CHAPTER

2 Foundations of Second Language Acquisition

CHAPTER PREVIEW

KEY TERMS

Multilingualism/ bilingualism
Monolingualism
Multilingual competence
Monolingual competence
Learner language
Positive transfer
Negative transfer
Fossilization
Poverty-of-the-stimulus

Most of us, especially in countries where English is the majority language, are not aware of the prevalence of multilingualism in the world today, nor the pervasiveness of second language learning. We begin this chapter with an overview of these points, and then go on to explore the nature of language learning, some basic similarities and differences between L1 and L2 learning, and "the logical problem of language acquisition." An understanding of these issues is a necessary foundation for our discussion of linguistic, psychological, and social perspectives on SLA in the next chapters. We follow this with a survey of the theoretical frameworks and foci of interest which have been most important for the study of SLA within each of the three perspectives.

The World of Second Languages

Multilingualism refers to the ability to use two or more languages. (Some linguists and psychologists use **bilingualism** for the ability to use two languages and **multilingualism** for more than two, but we will not make that distinction here.) **Monolingualism** refers to the ability to use only one. No one can say for sure how many people are multilingual, but a reasonable estimate is that at least half of the world's population is in this category. Multilingualism is thus by no means a rare phenomenon, but a normal and common occurrence in most parts of the world. According to François Grosjean, this has been the case as far back as we have any record of language use:

> [B]ilingualism is present in practically every country of the world, in all classes of society, and in all age groups. In fact it is difficult to find a society that is genuinely monolingual. Not only is bilingualism worldwide, it is a phenomenon that has existed since the beginning of language in human history. It is probably true that no language group has ever existed in isolation from other language groups, and the history of languages is replete with examples of language contact leading to some form of bilingualism. (1982:1)

Reporting on the more recent situation, G. Richard Tucker concludes that

> there are many more bilingual or multilingual individuals in the world than there are monolingual. In addition, there are many more children throughout the world who have been and continue to be educated through a second or a later-acquired language, at least for some portion of their formal education, than there are children educated exclusively via the first language. (1999:1)

Given the size and widespread distribution of multilingual populations, it is somewhat surprising that an overwhelming proportion of the scientific attention which has been paid to language acquisition relates only to monolingual conditions and to first language acquisition. While there are interesting similarities between L1 and L2 acquisition, the processes cannot be equated, nor can multilingualism be assumed to involve simply the same knowledge and skills as monolingualism except in more than one language. This point is made most cogently by Vivian Cook, who introduced the concept of **multilingual competence** (his term is "multi-competence") to refer to "the compound state of a mind with two [or more] grammars" (1991:112). This is distinguished from **monolingual competence** (or "monocompetence" in Cook's terminology), which refers to knowledge of only one language.

> L2 users differ from monolinguals in L1 knowledge; advanced L2 users differ from monolinguals in L2 knowledge; L2 users have a different metalinguistic awareness from monolinguals; L2 users have different cognitive processes. These subtle differences consistently suggest that people with multicompetence are not simply equivalent to two monolinguals but are a unique combination. (Cook 1992:557)

Table 2.1 Estimated L1/L2 distribution of numerically dominant languages

	L1 speakers (in millions)	L2 speakers (in millions)
Chinese	1,200	15
English	427	950
Spanish	266	350
Hindi	182	350

One message from world demographics is that SLA phenomena are immensely important for social and practical reasons, as well as for academic ones. Approximately 6,000 languages are spoken in the world, with widely varying distribution, and almost all of them have been learned as second languages by some portion of their speakers. By the year 2000, the four most commonly used languages were Chinese, English, Spanish, and Hindi, which were acquired by over 2 billion as L1s and almost 1.7 billion as L2s, as shown in Table 2.1 (based on Zhu 2001 and Crystal 1997b).

Even just among these four numerically dominant languages, there is great variance. Chinese is an L1 for many more people than any other language, and English is by far the most common L2. The British Council has estimated that more than 1 billion people are studying English as an L2 (Cook 2002:3), and the number may be closer to 1.75 billion if we include all varieties and functions of the language (McArthur 2001). In China alone this figure includes over 150 million English L2 learners, and millions more are being added as English instruction is further implemented at the primary level. There are now perhaps 15 million speakers of Chinese L2, but the increasing involvement and influence of China in international economic and political spheres is being accompanied by an increase in the election or need for people elsewhere to learn Mandarin Chinese, the official national language (different varieties, such as Cantonese and Taiwanese, are as different as German and Swedish). An indicator of this trend in the USA is that by 1998, the Modern Language Association reported that Chinese had become the sixth most commonly taught foreign language in US colleges and universities, and numbers are steadily growing. School districts around the country are also increasingly adding Chinese language courses to elementary and secondary curricula.

While multilingualism occurs in every country, for a variety of social reasons the distribution of multiple language use is quite unequal. In some countries, e.g. Iceland, very few people speak any other language than the national language on a regular basis, while in other countries, such as parts of west Africa, close to 100 percent of the speakers of the national language also speak another language. English L1 speakers often expect to be able to "get along" in English anywhere in the world they may travel for tourism, business, or diplomatic purposes, and may be less likely to become fluent in other languages in part for this reason.

Those who grow up in a multilingual environment acquire multilingual competence in the natural course of using two or more languages from

childhood with the people around them, and tend to regard it as perfectly normal to do so. Adding second languages at an older age often takes considerable effort, however, and thus requires motivation. This motivation may arise from a variety of conditions, including the following:

- Invasion or conquest of one's country by speakers of another language
- A need or desire to contact speakers of other languages in economic or other specific domains
- Immigration to a country where use of a language other than one's L1 is required
- Adoption of religious beliefs and practices which involve use of another language
- A need or desire to pursue educational experiences where access requires proficiency in another language
- A desire for occupational or social advancement which is furthered by knowledge of another language
- An interest in knowing more about peoples of other cultures and having access to their technologies or literatures. (Crystal 1997b)

Although the relative order in the listing of the world's numerically dominant languages (Table 2.1) remains relatively unchanged over the past few decades, with English by far the most commonly used L2 in the world, the motivation for L2 selection may have shifted significantly. One indicator of this shift for English was reported in Liu and Berger (2015:10). They showed a change of focus in research/publication activity by decade from ESL to EFL, as represented by articles in the *TESOL Quarterly* from 1969 to 2000+, and this trend continues. One implication suggested by these data is that this shift in professional focus may reflect changing language needs from assimilation of immigrants in the USA to motivations related to global economic and communicative needs. Most of this EFL context for professional attention is from the Asia/Asia Pacific region. Increasing implementation of English education in China, Japan, and elsewhere in Asia also appears to be a response to language demands of globalization (see, e.g., Barret 2015).

