected.

Part II is the main part of the Guide; it contains 17 chapters that cover various procedures, methods, and tools for data collection and analysis. The sequence of the chapters broadly follows the process of a research project, starting with decisions on the source of data and where to find it, continuing with design options of the study, and concluding with various ways of analyzing the data.

We have deliberately avoided grouping these chapters under the traditional "sociolinguistic" or "psycholinguistic" labels for two main reasons. First, we do not believe that these labels accurately describe the complex nature of bilingualism and multilingualism research, which has always been highly multidisciplinary. Second, we wish to offer the reader an opportunity to read beyond their immediate discipline of interest and to learn about other perspectives. While readers with specific interests and experience can dip in and out of specific chapters as they require, it would be highly desirable, time permitting, to read all the chapters in this part of the Guide.

The amount of detail and practical advice given in the different chapters in Part II varies. This is intentional, as some methods can be learned and applied fairly easily by the student while others require elaborate facilities and support. Even in the latter case, however, we believe that reading the chapters in this part (e.g. imaging technologies) will enable the student to better understand and appreciate the published studies on bilingualism and multilingualism. In some chapters, the term bilingualism is used as a convenient label to cover multilingualism as well.

Part III contains information and advice on project ideas, disseminating research results, and research resources. The aim of illustrative project ideas is to help new researchers to think creatively and make links between their personal research interests and broad themes of wider concern.

The Guide is intended to complement, rather than replace, existing textbooks and readers on bilingualism and multilingualism. We have tried to make the Guide as practical as possible. As this type of publication is still rare, we would be glad to hear any comments and suggestions for revision.

Li Wei, London
Melissa Moyer, Barcelona

Part I Researching Bilingualism and Multilingualism

1 Research Perspectives on Bilingualism and Multilingualism

Li Wei

1.1 Introduction

For many people, bilingualism and multilingualism are a fact of life and not a problem. Contact between people speaking different languages has been a common phenomenon since ancient times. Increased international travel and modern information and communication technologies provide even more opportunities for people of different tongues to get to know each other. Even if one was born and brought up as a monolingual, the opportunity to learn other languages is no longer a luxury for the elite. Nevertheless, some regard bilingualism and multilingualism as an issue of concern, and raise questions such as: Can learning more than one language at a time affect children's intellectual development? Do bilingual and multilingual children present special educational needs? Can bilingualism and multilingualism result in schizophrenia, split or confused identity, or mental illness? Do bilingualism and multilingualism lead to social disorder between communities? These are legitimate questions, the answers to which depend on one's experience, knowledge of the phenomenon, and point of view. They are also worthwhile research questions that need to be addressed scientifically. Findings from scientific research on bilingualism and multilingualism can provide strong evidence for answering these questions.

1.2 Societal and Individual Bilingualism and Multilingualism

Fishman (1980) made a useful distinction between bilingualism or multilingualism as an individual phenomenon and as a societal phenomenon. A quick look at the statistics will tell us that most of the countries in the world are multilingual – there are 193 countries and over 6,000 different languages. This does not mean, however, that the individual citizens of multilingual countries are necessarily multilingual

themselves. In fact, countries which are officially multilingual, such as Belgium and Switzerland, may have many monolinguals in their population, while officially monolingual countries, such as France and Germany, have sizeable multilingual populations. Several questions arise here: Why are some countries officially multilingual whereas others are officially monolingual? What rights do different languages have, in government, in education, or in social interaction? What are the effects of the language policies of a country on its citizens? What are the effects of bilingualism and multilingualism on the country's economic and social development?

A multilingual individual is anyone who can communicate in more than one language, be it active (through speaking and writing) or passive (through listening and reading). Multilingual individuals may have become what they are through very different experiences: some may have acquired and maintained one language during childhood, the so-called first language (L1), and learned other languages later in life, while others have acquired two or more first languages since birth. What is the relationship between the languages in the process of language acquisition? Are early and late bilinguals and multilinguals different kinds of language users? Are some languages more easily learned and maintained than others? These are some of the questions that could be researched with regard to bilingualism and multilingualism as an individual phenomenon.

