Children with Two Languages

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21.1 Introduction

The study of bi- (or multi-) lingual children has the potential to inform—or challenge—our ideas about the fundamental process of language learning, its timing and limits, and about the role of the environment in conjunction with factors internal to the child or the languages themselves.

Until recently, childhood bilingualism was considered a special case of language acquisition, rather than the majority phenomenon it is (Crystal, 2004). According to a topic search by Bialystok (2007), the number of articles on bilingualism in the corpus selected more than tripled between 1997 and 2005, from an average of 100 articles in 1997 to over 350 in 2005. One- and two-case studies are popular and instructive, but we are also witnessing the study of groups of children and the establishment of large government-funded projects like the Collaborative Research Center for Multilingualism in Hamburg and the recently instituted Centre for Research on Bilingualism in Theory and Practice at the University of Wales, Bangor. In such centers, much of the programmatic research is devoted to issues in bilingual acquisition.

Crystal (2004) proposes that the innate mechanisms that help children acquire their first language also help them acquire second or subsequent languages in early
childhood. In his view, the Language Acquisition Device, or “LAD,” (Chomsky, 1965) is really a “MAD,” or Multilingual Acquisition Device, so innate factors are as crucial for bilingual language acquisition as for monolingual acquisition. On the other hand, bilingual learning children’s more obvious dependence on relatively specific amounts of input from the environment has theoretical implications for the nature of the LAD (or MAD) and also more practically, for the kind of support parents and other interlocutors provide for language learners, what Bruner (1983) called the LASS, the Language Acquisition Support System.

In this chapter I first give a broad descriptive overview of childhood bilingualism and its many manifestations, especially behaviors unique to bilinguals. Then I compare early versus late acquisition of the second language and bilingual versus monolingual acquisition. Finally, I point to practical research on bilingual children in education and communication disorders.

21.2 Terms for Talking about Bilinguals

The term “bilingual” takes on slightly different meanings depending on whether it is used to describe an individual, a community, or a behavior. A person is “bi-lingual” if he or she can use two languages in communication. Similarly, a community is bilingual if some functions of community life take place in one language and other functions in another. A language practice is bilingual if it mixes elements of two languages either receptively or expressively, or both.

21.2.1 Classifications of Bilinguals by Skills
The consensus is that individuals who use more than one language fall on a spectrum. At one end is the simultaneous interpreter at the U.N. who speaks both languages as well as a native and is fully literate in both. At the other end are newborns who hear two languages spoken to them, but who cannot speak or understand even one language, much less two. In between these poles are all degrees of proficiency and use. Preschoolers who are just being introduced to a new language at school that is different from the one they speak at home are often called bilingual because, like the newborn, they have bilingual input and will probably speak two languages at some point in the near future. They will be considered true, active bilinguals when they have productive use of two grammars and can produce and understand novel sentences in both the first and second language, even if skills in the languages are not balanced. Often a bilingual has only one language that is at the same level as a monolinguals’ single language. Typically one language is dominant and the other is non-dominant, or weaker. Which language is dominant at any one point can change over time with new experience and new needs for one or the other language. Also, children younger than age 9 or 10 are vulnerable to loss, or attrition, of a language if they do not use it consistently.

21.2.2 Classification by Learning Context

Bilinguals differ according to how their two language communities relate to each other. If the learners’ dominant language is the community (or majority) language, they would be called “elite” or “elective” bilinguals—for example, French speakers in France who decide to learn Chinese. To be bilingual is a choice since the primary language will already serve their basic needs in the community. The opposite is a “heritage” or “folk”
or “immigrant” bilingual, for example Chinese speakers who move to France and must learn French for their daily life and livelihood.

Another defining characteristic is the place where the languages are learned and used. A “home language” may serve for primarily conversational purposes, what Cummins (1979) calls “Basic Interpersonal Communication Skills” (or BICS). More formal, academic language, typically learned at school or in formal settings, he called “Cognitive-Academic Language Proficiency” (or CALP). CALP engages all four modalities of language use: understanding, speaking, reading, and writing, whereas BICS are more likely oral language only. Those who can read and write as well as understand and speak both languages are bilingual and bi-literate. Those who can only understand and possibly read but do not speak or write the second language are passive bilinguals.

21.2.3 Classification by Timing

One common classification of bilinguals is based on when the languages were learned relative to one another. Child bilinguals can begin both languages at birth simultaneously or learn one first and then after that one is established, learn the next one sequentially (or successively). An infant bilingual is unambiguously a simultaneous learner, but a child bilingual could be either a simultaneous or sequential learner. The terms for this contrast are Bilingual First Language Acquisition (BFLA) and early Second Language Acquisition (early SLA). When one language is learned first and then another one learned as a second language, they are called L1 and L2. Both infant and child bilinguals are considered early bilinguals as opposed to someone learning a second language late, or after a critical age (yet to be determined).
It is not obvious what the limits are of “early” in early SLA nor what the nature of second language learning is for the child learner. Early language learning is unlike other complex behaviors, such as figure skating or playing the piano, which seem like “talents” and are normally distributed throughout the population. Children learning an L2 within an early sensitive period have a more universal expectation of success, as for other human endowments like walking or binocular vision (Hyltenstam & Abrahamsson, 2000). Everyone with sufficient exposure and without a specific handicap—such as deafness—achieves native or near-native fluency. By contrast, late second language acquisition is more like a sport, or a talent.