The numbers of L1 and L2 speakers of different languages can only be estimated. Reasons for uncertainty in reporting language data include some which have social and political significance, and some which merely reflect imprecise or ambiguous terminology. For example:

1. Linguistic information is often not officially collected

Census forms in many countries do not include questions on language background, presumably because there is no particular interest in this information, because it is impractical to gather, or because it is considered to be of a sensitive nature. In cases where responses concerning language would essentially identify minority group members, sensitivities can be either personal or political: personal sensitivities can arise if identification might lead to undesired individual, family, and community consequences; political sensitivities can be at issue if the government does not wish to recognize how many speakers of minority languages there are

in order to downplay the political importance of a group, or in order to emphasize cultural/linguistic homogeneity and cohesion by not according recognition to cultural/linguistic diversity.

2. Answers to questions seeking linguistic information may not be reliable

Respondents may not want to be identified as speakers of a minority language. For instance, this was the case for a survey which was conducted several years ago for a rural school district in California. The survey was of parents with preschool children, asking them about the language(s) used at home in order to anticipate future English L2 instructional program needs. Many Hispanic parents insisted that they spoke primarily English at home even when they could only understand and respond to the interviewers when questions were asked in Spanish. Their linguistic "misrepresentation" was likely motivated by fear that lack of English would trigger further questions about their US citizenship (a reasonable concern on their part, although not the school's intent). In other cases, respondents may say that they use the dominant language more than they actually do because they reject or are ashamed of their ethnic heritage and wish to assimilate, or because they are afraid of government oppression or social stigmatization. Others may similarly over-report dominant language use because they feel this is the appropriate answer to give official representatives, or in order to qualify for civil privileges, such as being allowed to vote.

On the other hand, respondents may over-report use of minority and ancestral languages because of pride in their heritage. There may also be over-reporting of minority language use in order to obtain more recognition, resources, or services for the groups with which they identify.

How questions are worded also commonly contributes to the unreliability and non-comparability of language data. For example, the following questions might all be intended to elicit the identity of speakers' L1, but the same speakers might respond differentially depending on which question is asked:

- What is your native language?
- What is your mother tongue?
- What language did you learn first as a child?
- What language was usually spoken in your home when you were a child?
- What language are you most likely to use with family and friends?
- What is your strongest language?

3. There is lack of agreement on definition of terms and on criteria for identification

It may be difficult for someone to answer the common census question, "What is your native language?" for example, if they acquired multilingual competence simultaneously in two languages. In this case, both are L1s, and either or both might be considered a "native language."

Such a question is also problematic for individuals whose **language dominance** (or relative fluency) has shifted from their L1 to a language learned later.

Another issue is the degree of multilingualism. What level of proficiency is needed before one claims to have multilingual competence, or to "know" a second language? Does reading knowledge alone count, or must one also be able to carry on a conversation? What about languages that have been learned only in relation to limited domains or for special purposes? Do claims of multilingualism require near-balance in ability to function in multiple languages, or does multilingual competence include even early stages of L2 learning (the view in much SLA research)?

Perhaps the most basic definitional basis for unreliability in statistics lies in the meaning of "language" itself, for what counts as a separate language involves social and political (as well as linguistic) criteria. For instance, religious differences and the use of different writing systems result in Hindi and Urdu being counted as distinct languages in India, although most varieties are mutually intelligible; on the other hand, mutually unintelligible "dialects" of Chinese (such as Mandarin and Cantonese) are counted as the same language when emphasis on national cohesion is desired. Similar examples arise when languages are reclassified, a process which may accompany political change. For instance, the demise of Yugoslavia as a political entity led to the official distinction as separate languages of Bosnian and Montenegrin, which had been categorized within former Serbo-Croatian (itself a single language divided into national varieties distinguished by different alphabets because of religious differences). Social status or prestige may also play a role, as in whether Haitian Creole is to be considered a separate language or a variety of French. The creole originated as a contact language between slaves who spoke African languages and French-speaking slave traders and colonists, evolving its own systematic grammar while incorporating vocabulary from French. Linguists classify the creole as a separate language because its grammar and usage are quite distinct from French. In contrast, some people disparage the creole as not a "real" language, but merely an inferior variety of French. Recognition of this and other creoles as full-fledged languages goes beyond linguistic consideration because such recognition strengthens the social identity and status of the people who speak them. There are also potentially important educational implications. For instance, when teachers recognize that native speakers of Haitian Creole are really learning a second language in acquiring French, they are likely to use different instructional methods. Thus teachers no longer view their task as "correcting" or "cleaning up" their students' "bad French," and are more likely to feel that the second language can simply be added to the first rather than having to replace it. Regrettably, there is a common attitude among educators, sometimes pursued with almost religious fervor, that socially "inferior" or "uneducated" varieties of a language are a moral threat and should be completely eradicated.

The Nature of Language Learning

Much of your own L1 acquisition was completed before you ever came to school, and this development usually takes place without any conscious effort. By the age of six months infants have produced all of the vowel sounds and most of the consonant sounds of any language in the world, including some that do not occur in the language(s) their parents speak. If children hear English spoken around them, they will learn to discriminate among those sounds that make a difference in the meaning of English words (the **phonemes**), and they will learn to disregard those that do not. If the children hear Spanish spoken around them, they will learn to discriminate among some sounds the English speaker learns to ignore, as between the flapped *r* in *pero* 'but' and the trilled *rr* in *perro* 'dog,' and to disregard some differences that are not distinctive in Spanish, but vital to English word meaning, as the *sh* and *ch* of *share* and *chair*.

On average children have mastered most of the distinctive sounds of their first language before they are three years old, and an awareness of basic discourse patterns such as conversational turn-taking appear at an even earlier age. Children control most of the basic L1 grammatical patterns before they are five or six, although complex grammatical patterns continue to develop through the school years.

The same natural and generally effortless learning processes take place when there is significant exposure to more than one language in early childhood. If young children hear and respond to two (or more) languages in their environment, the result will be **simultaneous multilingualism** (multiple L1s acquired by about three years of age). As noted in the first chapter, simultaneous multilingualism is not within the usual scope of study in SLA, which focuses on **sequential multilingualism** (L2s acquired after L1).

Our understanding of (and speculation about) how children accomplish the early mastery of L1(s) has changed radically in the past sixty years or so, primarily owing to developments in linguistics and psychology. It was once suggested that first language acquisition is in large part the result of children's natural desire to please their doting parents, who wait impatiently for them to utter a recognizable word. Yet the offspring of even relatively indifferent parents successfully acquire language at about the same rate. Others argued that children's language acquisition is purposive, that they develop language because of their urge to communicate their wants and needs to the people who take care of them. This has not proven to be an adequate explanation, however, since within young children's limited sphere of activity, communicative needs seem to be largely satisfied by gesture and such non-speech sounds as squeals, whines, grunts, and cries.