Whenever two people meet, they need to decide whether they want to interact with each other and in what way. When bilingual and multilingual speakers meet, an issue for consideration and negotiation is which language should be used. Most bilingual and multilingual speakers seem to know which language is the most appropriate for a given situation, but how do they know it? Most bilingual and multilingual speakers switch from one language to another in the middle of a conversation, but why do they do it? Bilingual and multilingual interaction can also take place without the speakers switching languages. In certain areas, it is not uncommon for speakers to consistently each use a different language. This phenomenon is found, for example, in Scandinavia, where speakers of Swedish and Norwegian can easily communicate by each speaking their own language. To what extent are these speakers aware of the differences between their languages?

Individual and societal bilingualism and multilingualism are by no means entirely separate. Multilingual speakers in officially monolingual countries often find themselves constrained by official policies and unable to utilize their full linguistic repertoire, just as monolinguals in officially multilingual countries find it difficult to cross linguistic boundaries to make full use of the opportunities and resources available. Can these kinds of tensions be resolved through legislation? What would be the long-term effect of tensions of this kind?

1.3   Research Perspectives

Research on bilingualism and multilingualism has a very long history. Detailed documentation of societal language contacts in Europe, for example, dates back to

the seventeenth century; Whitney's analysis of the grammatical structure of bilingual speech was published in 1881; and Cattell's experiments, which compared word associations and reaction times of bilingual and monolingual individuals, were published in 1887. Nevertheless, bilingualism and multilingualism became a major focus of scientific research only in the last century, especially from the 1970s. Three broad research perspectives can be identified: linguistic, psycholinguistic, and sociolinguistic. Each of these perspectives has its distinct themes and research methodologies.

1.3.1 *Linguistic perspective*

Research on bilingualism and multilingualism is central to the contemporary linguistics agenda. Chomsky (1986) defined three basic questions for linguistics:

1 What constitutes knowledge of language?
2 How is knowledge of language acquired?
3 How is knowledge of language put to use?

For bilingualism and multilingualism research, these questions can be rephrased to take into account knowledge of more than one language (see Cook, 1993):

1 What is the nature of language or grammar in a bi- or multilingual person's mind, and how do different systems of language knowledge coexist and interact?
2 How is more than one grammatical system acquired, either simultaneously or sequentially? In what respects does bi- or multilingual acquisition differ from monolingual acquisition?
3 How is the knowledge of two or more languages used by the same speaker in bilingual interaction?

With regard to the first question (the nature of multilingual knowledge), a key issue is whether and how the different languages in the multilingual person's mind interact with one another. One important characteristic of the multilingual is their ability to move between different languages: they can speak one language at a time, behaving more or less like a monolingual; or mix languages in the same sentence, clause, or even word, resulting in a linguistic phenomenon known as code-switching. There is a very large body of literature describing the structural patterns of bilingual code-switching. It is clear that code switches take place at specific points in an utterance; they are structurally well formed and seem to conform to the grammatical constraints of the languages involved. Muysken (2000), for example, offers a typology of code-switching: "insertion" of material (lexical items or entire constituents) from one language into a structure from the other language; "alternation" between structures from languages; and "congruent lexicalization" of material from different lexical inventories into a shared grammatical structure. Linguists have developed various models specifying the grammatical constraints of these processes. For instance, models of the insertional type of code-switching

view the constraints in terms of the structural properties of some base or matrix language, e.g. the Matrix Language frame model of Myers-Scotton (1997), while models departing from alternation see the constraints on code-switching in terms of the compatibility or equivalence of the languages involved at the switch point, e.g. Poplack (1980).