21.2.3.1 The age factor. It is a matter of some debate whether second language learners have access to innate mechanisms (the LAD or Universal Grammar, “UG”) specialized for language learning, or whether they must use more general learning principles which are less efficient for language tasks. Early accounts (e.g. Lenneberg, 1967) proposed that the cut-off between early second language learning (with UG) and late learning (with general learning principles) was puberty. However, studies of different language domains show no clear cut-off age but rather a gradual decline in ability for language tasks starting as early as age 7. Indeed, for some tasks, such as phonological discrimination in the laboratory, or processing the new language in the presence of noise, not every person who learned a second language before age 7 falls in the same range as monolingual learners (Caramazza et al. 1973; Hyltenstam & Abrahamsson, 2000). Still, in the real world, within four or five years of starting the second language, the “early sequential bilingual” is indistinguishable from the native
speaker. For many people in many parts of the world, the L2 becomes their primary language.

For syntax the age of 9 or 10 seems a promising candidate for the language divide between early and late language learning. Hahne (2001), using ERP measures, found strong differences in syntactic (but not semantic) processing between bilinguals whose age of acquisition of the second language was younger or older than 10. Also, before age 9, learners of a second language were more likely to adopt a preference for L2 syntactic structures than were older learners, whose preferences did not shift away from the L1 (Jamshidia & Marefat, 2006). For phonology, Caramazza et al.’s (1973) findings indicate that the divide comes earlier particularly in perception, whereas there is no age limit for learning vocabulary or the pragmatics of discourse in two languages, and the older learner is perhaps better than the younger learner in those domains.

In sum, “childhood bilingual” would be the general term for one who learned two languages natively before age 9, with the caution that the boundary between early and late is porous. Some rare individuals under 9 will not achieve native fluency (Ioup, 1989), and some individuals older than 9 will (DeKeyser & Larson-Hall, 2005). Even sequentially, the young child learns two languages in the implicit manner characteristic of first language acquisition. Given rich enough language interactions in two languages, children can learn them both without explicit, formal instruction.

21.2.3.2 Learning order. Also at stake in the difference between learning a language early or late is whether the second language is learned “from scratch,” independently from the first language, or whether it is filtered through the first language structures. In a University of Miami study of lexical learning by 18 bilingual-learning
infants (Pearson & Fernandez, 1994), most children were observed to be learning new words in both languages and seemed to be learning both languages "from the ground up." One child, however, learned no words in her second language that she did not already know in her first language. So despite having begun both languages at birth, she seemed to be filtering the second language through the first, like a second language learner. Other reports also indicate that transitory accents have been noted in preschoolers (Fantini, 1985; Leopold, 1939) and what looks like grammatical transfer (Dopke, 1998), or other influence from one language to the other (Paradis & Genesee, 1996), all indicating some degree of second language learning.

21.2.3 Relationships between the Two Languages of a Bilingual

Individuals can be balanced in their oral skills, but have a dominant language for reading and writing (or vice versa). Whether they are balanced or not, they can have their skills, like vocabulary, "distributed" between the languages (Oller & Pearson, 2002). For example, a scientist may know technical vocabulary learned in the L2 in that language only and not in the L1. Knowledge of household or sports terms may be more accessible in L1, and relatively fewer terms equally accessible in both.

In general, it is easier to learn a majority language than a minority language. That is, it takes more exposure to a minority language for the same degree of acquisition (Pearson et al., 1997; Vihman et al. 2006). When an elective/elite bilingual learns a second (minority) language, we expect the second language to be ADDED to the first. To learn French, the majority-language English speaker does not have to forget English first. French is added to English, in additive bilingualism (Lambert, 1977). When an
immigrant learns a second language, especially a child under 10, it is often at the expense of the first language, resulting in **subtractive bilingualism**, unless efforts are made to help the child continue growing the first language as well as the second.

The extreme case of subtractive bilingualism has been called "**serial monolingualism**," where one language replaces the other, and the individual ends up not being bilingual at all. Serial monolingualism is observed in foreign adoptees who leave their country at an early age and subsequently lose all contact with their native language. For example, Pallier et al. (2003) showed that in word recognition tests and neuro-imaging data, French adults who had been adopted from Korea between ages 3 and 7 showed no greater response to Korean than to another unknown language. More usually, the first language skills persist. In a study of processing, Kohnert and colleagues (1999, 2002) documented the time course of the switch in language dominance among bilinguals who did not learn their L2 until the start of school. Among these children, their dominance shifted, and the L2 at different times (for different skills and subskills) became the stronger language. Still, both languages advanced during the time they examined (age 6 to adult), but the L1 at a slower rate than the L2. The researchers did not observe that the L1 actually regressed.