Perhaps the most widely held view by the middle of the twentieth century was that children learn language by imitation (the **stimulus-response theory**). While it is true that much of children's initial language learning can be attributed to their imitation of sounds and words around them, many of their utterances are quite original and cannot be explained as imitations at all, since they can never have heard them before.

The Role of Natural Ability

Humans are born with a natural ability or **innate capacity** to learn language. Such a predisposition must be assumed in order to explain several facts:

- Children begin to learn their L1 at the same age, and in much the same way, whether it is English, Bengali, Korean, Swahili, or any other language in the world.
- Children master the basic phonological and grammatical operations in their L1 by the age of about five or six, as noted above, regardless of what the language is.
- Children can understand and create novel utterances; they are not limited to repeating what they have heard, and indeed the utterances that children produce are often systematically different from those of the adults around them.
- There is a sensitive cut-off age for L1 acquisition, beyond which it may never be complete.
- Acquisition of L1 is not simply a facet of general intelligence.

In viewing the natural ability to acquire language in terms of **innate capacity**, we are saying that part of language structure is genetically "given" to every human child. All languages are incredibly complex systems which no children could possibly master in their early years to the degree they succeed in doing so if they had to "learn" them in the usual sense of that word. Children's ability to create new utterances is remarkable, and their ability to recognize when a string of common words does *not* constitute a grammatical sentence in the language is even more so. For example, children acquiring English L1 can recognize early on that *Cookies me give* is ungrammatical. They have never been told, surely, that the particular group of words is not an English sentence, but they somehow know, nevertheless. If a child had to consciously learn the set of abstract principles that indicate which sequences of words are possible sentences in their language as opposed to those that are not, only the smartest would learn to talk, and it would take them many more years than it actually does. This is part of "the logical problem of language acquisition," which is discussed further below.

A hypothesis which many linguists and psychologists support is that a great many of these abstract principles are common to all language, as opposed to the principles that are language-specific (i.e. specific to particular languages). According to this view, those principles that are universal are "programmed" into all human children just by virtue of their being human, and this accounts for children's ability to process the smorgasbord of sounds and words that they hear, and their ability to come up with essentially the same structures as other children.

To explain why all L1 development follows essentially the same sequence, we may view children's language development as a gradual process of acquiring a more and more complex set of structures and rules for combining them. Because the stages and levels of language development can be delineated and studied, it is possible to talk about

child grammar: that is, it is possible to systematically describe the kinds of utterances a child can produce or understand at a given maturational level. The differences between their grammar and that used by adults are not viewed as failures on the part of the children, but are considered the normal output of children at that level of development. As children mature, so do their language abilities. Since certain grammatical processes are more complex than others, they require a higher maturational level than simpler ones. As Jean Piaget observed several decades ago (e.g. 1926), in order to master complexities in their L1 which are beyond their present linguistic grasp, what normal children need is additional time, not additional stimuli.

The *rate* of progression through stages of language development can vary radically among individual children, even as the *order* of development is relatively invariant both for different children and for different languages. This is because the rate may be influenced by individual factors, while the order is "primarily determined by the relative semantic and grammatical complexity of constructions" (Brown 1973:59).

Saying that there is a "sensitive age" for L1 acquisition means that normal development does not occur if the process is unlikely to begin in childhood. Even when acquisition starts at an early age, there is evidence that progress in language development usually begins to slow sharply at about the age of puberty – no matter what level has been reached. Severely retarded children, who have a slower rate of development (but in the same relative sequence), are likely never to develop a complete adult grammar for this reason. The effects of age on both L1 and L2 acquisition are discussed in Chapter 4 as the **Critical Period Hypothesis**.

Given the complexity of language, it is no wonder that even adults with their mature intellects seldom attain native fluency in a new language. But almost all children, with their limited memories, restricted reasoning powers, and immature analytical abilities, almost always acquire fluency in any language to which they are adequately exposed, and in which they interact with others. The ability to acquire language could not be dependent upon intellectual powers alone, since children with clearly superior intelligence do not necessarily begin to speak earlier, or with better results, than children of ordinary intellect.

The Role of Social Experience

Not all of L1 acquisition can be attributed to innate ability, for language-specific learning also plays a crucial role. Even if the universal properties of language are preprogrammed in children, they must learn all of those features which distinguish their L1 from all other possible human languages. Children will never acquire such language-specific knowledge unless that language is used with them and around them, and they will learn to use only the language(s) used around them, no matter what their linguistic heritage. American-born children of Korean or Greek ancestry will never learn the language of their grandparents if only English surrounds them, for instance, and they will find their ancestral language just as hard to learn as any other English speakers do if they attempt to learn

it as an adult. Appropriate social experience, including L1 input and interaction, is thus a necessary condition for acquisition.

Intentional L1 teaching to young children is not necessary and indeed may have little effect. Some parents "correct" their children's immature pronunciation and grammar but most do not, and there is no noticeable change in rate of acquisition among children who receive such instruction. Some adults simplify both grammar and word choice, adding more complex structures as the child does, but adults' notion of "simplicity" does not correspond to the actual sequence in language acquisition. Some adults imitate children's language production, and in this imitation, they sometimes provide expansions of children's structures (such as saying *Yes, that's a big, brown dog* in response to the child saying *That dog*). The expansion may play a role in developing children's ability to understand new forms, but it cannot be considered necessary since many children do not receive this type of input and still develop language at essentially the same rate.

Sources of L1 input and interaction vary depending on cultural and social factors. Mothers' talk is often assumed to be the most important source of early language input to children, but fathers or older siblings have major childrearing responsibilities in many societies and may be the dominant source of input, and wealthier social classes in many cultures delegate most of the childrearing responsibilities to nannies or servants. The relative importance of input from other young children also varies in different cultures, as does the importance of social institutions such as nursery schools.

As long as children are experiencing adequate L1 input and interaction from people around them, the rate and sequence of their phonological and grammatical development does not appear to vary systematically according to its source, although children's pronunciation is naturally influenced by the regional and social varieties or styles of the L1 which they hear. There is considerable variance in vocabulary knowledge depending on social context, however, because vocabulary is typically learned in conjunction with social experiences. There is also variation to some extent in what functions of speaking children learn to use at an early age depending on social experience. For example, children who attend nursery school are often more advanced in development of verbal skills that are needed for controlling and manipulating other children than are children who are raised at home without the experience of interacting and competing with peers.