As is often the case in linguistics, counter-examples are reported as soon as a new model or constraint is proposed. More recent linguistic studies of code-switching question the theoretical value of the various grammatical constraints, arguing instead for the application of the basic principles already afforded by Universal Grammar. MacSwan (2004: 298), for example, goes as far as to say that "Nothing constrains code switching apart from the requirements of the mixed grammars." Put differently, the generative-universalist position is that all of the facts of bilingual code-switching may be explained in terms of principles and requirements of the specific grammars used in each specific utterance. MacSwan also questions the status and explanatory power of the matrix language, a concept that is widely believed to exist by code-switching researchers and is central to models such as the one proposed by Myers-Scotton. While it is generally accepted that the two languages involved in code-switching tend to play different roles – one providing the morphosyntactic frame while the other provides specific items, usually open-class content morphemes – the concept of matrix language is not theoretically motivated and probably not needed for explaining the structural patterns or constraints.

The second major area of linguistic studies of bilingualism and multilingualism concerns the acquisition of linguistic knowledge. Earlier studies of bilingual acquisition attempted to chart the developmental paths and stages of the bilingual child. Volterra and Taeschner (1978) suggested that bilingual acquisition went through three key stages:

Stage I: the child has one lexical system comprised of words from both languages;
Stage II: the child distinguishes two different lexicons, but applies the same syntactic rules to both languages;
Stage III: the child speaks two languages differentiated both in lexicon and syntax, but each language is associated with the person who uses that language.

Although some studies both before and after Volterra and Taeschner's had evidence supporting the model, there has been much criticism particularly of the claims made regarding the first two stages. This is generally known as the "one-system-or-two" debate; i.e., do bilingual children begin with a fused linguistic system and gradually differentiate the two languages, or do they start with a differentiated system? Part of that debate centers around the question: What counts as evidence for differentiation or fusion? Volterra and Taeschner (1978) and Taeschner (1983), for instance, based their decision on whether the child made appropriate sociolinguistic choices, i.e., whether the child spoke the "right" language to the "right" person. It was argued that awareness of the two languages as distinct plays a crucial role in deciding the issue of differentiation, and a child's ability to

make appropriate language choices reflects that awareness. However, as McLaughlin (1984) points out, the argument that bilingual children separate the languages when they are aware there are two systems is circular unless some criterion is provided for assessing what is meant by awareness other than that children separate the languages. In any case, we need to bear in mind that a child's apparent (in)ability to choose the right language for the right addressee is a rather different issue from whether the child has one or two linguistic systems. Part of the problem is the familiar one of what we can infer about competence from performance.

In a longitudinal study of a girl named Kate who was acquiring Dutch and English simultaneously, De Houwer (1990) provided strong evidence for the separate-development argument. De Houwer reported that Kate used only Dutch with monolingual Dutch speakers, but would occasionally switch to English when interacting with Dutch-English bilinguals. Thus, the child seemed aware of the linguistic abilities of the interlocutors. De Houwer further suggested that Kate used English and Dutch in the same manner as do children monolingual in one of her languages. She was, according to De Houwer, already fully bilingual by the age of 2;7. Although lexical mixing was not a focus of De Houwer's analysis, the phenomenon was discussed. In the majority of Kate's mixed utterances, a single-word item, most often a noun from one language, was inserted into an utterance that was otherwise completely in the other language. These mixed utterances were well formed, that is structurally grammatical. De Houwer used this as evidence for the child's separate rule systems of the two languages.

Meisel (1989) also took issue with Volterra and Taeschner (1978), criticizing their stage of syntactic mixing for being too vaguely defined; he pointed out that the evidence given by Volterra and Taeschner was not sufficient to support the hypothesis that bilingual children must undergo an initial stage of syntactic mixing, a situation which would need to be explained by the child's processing both languages as a single system. Meisel argued that one could only consider those aspects of grammar where the two adult systems differed as valid empirical evidence for instances of syntactic mixing or of differentiation between systems. In addition, one should try to find evidence for or against a non-differentiated syntax in structural areas where the language production of monolingual children in each language differed. Meisel further suggested that if it could be shown that young bilingual children used linguistic structures in which the two adult target systems differed, this would constitute evidence against the one-system hypothesis. There now exists a large body of literature rebutting the "fused" system hypothesis, arguing instead that bilinguals have two distinct but interdependent systems from the very start (e.g. Genesee, 1989; Meisel, 1989; De Houwer, 1990; Döpke, 1992; Lanza, 1997; Deuchar & Quay, 2000).