Another distinction between types of bilinguals derives from observations of how individuals use their languages, and how much interaction is envisioned between the two languages. Cummins' (1979) description of **independent** versus **interdependent** development echoes the earlier distinction from Weinreich (1953) between **coordinate** versus **compound** bilinguals. A coordinate bilingual was envisioned as having two independent systems that develop in parallel, but with minimal connection or overlap
between them. Wierzbicka (2005) characterizes it as having “two sets of mental
furniture,” a suite for each language. A “compound” bilingual, by contrast, would have
only one set of mental furniture, with two sets of labels for the different pieces. The
languages are pictured as “interdependent.”

21.3 Bilingual Behaviors

Being bilingual also entails a certain amount of mental machinery involved, for
example, in labeling elements as to which language they are part of and in coordinating
the two languages. Psycholinguistic evidence indicates that both languages of a bilingual
are always activated (Francis, 2005), so there are elements of both conscious and
subconscious choice in which language gets processed and which language gets
suppressed in any situation.

21.3.1 Monolingual versus Bilingual “Mode” of Speaking

Grosjean (1989) protests that a bilingual “is not two monolinguals in one
person,” but in fact, some bilinguals operate in what he calls a “monolingual mode”
(Grosjean, 2001). That is, they switch between being a monolingual speaker of one
language with one person (or in one situation) to being a monolingual speaker of the
other language with another person. Other people do not feel their languages are so
separate from each other and they use both languages together in a “bilingual mode,” or
“rich language stew” (Gupta, 2006) when the situation allows. Most bilingual people,
regardless of whether they learned their languages together or separately, report that they
can operate in either a monolingual or bilingual mode, depending on whom they are
speaking with and what the situation requires.
21.3.2 Codeswitching (and Code-mixing)

A phenomenon unique to the bilingual mode is code switching, where two languages are used within the same utterance or turn. Bilinguals' seamless switching between languages (here called "codes") can happen either between sentences or within sentences at permissible points in the grammatical structure. The latter is often called code-mixing. Some bilinguals have negative attitudes about code-switching and resist the impulse to mix, but many others profess to prefer it. In many bilingual parts of the world, for example in India, Singapore, or south Florida, mixed language contexts are the standard, and people report it would feel unnatural to restrict conversations to one language (Gupta, 2006). There is also a growing bilingual literature from writers who flow lyrically back and forth between languages, writing for others with knowledge of both languages. (See de Courtivron, 2003; or the Nuyorican Poetry Cafe, 2007.)

Code-mixing used to be thought of as a failure of bilingual behavior. In fact, some of it is due to filling in words one does not know or cannot recall in one language, but code-mixing turns out to be a skilled behavior that people master only after they have considerable skill in both languages. The principal constraint involves having the utterance respect the grammar of both languages at once. This is readily accomplished by adding an invariant tag, or a quotation, which has no syntactic links with the previous material. For example, "He said he'd be late, n'est-ce pas?" ("isn't that right"). A second kind of switch happens within sentences but at clause boundaries, as in the example from Poplack (1980), "Sometimes I begin a sentence in English, y termino en espanol." (and I finish [it] in Spanish"). A word or a phrase from one language can also be embedded within a constituent in the grammar of the other language where it takes the
word order and morpho-syntax of what is called the matrix language frame (Myers-Scotton, 2001). Generally, only a small percentage of switches involve insertions of one word into the grammar of the other language. Allen (2007) gives examples from the highly inflected Inuktut language, where the inserted English material ("mushy") follows the word order of the matrix sentence and takes its word endings: *mushy-u-ngi-tu-rulu-alu-runa* ("[mushy]-be-NEG-one.which-little-EMPH-this.one ‘This little one isn’t mushy.’") Proper names and words with similar pronunciation are often "triggers," as in this example from Clyne (2003): "Holland was too *smaal voor ons. Het was te benauwd...* (‘too narrow for us. It was too oppressive’). The shared pronunciation of "smaal/small" appears to condition the switch from one language to the other.

Clyne (1980) noted that there is a micro-pause at the juncture where a switch takes place, and indeed in psycholinguistic experiments that force switching, the switch has been shown to have a measurable time cost. It takes longer to switch from a non-dominant language to the dominant language than vice versa (on average 143 milliseconds versus 85 ms). This may be counter-intuitive, but Meuter (2005) argues that this asymmetry indicates the speaker is working harder (subconsciously) to suppress a dominant language than a non-dominant language, and thus it takes longer to release the suppression.

21.3.4 Codeswitching in Children

Children’s mixed utterances have been examined to see whether there is a period of development during which their code-mixing is ungrammatical, or non-adultlike. While there are clearly some errors—just as adult speech contains performance errors that do not reflect the speaker’s competence—only a small percentage of children’s