When young children's social experience includes people around them using two or more languages, they have the same innate capacity to learn both or all of them, along with the same ability to learn the language-specific features of each without instruction. Acquiring other languages after early childhood presents some significant differences, which we will explore in the following section.

L1 versus L2 Learning

This brief comparison of L1 and L2 learning is divided into three phases. The first is the **initial state**, which many linguists and psychologists believe includes the underlying knowledge about language structures and principles

Table 2.2 First vs. second language development

L1		L2
	INITIAL STATE	
Innate capacity		Innate capacity? L1 knowledge World knowledge Interaction skills
	INTERMEDIATE STATES	
Child grammar		**Learner language**
	Basic processes	
Maturation		Transfer
	Necessary conditions	
Input Reciprocal interaction		Input
	Facilitating conditions	
		Feedback Aptitude Motivation Instruction .....
	FINAL STATE	
Native competence		Multilingual competence

that is in learners' heads at the very start of L1 or L2 acquisition. The second phase, the intermediate states, covers all stages of basic language development. This includes the maturational changes which take place in what we have called "child grammar," and the L2 developmental sequence which is known as **learner language** (also **interlanguage** or **IL**). For this phase, we will compare processes of L1 and L2 development, and then compare the conditions which are necessary or which facilitate language learning. The third phase is the **final state**, which is the outcome of L1 and L2 learning.

A simplified representation of these three phases is included in Table 2.2, along with a listing of some major points of contrast between L1 and L2 learning which we will consider here.

Initial State

While the initial state in children's minds for L1 almost surely is an **innate capacity** to learn language, it is not at all certain whether or not such natural ability is part of the initial state in older learners for L2 acquisition (hence the "?" in Table 2.2). Some linguists and psychologists believe that the genetic predisposition which children have from birth to learn

language remains with them throughout life, and that differences in the final outcomes of L1 and L2 learning are attributable to other factors. Others believe that some aspects of the innate capacity which children have for L1 remain in force for acquisition of subsequent languages, but that some aspects of this natural ability are lost with advancing age. Still others believe that no innate capacity for language acquisition remains beyond childhood, and that subsequent languages are learned by means which are more akin to how older learners acquire other domains of knowledge, such as mathematics or history.

Because it is impossible for us to observe mental capacity for language learning directly, the different beliefs are based largely on theoretical assumptions and are tested by indirect methods which individuals who come from different disciplinary perspectives may not agree on. For example, many linguists rely on learners' ability to judge which L2 utterances are not possible (such as the *Cookies me give* example mentioned above), an aspect of children's L1 competence which is attributed to innate capacity. Many who take a social perspective tend to reject such judgments of (un)grammaticality as convincing evidence because they result from artificial tasks which do not include actual circumstances of L2 interpretation and use. Many who take a psychological perspective in turn reject socially constituted evidence (such as natural language production) because the many variables which go along with actual social usage cannot be controlled for experimental investigation. So, although the question of the extent to which innate capacity for language acquisition remains available in SLA is a very interesting and important one, it is likely to remain unresolved for some years to come.

There is complete agreement, however, that since L2 acquisition follows L1 acquisition, a major component of the initial state for L2 learning must be prior knowledge of L1. This entails knowledge of how language (in general) works, as well as a myriad of language-specific features which are only partially relevant for production of the new L2. This prior knowledge of L1 is responsible for the **transfer** from L1 to L2 during second language development, which we will consider as part of the second phase of L1 versus L2 learning.

L2 learners also already possess real-world knowledge in their initial state for language acquisition which young children lack at the point they begin learning their L1. This has come with cognitive development and with experience by virtue of being older. The initial state for L2 learning also includes knowledge of means for accomplishing such interactional functions as requesting, commanding, promising, and apologizing, which have developed in conjunction with L1 acquisition but are not present in the L1 initial state.

The initial state of L1 learning thus is composed solely of an innate capacity for language acquisition which may or may not continue to be available for L2, or may be available only in some limited ways. The initial state for L2 learning, on the other hand, has resources of L1 competence, world knowledge, and established skills for interaction, which can be both an asset and an impediment.

Intermediate States

Both L1 and L2 learners go through intermediate states as they progress from their initial to their final state linguistic systems. There is similarity in that the development of both L1 and L2 is largely systematic, including predictable sequencing of many phenomena within each and some similarity of sequencing across languages, and in the fact that L1 and L2 learners both play a creative role in their own language development and do not merely mimic what they have heard or been taught.

Processes

Development, as we have seen, is a spontaneous and largely unconscious process in L1 child grammar, where it is closely correlated with cognitive maturation. As noted above, as children mature, so do their language abilities. In contrast, the development of **learner language** (or **interlanguage**) for L2 learners occurs at an age when cognitive maturity cannot be considered a significant factor; L2 learners have already reached a level of maturity where they can understand and produce complex utterances in their L1, and level of maturity is not language-specific. Processes other than maturation must be involved to explain development in SLA.

Just as we cannot directly observe mental capacity, we cannot directly observe developmental processes, but we can infer from the utterances which learners understand and produce at different stages what processes are possibly taking place. This addresses the fundamental *how* question of SLA, which we will explore from different perspectives in the chapters which follow. While answers to this question vary, there is general agreement that cross-linguistic influence, or **transfer** of prior knowledge from L1 to L2, is one of the processes that is involved in interlanguage development. Two major types of transfer which occur are:

- **positive transfer**, when an L1 structure or rule is used in an L2 utterance and that use is appropriate or "correct" in the L2; and
- **negative transfer** (or **interference**), when an L1 structure or rule is used in an L2 utterance and that use is inappropriate and considered an "error."

Cross-linguistic influence occurs in all levels of IL: vocabulary, pronunciation, grammar, and all other aspects of language structure and use. Positive transfer facilitates L2 learning because an L1 structure or rule that also works for L2 means that a new one doesn't have to be learned. For example, a word that has essentially the same form and meaning in both languages can transfer appropriately from L1 to L2: e.g. *exterior* 'outside' is a word in both Spanish and English (pronounced differently, but with the same spelling and meaning). Negative transfer of L1 features can often be inferred from forms in the second language which are unlike any that are likely to be produced by a native speaker of the L2, or are an integration of elements which would not occur in monolingual speech. Inappropriate transfer of L1 pronunciation to L2 is detectable as a "foreign accent" in a non-native speaker's production, and is probably the most common and most easily recognized aspect of L1 influence. Interference

at the grammatical level is illustrated in the following utterances made by learners of English L2, which a native English speaker would be unlikely to produce:

Can I assist to your class?
I have been always to class on time.