While the one-versus-two-systems debate continues to attract new empirical studies, a more interesting question has emerged regarding the acquisition of bilingual and multilingual knowledge. More specifically, is bilingual and multilingual acquisition the same as monolingual acquisition? Theoretically, separate development is possible without there being any similarity with monolingual acquisition. Most researchers argue that multilingual children's language development is by and large the same as that of monolingual children. Nevertheless, as Genesee (2002) points

out, one needs to be careful about the kinds of conclusions one draws from such evidence. Similarities between bilingual and monolingual acquisition do not mean that (1) the two languages a bilingual child is acquiring develop in the same way or at the same speed, or that (2) the two languages a bilingual child is acquiring do not influence and interact with each other (see e.g. Paradis & Genesee, 1996; Döpke, 2000).

There is one area in which multilingual children clearly differ from monolingual children, namely, code mixing. Studies show that multilingual children mix elements from different languages in the same utterance as soon as they can produce two-word utterances (e.g. De Houwer, 1990; Lanza, 1997; Deuchar & Quay, 2000; and David, 2004). Like adult code-switching, multilingual children's language mixing is highly structured. The operation of constraints based on surface features of grammar, such as word order, is evident from the two-word/-morpheme stage onward, and the operation of constraints based on abstract notions of grammatical knowledge is most evident in multilingual children once they demonstrate such knowledge overtly (e.g. verb tense and agreement markings), usually around 2;6 years of age and older (see further Meisel, 1994; Koppe & Meisel, 1995). As Genesee (2002) points out, these findings suggest that, in addition to the linguistic competence to formulate correct monolingual strings, multilingual children have the added capacity to coordinate their two languages on-line in accordance with the grammatical constraints of specific languages during mixing. While these studies provide further evidence for the separate-development (or two-systems) argument, they also suggest that there are both quantitative and qualitative differences between multilingual and monolingual acquisition.

Although much of the language acquisition research focuses on children, learning languages can be a lifelong experience. The field of second language acquisition (SLA) addresses some of the fundamental issues of how learners who may have begun their lives as monolinguals acquire additional languages at a later time. For example, what effect does the timing of additional language acquisition have on the later-learned languages as well as earlier-acquired ones? Clearly one of the key objectives of second language acquisition is to become bilingual. But why do some learners appear to be able to achieve a much higher level of proficiency in the later-learned languages, and at a much faster rate than other learners? Can the attainment level in the later-learned languages be maintained when the speakers reach an advanced age? What aspects of their multilingual knowledge may be subject to attrition and loss? While many of these issues are typically addressed in SLA, which is generally considered to be different from bilingualism and multilingualism research, second language learners and other later-acquired language users are regarded as an important and distinctive group of bilinguals and multilinguals.

The third major area of linguistic research on bilingualism and multilingualism concerns how bilinguals put their knowledge of two or more languages to use. Earlier studies of multiple language use focused on language choice in different contexts and for different purposes. Fishman's domain analysis (2000 [1965]), for example, outlined the ways in which speakers make their language choices according to topic, setting, and participant. Gumperz (1982a) identified a range of discourse functions of bilingual code-switching, including quotation, addressee specification,

interjections, reiteration, message qualification, and personalization versus object-ivization. Such descriptive accounts laid the foundation for later, still developing research on the pragmatics of multilingual speech.