We have noted that, in addition to L1 competence, older children and adults have access to world knowledge that has come with cognitive development and with experience, and this is also available for L2 use during the intermediate states. The concepts associated with advanced world knowledge are often much too complex for adequate expression with limited L2 ability, but they may be at least partially conveyed in context, and they are likely to stimulate L2 vocabulary learning. For example, older children in immigrant families may enroll in US schools with prior knowledge of academic subject areas (such as science and mathematics) which are at least equal to or more advanced than US curriculum expectations, but they may lack the English L2 competence to express what they know. These students do not need to learn those concepts again, since the concepts themselves are not dependent on any specific language; they merely require new language-specific forms to represent them in L2. Even advanced international students in such fields as engineering and computer science find it much easier to learn English L2 terms for concepts they have already acquired than native English speakers do for acquiring those terms and concepts to begin with.

Adults in immigrant families to the USA often know how to drive a car, and they are likely to have vocational knowledge and skills which transfer to the new social setting. Some English must be learned before they can pass a test for a driver's license in the USA along with a few new rules and regulations, but they don't need to learn how to drive all over again. Similarly, job-related English can generally be added with relative ease to prior vocational knowledge and skills. Transfer of knowledge and skills to an L2 setting is clearly made easier when L1 support is available as part of L2 learning, and when key terminology is shared across languages, but conceptual transfer occurs in any case.

Many skills for social interaction which have been developed in L1 also transfer to L2, as we suggested above. These often also involve positive transfer and facilitate IL development, but some are inappropriate for L2 contexts. Examples of how communication can be achieved with limited shared linguistic means are presented in Chapter 5.

Necessary Conditions

Language input to the learner is absolutely necessary for either L1 or L2 learning to take place. Children additionally require direct, reciprocal interaction with other people for L1 learning to occur. They cannot learn L1 exclusively from such experiences as listening to radio or watching television. In contrast, while face-to-face social interaction generally facilitates SLA, it is not a necessary condition. It is possible for

some individuals to reach a fairly high level of proficiency in L2 even if they have input only from such physically or temporally more remote sources as radio, television, or written text. Evidence of such L2 learning is found among highly motivated individuals whose L2 input was limited entirely to electronic media and books because of geographical or political isolation. The role of input and interaction in SLA is also discussed in Chapter 5.

Facilitating Conditions

While L1 learning by children occurs without instruction, and while the rate of L1 development is not significantly influenced by correction of immature forms or by degree of motivation to speak, both rate and ultimate level of development in L2 can be facilitated or inhibited by many social and individual factors. Identifying and explaining facilitating conditions essentially addresses the fundamental *why* question of SLA: *Why* are some L2 learners more successful than others?

Some of the conditions which will be explored in chapters that follow are:

- **Feedback**, including correction of L2 learners' errors
- **Aptitude**, including memory capacity and analytic ability
- **Reason**, or need and desire to learn
- **Instruction**, or explicit teaching in school settings

Final State

The **final state** is the outcome of L1 or L2 learning. The final state of L1 development – by definition – is native linguistic competence. While vocabulary learning and cultivation of specialized **registers** (such as formal academic written style) may continue into adulthood, the basic phonological and grammatical systems of whatever language(s) children hear around them are essentially established by the age of about five or six years (as we have already noted), along with vocabulary knowledge and interaction skills that are adequate for fulfilling communicative functions. This is a universal human achievement, requiring no extraordinary aptitude or effort.

The final state of L1 linguistic competence is not completely uniform, although it is more so than the final state of competence for L2 learners. This is primarily for social reasons (to be discussed in Chapter 5).

On the other hand, the final state of L2 development – again by commonly held definition – can never be totally native linguistic competence, and the level of proficiency which learners reach is highly variable. Some learners reach at least "near-native" or "native-like" competence in L2 along with native competence in L1, but many cease at some point to make further progress toward the learning target in response to L2 input, resulting in a **final state** which still includes instances of L1 interference or creative structures different from any that would be produced by a native speaker of the L2 (a "frozen" state of progress known as **fossilization** in SLA). The complex of factors which

contribute to differential levels of ultimate multilingual development is of major interest for both SLA theory and second language teaching methods (see e.g. Davies 2003; Han and Odlin 2006). One question that is receiving increasing attention for SLA theory and research is whether exceptionally successful learners actually become as proficient in their L2 as in their L1. This possibility is blurring the traditional definition of "native speaker" in interesting ways.

The Logical Problem of Language Learning

How is it possible for children to achieve the final state of L1 development with general ease and complete success, given the complexity of the linguistic system which they acquire and their immature cognitive capacity at the age they do so? This question forms the **logical problem of language learning**. The "problem" as it has been formulated by linguists relates most importantly to syntactic phenomena. As noted in the preceding section, most linguists and psychologists assume this achievement must be attributed to innate and spontaneous language-learning constructs and/or processes. The notion that innate linguistic knowledge must underlie language acquisition was prominently espoused by Noam Chomsky (1957, 1965), who subsequently formulated a theory of **Universal Grammar** which has been very influential in SLA theory and research (to be discussed in Chapter 3). This view has been supported by arguments such as the following:

1. Children's knowledge of language goes beyond what could be learned from the input they receive

This is essentially the **poverty-of-the-stimulus** argument. According to this argument, children often hear incomplete or ungrammatical utterances along with grammatical input, and yet they are somehow able to filter the language they hear so that the ungrammatical input is not incorporated into their L1 system. Further, children are commonly recipients of simplified input from adults, which does not include data for all of the complexities which are within their linguistic competence. In addition, children hear only a finite subset of possible grammatical sentences, and yet they are able to abstract general principles and constraints which allow them to interpret and produce an infinite number of sentences which they have never heard before. Even more remarkable, children's linguistic competence includes knowledge of which sentences are *not* possible, although input does not provide them with this information: i.e. input "underdetermines" the grammar that develops. Almost all L1 linguistic input to children is **positive evidence**, or actual utterances by other speakers which the children are able to at least partially comprehend. Unlike many L2 learners, children almost never receive any explicit instruction in L1 during the early years when acquisition takes place, and they seldom receive any **negative evidence**, or correction (and often fail to recognize it when they do).

2. Constraints and principles cannot be learned

Children's access to general constraints and principles which govern language could account for the relatively short time it takes for the L1 grammar to emerge, and for the fact that it does so systematically and without any "wild" divergences. This could be so because innate principles lead children to organize the input they receive only in certain ways and not others. In addition to the lack of negative evidence mentioned above, constraints and principles cannot be learned in part because children acquire a first language at an age when such abstractions are beyond their comprehension; constraints and principles are thus outside the realm of learning processes which are related to general intelligence. Jackendoff (1997) approaches this capacity in children as a "paradox of language acquisition":

> If general-purpose intelligence were sufficient to extract the principles of mental grammar, linguists (or psychologists or computer scientists), at least some of whom have more than adequate general intelligence, would have discovered the principles long ago. The fact that we are all still searching and arguing, while every normal child manages to extract the principles unaided, suggests that the normal child is using something other than general-purpose intelligence. (p. 5)

3. Universal patterns of development cannot be explained by language-specific input

Linguistic input always consists of the sounds, words, phrases, sentences, and other surface-level units of a specific human language. However, in spite of the surface differences in input (to the point that people who are speaking different languages can't understand one another), there are similar patterns in child acquisition of any language in the world. The extent of this similarity suggests that language universals are not only constructs derived from sophisticated theories and analyses by linguists, but also innate representations in every young child's mind.

The Logical Problem of Language Learning

For a long time, people thought that children learned language by imitating those around them. More recent points of view claim that children have an innate language ability. There are three major arguments supporting this notion.

First of all, children often say things that adults do not. This is especially true of children's tendency to use regular patterns to form plurals or past tenses on words that would have irregular formation. Children frequently say things like *goed*, *mans*, *mouses*, and *sheeps*, even though it is highly unlikely that any adult around them ever produced such forms in front of them.

We also know that children do not learn language simply by imitation because many do not imitate adult language well when asked to do so. For example (adapted from Crystal 1997b:236):

CHILD: He taked my toy!
MOTHER: No, say "he took my toy."
CHILD: He taked my toy!
(Dialogue repeated seven times.)
MOTHER: No, now listen carefully: say "*He took my toy*."
CHILD: Oh! He taked my toy!

Next, children use language in accordance with general universal rules of language even though they have not yet developed the cognitive ability necessary to understand these rules. Therefore, we know that these rules are not learned from deduction or imitation.

Finally, patterns of children's language development are not directly determined by the input they receive. The age at which children begin to produce particular language elements does not necessarily correspond to their frequency in input. Thus, we must assume that something besides input triggers the developmental order in children's language.

If we extend the logical problem from L1 acquisition to SLA, we need to explain how it is possible for individuals to achieve multilingual competence when that also involves knowledge which transcends what could be learned from the input they receive. In other words, L2 learners also develop an underlying system of knowledge about that language which they are not taught, and which they could not infer directly from anything they hear (see White 1996). As we have already seen, however, in several important respects L1 and L2 acquisition are fundamentally different; the arguments put forth for the existence of an innate, language-specific faculty in young children do not all apply to L2 learners since they are not uniformly successful, they are typically more cognitively advanced than young children, they may receive and profit from instruction and negative evidence, and they are influenced by many factors which seem irrelevant to acquisition of L1.

It is widely accepted that there is an innate capacity involved in L1 acquisition by young children (although many do not agree with Chomsky's particular formulation of its nature), but there is less certainty about the continued availability of that capacity for acquiring an L2. Still, we do need to explain how multilingual competence transcends input, and why there are such widely differential outcomes of SLA – ranging from L2 performance which may be perceived as native to far more limited L2 proficiency. This will be an important question to keep in mind as we review theories and findings on SLA from different perspectives, since it has provided a topic of inquiry for much of the history of this field.

Most of what we now know about L1 versus L2 learning is based on study of L1 learning by young children and L2 learning by older children or adults. It is therefore sometimes difficult to isolate differential factors and results that can be attributed to age versus multiple language learning. Many of us believe that children who begin to receive multiple language input between birth and about three years of age can acquire more than one language

simultaneously by essentially the same processes and with the same results. While this belief is probably true, it ignores the fact that many such children do **not** reach the same final state in each language. Understanding differential levels of multilingual achievement in young children will require more attention to facilitating conditions for language development, including social and cognitive as well as innate and maturational factors. (See Ellis 2008:628–31 for a discussion of more comprehensive models of SLA which incorporate UG and de Houwer 2009 and Ågren et al. 2014 for findings on the effect of age and different socializing environments.)

One possible explanation for variability in both L1 and L2 development is that acquisition does not involve a single basic process, but is rather a complex of mechanisms for every learner. These may sequentially or simultaneously include innate knowledge, recognition of statistical occurrences in input, and different features of language which depend more on inflectional or deductive components. (For an overview of this perspective, see Lidz and Gagliardi 2015.)

Frameworks for SLA

Interest in second language learning and use dates back many centuries (see e.g. McCarthy 2001), but it is only since the 1960s that scholars have formulated systematic theories and models to address the basic questions in the field of SLA which were listed in Chapter 1: (1) *What* exactly does the L2 learner know? (2) *How* does the learner acquire this knowledge? (3) *Why* are some learners more successful than others? As we noted earlier, different approaches to the study of SLA can be categorized as primarily based on *linguistic*, *psychological*, and *social* frameworks. Each of these perspectives will be the subject of a separate chapter, although we should keep in mind that there are extensive interrelationships among them.

Important theoretical frameworks that have influenced the SLA approaches which we will consider are listed in Table 2.3, arranged by the discipline with which they are primarily associated, and sequenced according to the decade(s) in which they achieved relevant academic prominence.

Prior to the 1960s, interest in L2 learning was tied almost exclusively to foreign language teaching concerns. The dominant linguistic model through the 1950s was **Structuralism** (e.g. Bloomfield 1933), which emphasized the description of different levels of production in speech: **phonology** (sound systems), **morphology** (composition of words), **syntax** (grammatical relationships of words within sentences, such as ordering and agreement), **semantics** (meaning), and **lexicon** (vocabulary). The most influential cognitive model of learning that was applied to language acquisition at that time was **Behaviorism** (Skinner 1957), which stressed the notion of habit formation resulting from **S-R-R**: **stimuli** from the environment (such as linguistic input), **responses** to those stimuli, and **reinforcement** if the responses resulted in some desired outcome. Repeated S-R-R sequences are "learned" (i.e. strong stimulus-response pairings become "habits"). The intersection of these two models formed the disciplinary framework for the **Audiolingual Method**, an approach to language teaching which emphasized repetition

Table 2.3 Frameworks for study of SLA

Timeline	Linguistic (Chapter 3)	Psychological (Chapter 4)	Social (Chapter 5)
1950s and before	Structuralism	Behaviorism	Sociocultural Theory
1960s	Transformational-Generative Grammar	Neurolinguistics Information Processing	Ethnography of Communication Variation Theory
1970s	Functionalism	Humanistic models	Acculturation Theory Accommodation Theory
1980s	Principles and Parameters Model	Connectionism	Social Psychology
1990s	Minimalist Program	Processability	Interactionist approaches
2000s	Interfaces	Complexity Theory	Computer-Mediated Communication

and habit formation that was widely practiced in much of the world at least until the 1980s. Although it had not yet been applied to second language concerns, Vygotsky's **Sociocultural Theory** (1962 in English translation) was also widely accepted as a learning theory by mid-century, emphasizing interaction with other people as critical to the learning process. This view is still influential in SLA approaches which are concerned with the role of input and interaction.