Invoking the notion of "contextualization" – the processes by which speakers construe the local and global contexts which are necessary for the interpretation of their linguistic and non-linguistic activities – Auer (1984, 1995) argued that multilinguals alternate their languages in conversation to build a frame of reference for the interpretation of each other's intentions. According to Auer, the interpreta-tion of function(s) or meaning(s) of code-switching is influenced by the sequential patterns of language choice. He proposed a distinction between discourse-related and participant-related code-switching. Discourse-related code-switching contributes to the organization of the ongoing interaction, while participant-related code-switching permits assessment by participants of the speaker's preference for and competence in one language or the other.

From the speaker's point of view, language choice allows them to calculate the relative costs and rewards of speaking one language rather than another. This is the premise on which Carol Myers-Scotton builds her "rational choice model." Under such a model, what makes choices "rational" is the premise that the speaker makes cognitive calculations that take account of how the speaker views available evidence that indicates likely outcomes of choices, but the speaker also considers his or her own values and beliefs. So rational choices are subjective, with the emphasis on mental calculations about getting the best outcome (Myers-Scotton & Bolonyai, 2001).

1.3.2 Psycholinguistic perspective

Psycholinguists working on bilingualism and multilingualism are interested in essen-tially the same three key issues – multilingual knowledge, multilingual acquisition and multilingual use. Yet the research methodologies are quite different from those of theoretical and descriptive linguistics. Psycholinguistic research tends to use experimental and laboratory methods to investigate multilingual behavior. They are less concerned with describing and explaining structures of multilingual speech, but more so with the cognitive processes involved in receiving and producing multilingual speech.

Psycholinguistic research on the cognitive organization and representation of bilingual and multilingual knowledge is inspired and influenced by the work of Weinreich. Focusing on the relationship between the linguistic sign (or *signifier*) and the semantic content (*signified*), Weinreich (1953) distinguished three types of bilinguals. In Type A, the individual combines a signifier from each language with a separate unit of signified. Weinreich called them "coordinative" (later often called "coordinate") bilinguals. In Type B, the individual identifies two signifiers but regards them as a single compound, or composite, unit of signified; hence "compound" bilinguals. Type C relates to people who learn a new language with the help of a previously acquired one. They are called "subordinative" (or "subordinate") bilinguals. His examples were from English and Russian:

(a)   'book'   'kniga'
        | |
      /buk/   /kn'iga/

(b)   'book' = 'kniga'
              /\
            /   \
       /buk/   /kn'iga/

(c)   'book'
          |
        /buk/
          |
        /kn'iga/

Weinreich's distinctions are often misinterpreted in the literature as referring to differences in the degree of proficiency in the languages. But in fact the relationship between language proficiency and cognitive organization of the bilingual individual, as conceptualized in Weinreich's model, is far from clear. Some "subordinate" bilinguals demonstrate a very high level of proficiency in processing both languages, as evidenced in grammaticality and fluency of speech, while some "coordinative" bilinguals show difficulties in processing two languages simultaneously (e.g. in code-switching or in "foreign" words identification tasks). It must also be stressed that in Weinreich's distinctions, bilingual individuals are distributed along a continuum from a subordinate or compound end to a coordinate end, and can at the same time be more subordinate or compound for certain concepts and more coordinate for others, depending on, among other things, the age and context of acquisition.

Weinreich's work influenced much of the psycholinguistic modeling of the bilingual lexicon. Potter, So, Von Echardt, and Feldman (1984) presented a reformulation of the manner in which bilingual lexical knowledge could be represented in the mind in terms of two competing models: the Concept Mediation Model and the Lexical Association Model. In the Concept Mediation Model, words of both L1 and L2 are linked to modal conceptual representations. In the Lexical Association Model, on the other hand, words in a second language are understood through L1 lexical representations. As can be seen in figure 1.1, the models are structurally equivalent
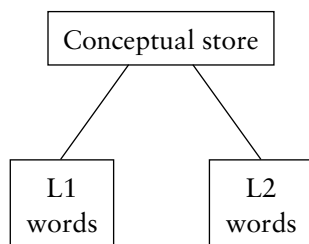

Figure 1.1: Concept Mediation Model