Linguistic

There have been two foci for the study of SLA from a linguistic perspective since 1960: **internal** and **external**. The **internal focus** has been based primarily on the work of Noam Chomsky and his followers. It sets the goal of study as accounting for speakers' internalized, underlying knowledge of language (**linguistic competence**), rather than the description of surface forms as in earlier Structuralism. The **external focus** for the study of SLA has emphasized language use, including the functions of language which are realized in learners' production at different stages of development.

Internal Focus

The first linguistic framework with an internal focus is **Transformational-Generative Grammar** (Chomsky 1957, 1965). The appearance of this work revolutionized linguistic theory and had a profound effect on the study of both first and second languages. Chomsky argued convincingly that the behaviorist theory of language acquisition is wrong because it cannot explain the creative aspects of our linguistic ability. He called attention to

the "logical problem of language acquisition," which we discussed earlier in this chapter, and claimed the necessity of assuming that children begin with an **innate capacity** which is biologically endowed. These views have dominated most linguistic perspectives on SLA to the present day.

This framework was followed by the **Principles and Parameters Model** and the **Minimalist Program**, also formulated by Chomsky. Specification of what constitutes "innate capacity" in language acquisition was revised to include more abstract notions of general principles and constraints that are common to all human languages as part of **Universal Grammar**. The Minimalist Program added distinctions between lexical and functional category development, as well as more emphasis on the acquisition of feature specification as a part of lexical knowledge.

Another development within this theoretical approach has focused on the **linguistic interfaces** between different modules of language such as lexicon and morphology, syntax and semantics, and semantics and pragmatics or discourse. Some interface phenomena are more problematic for L2 learners than others, and may account for developmental delays and interference between languages.

External Focus

The most important linguistic frameworks contributing to an external focus on SLA are categorized within **Functionalism**, which dates back to the early twentieth century and has its roots in the Prague School of Eastern Europe. They differ from the Chomskyan frameworks in emphasizing the information content of utterances, and in considering language primarily as a system of communication. Some of them emphasize similarities and differences among the world's languages and relate these to sequence and relative difficulty of learning; some emphasize acquisition as largely a process of mapping relations between linguistic functions and forms, motivated by communicative need; and some emphasize the means learners have of structuring information in L2 production and how this relates to acquisition. Approaches based on functional frameworks have dominated European study of SLA and are widely followed elsewhere in the world.

Psychological

There have been three foci in the study of SLA from a psychological perspective: languages and the brain, learning processes, and learner differences.

Languages and the Brain

The location and representation of language in the brain has been of interest to biologists and psychologists since the nineteenth century, and the expanding field of **neurolinguistics** was one of the first to influence cognitive perspectives on SLA when systematic study began in the 1960s. Lenneberg (1967) generated great interest when he argued that there is a **critical period** for language acquisition which has a neurological basis, and much age-related research on SLA is essentially grounded in this framework. As we will see in Chapter 4, exploratory procedures associated with brain surgery on multilingual patients, as well as the development

of modern noninvasive imaging techniques, are dramatically increasing knowledge in this area.

Learning Processes

The focus on learning processes has been heavily influenced by computer-based **Information Processing (IP)** models of learning, which were established in cognitive psychology by the 1960s. Explanations of SLA phenomena based on this framework involve assumptions that L2 is a highly complex skill, and that learning L2 is not essentially unlike learning other highly complex skills. Processing itself (of language or any other domain) is believed to cause learning. A number of approaches to SLA have been based on IP, including several that will be discussed in Chapter 4. They have been especially productive in addressing the question of *how* learners acquire knowledge of L2, and in providing explanations for sequencing in language development. **Processability** is a more recently developed framework which extends IP concepts of learning and applies them to teaching second languages.

Connectionism is another cognitive framework for the focus on learning processes, beginning in the 1980s and becoming increasingly influential. It differs from most other current frameworks for the study of SLA in not considering language learning to involve either innate knowledge or abstraction of rules and principles, but rather to result from increasing strength of associations (connections) between stimuli and responses. Because this framework considers frequency of input an important causative factor in learning, it is also providing a theoretical base for research on language teaching.

Psychological frameworks which focus primarily on learning processes have long recognized their complex nature, but twenty-first-century theory and research on SLA has increased emphasis on the nature and effect of complex systems in their own right (see e.g. Larsen-Freeman and Cameron 2008). This includes attention to their dynamic and nonlinear character, their movement toward self-organization, and their interaction with other complex systems. Traditional definitions of causality are questioned, and context (as a complex system itself) has greater importance than in most prior work from a psychological perspective.

Learner Differences

The focus on learner differences in SLA has been most concerned with the question of *why* some learners are more successful than others. It arises in part from the **humanistic** framework within psychology, which has a long history in that discipline, but has significantly influenced second language teaching and SLA research only since the 1970s (see Williams and Burden 1997). This framework calls for consideration of emotional involvement in learning, such as affective factors of attitude, motivation, and anxiety level. This focus also considers biological differences associated with age and sex, as well as some differences associated with aspects of processing.

Social

Some of the frameworks that we categorize within a social perspective can also be considered linguistic, since they relate to language form and function; some can also be considered cognitive, since they explore learning

processes or attitude and motivation. We will review them in this section because (in addition to linguistic and cognitive factors) they all emphasize the importance of social context for language acquisition and use.

There are two foci for the study of SLA from this perspective: **microsocial** and **macrosocial**.

Microsocial Focus

The concerns within the microsocial focus relate to language acquisition and use in immediate social contexts of production, interpretation, and interaction. The frameworks provided by **Variation Theory** and **Accommodation Theory** include exploration of systematic differences in learner production which depend on contexts of use, and they consider why the targets of SLA may be different even within groups who are ostensibly learning the "same" language. Vygotsky's **Sociocultural Theory** also contributes to this focus, viewing interaction as the essential genesis of language. The Interactionist framework, which received a renewed surge of interest in the 1990s, is tied directly to the Sociocultural Theory of the 1950s and before. Much of the revitalization of this approach is credited to enriched translation and interpretation of Vygotsky's earlier work, and much to intensive research on the role of interaction in SLA within sociolinguistic traditions.

Computers as tools for L2 teaching and learning date back more than fifty years, but the systematic study of their processes and outcomes in SLA are much more recent. The approach generally called **Computer-Mediated Communication (CMC)** is of most interest for this social perspective on SLA because it emphasizes L2 production and interpretation within a virtual community, interaction among its participants, and often both formal and functional goals. The variety of L2 instructional programs now being implemented with computer mediation is yielding vastly divergent results. The answers to why this is so should enlighten both theory and practice. This framework provides a bridge to concerns which are macrosocial in nature, considering the community of interaction.

Macrosocial Focus

The concerns of the macrosocial focus relate language acquisition and use to broader ecological contexts, including cultural, political, and educational settings. The **Ethnography of Communication** framework extends the notion of what is being acquired in SLA beyond linguistic and cultural factors to include social and cultural knowledge that is required for appropriate use, and leads us to consider second language learners as members of groups or communities with sociopolitical as well as linguistic bounds. The frameworks provided by **Acculturation Theory** and **Social Psychology** offer broader understandings of how such factors as identity, status, and values affect the outcomes of SLA.

We will consider the foci and frameworks since 1960 in the next three chapters (see Table 2.4). As we now start to explore each of these in more depth, we should remind ourselves that no one perspective or framework among those surveyed in this book has the "final answer" or is more privileged, and that all are needed to provide an adequate understanding of SLA.

Table 2.4 Perspectives, foci, and frameworks

Perspective	Focus	Framework
Linguistic	Internal	Transformational-Generative Grammar Principles and Parameters Model Minimalist Program Interfaces
	External	Functionalism
Psychological	Languages and the brain	Neurolinguistics
	Learning processes	Information Processing Processability Connectionism Complexity Theory
	Individual differences	Humanistic models
Social	Microsocial	Variation Theory Accommodation Theory Sociocultural Theory Computer-Mediated Communication
	Macrosocial	Ethnography of Communication Acculturation Theory Social Psychology

Chapter Summary

For a variety of reasons, the majority of people in the world know more than one language. The first language is almost always learned effortlessly, and with nearly invariant success; second language learning involves many different conditions and processes, and success is far from certain. This may be at least partly because older learners no longer have the same natural ability to acquire languages as do young children, and because second language learning is influenced by prior knowledge of the first and by more individual and contextual factors.

This chapter has identified a number of theoretical frameworks which provide the bases for different approaches to the study of SLA that we will consider. All of these approaches address the basic *what*, *how*, and *why* questions that we posed, but they have different foci of interest and attention. Linguistic frameworks differ in taking an internal or external focus on language; psychological frameworks differ in whether they focus on languages and the brain, on learning processes, or on individual differences; and social frameworks differ in placing their emphasis on micro or macro factors in learning. Like the lenses with different color filters used in photographing Mars and Pluto, these complement one another and all are needed to gain a full spectrum picture of the multidimensional processes involved in SLA. Even so, much remains a mystery, stimulating continued research.

Activities

Questions for Self-Study

1. List at least five possible motivations for learning a second language at an older age.
2. Sounds that make a difference in the identity of words are called_____.
3. Match the following terms to their definitions:

1. innate capacity	a. when a second language is introduced after the native language has been acquired
2. sequential bilingualism	b. when young children acquire more than one language at the same time
3. simultaneous bilingualism	c. natural ability

4. What is the initial state of language development for L1 and L2 respectively?
5. What is a necessary condition for language learning (L1 or L2)?
6. Give at least two reasons that many scientists believe in some innate capacity for language.
7. Linguists have taken an internal and/or external focus to the study of language acquisition. What is the difference between the two?

Active Learning

1. If you can use two or more languages, why is this so? What has been your reason for learning second language(s)? If you can use only one, why haven't you learned other languages? Compare your response to this question with those of other individuals and make a list of reasons for multilingualism or monolingualism. Categorize these reasons as primarily based on individual preference and need or on social and political circumstances.
2. Think about the facilitating conditions to language learning discussed in this chapter. Have you had any of these experiences facilitate your own learning? If so, which ones? Have there been other factors as well that influenced your learning? In your answer to question 2 in Chapter 1, did you consider any of these conditions?
3. Based on your personal and educational experience, do you expect to prefer or feel more comfortable with one of the perspectives on SLA (linguistic, psychological, social)? Why or why not? If so, what are some strategies you can use to keep an open mind to the perspectives you might not privilege?
4. It is a matter of debate what level of proficiency is needed before one claims to have multilingual competence, or to "know" a second language. How did you decide what to count as L2(s) in question 1 of Chapter 1? Do you have exposure to other languages that you did not list? If so, explain why you did not list those languages. Now that you have read Chapter 2, have your ideas changed about how proficient one must be to be considered to have an L2?
5. Look at the dialog on p. 24, which exemplifies child speech that was definitely not modeled by an adult, and was therefore constructed by the child based on the grammatical system. Can you think of other examples of creative constructions like this from children you know? What about similar regularizations made by L2 learners?

Discuss and Debate

Many of us who specialize in SLA have shared a common assumption that a third language is easier to learn than a second, etc. Some of us have (perhaps without very strong evidence) attributed this to the experience that people gain in "learning to learn" language. We're not so sure anymore. What do you believe? Why?

Further Reading

Davies, A. (2003). *The Native Speaker: Myth and Reality*. Clevedon: Multilingual Matters.

Davies explores in depth several complex issues related to the definition of native speaker in relation to L2 learners. He includes not only theoretical discussion, but also practical implications for teaching and assessment. A basic claim is that "common-sense" definitions and assumptions used in SLA are inadequate.

Cunningham, U. (2011). *Growing up with Two Languages: A Practical Guide for the Bilingual Family* (Third Edition). Abingdon, Oxon: Routledge.

This book treats practical questions and real-life situations and problems associated with raising children bilingually, including how to plan before having children and different paradigms (one person–one language or one language–one location). Additionally, it includes information on language development, the advantages and disadvantages of growing up bilingual, and case studies from adults raised bilingually.

Lightbown, P. M. & Spada, N. (2006). *How Languages Are Learned* (Second Edition). Oxford: Oxford University Press.

Lightbown and Spada present a highly accessible overview of second language learning, with discussion of theories of learning and factors that affect second language learning. Additionally, second language learning and teaching in the school setting are treated, as are popular myths about language learning.

Bialystok, E. & Hakuta, K. (1994). *In Other Words: The Science and Psychology of Second-Language Acquisition*. New York: Basic Books.

Chapter 1, "First word," is a clear introduction to the important questions of second language acquisition from psychological and social perspectives, such as why there are learning differences among individuals who are different ages, are acquiring related versus unrelated languages, or have different educational experiences.