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INTRODUCTION

1.1 The study of second language acquisition

Second language acquisition (SLA) is a relatively young field. We would be hard-pressed to state a "beginning" date, but it is probably fair to say that the study of SLA has expanded and developed significantly in the past 40–45 years. This is not to say that there wasn't interest in the fields of language teaching and learning before then, for surely there was. It is to say, however, that since that time the body of knowledge of the field has seen increased sophistication.

We are far from a complete theory of SLA, but there is progress. By approaching SLA from a variety of disciplinary perspectives, as we will see in this chapter and in the remainder of this book, we have come a long way from pure descriptive studies to research that connects with other disciplines.

What is the scope of SLA? What does the study of SLA consist of? It is the study of how second languages are learned. In other words, it is the study of the acquisition of a non-primary language; that is, the acquisition of a language beyond the native language. It is the study of how learners create a new language system with only limited exposure to a second language. It is the study of what is learned of a second language and what is not learned; it is the study of why most second language learners do not achieve the same degree of knowledge and proficiency in a second language as they do in their native language; it is also the study of why only some learners appear to achieve native-like proficiency in more than one language. Additionally, second language acquisition is concerned with the nature of the hypotheses (whether conscious or unconscious) that learners come up with regarding the rules of the second language. Are the rules like those of the native language? Are they like the rules of the language being learned? Are there new rules, like neither language, being formed? Are there patterns that are common to all learners regardless of the native language and regardless of the language being learned? Do the rules created by second language learners vary

according to the context of use? Do these rules and patterns vary more in individuals in a second language than they vary in the native language? Given these varied questions, the study of second language acquisition draws from and impacts many other areas of study, among them linguistics, psychology, psycholinguistics, sociology, sociolinguistics, discourse analysis, conversational analysis, and education, to name a few.

Given the close relationship between second language acquisition and other areas of inquiry, there are numerous approaches from which to examine second language data, each one of which brings to the study of second language acquisition its own goals, its own data-collection methods, and its own analytic tools. Thus, second language acquisition is truly an interdisciplinary field. This introductory text attempts to shed light on the nature of second language acquisition from multiple perspectives.

One way to define second language acquisition is to state what it is not. Over the years, the study of second language acquisition has become inextricably intertwined with language pedagogy; in the current text, one goal is to disentangle the two fields. Second language acquisition is not about pedagogy unless the pedagogy affects the course of acquisition (this topic will be explored in chapter 11). Although it may be the case that those who are interested in learning about how second languages are learned are ultimately interested in doing so for the light this knowledge sheds on the field of language teaching, this is not the only reason second language acquisition is of interest, nor is it the major reason scholars in the field of second language acquisition conduct their research.

Let us briefly consider some of the reasons why it might be important for us to understand how second languages are learned and what is not learned.

Linguistics

> When we study human language, we are approaching what some might call the human essence, the distinctive qualities of mind that are, so far as we know, unique to [humans].
>
> (Chomsky, 1968, p. 100)

The study of how second languages are learned is part of the broader study of language and language behavior. It is not more central or peripheral than any other part of linguistic study, which in turn has as its larger goal the study of the nature of the human mind. In fact, a major goal of second language acquisition research is the determination of linguistic constraints on the formation of second language grammars. Because theories of language are concerned with human language knowledge, one can reasonably assume that this knowledge is not limited to first language knowledge, and that

linguistic principles reflect the possibilities of human language creation and the limits of human language variation. This scope of inquiry includes second languages.

Language pedagogy

Most graduate programs whose goal is to train students in language teaching now have required course work in second language acquisition, unlike a generation ago. Why should this be the case? People have come to realize that if one is to develop language-teaching methodologies, there has to be a firm basis for those methodologies in language learning. It would be counterproductive to base language-teaching methodologies on something other than an understanding of how language learning does and does not take place. To give an example, some language-teaching methodologies are based exclusively on rule memorization and translation exercises. That is, a student in a language class is expected to memorize rules and then translate sentences from the native language to the language being learned and vice versa. However, studies in second language acquisition have made language teachers and curriculum designers aware that language learning consists of more than rule memorization. More important, perhaps, it involves learning to express communicative needs. The details of this new conceptualization of language learning have resulted in methodologies that emphasize communication. In other words, pedagogical decision-making must reflect what is known about the process of learning, which is the domain of second language acquisition.

A second, perhaps equally important but less assuming, rationale related to language pedagogy has to do with the expectations that teachers have of their students. Let's assume that a teacher spends a class hour drilling students on a particular grammatical structure. Let's further assume that the students are all producing the structure correctly and even in an appropriate context. If, after the class is over and the drill is finished, a student comes up to the teacher and uses the incorrect form in spontaneous speech, what should the teacher think? Has the lesson been a waste of time? Or is this type of linguistic behavior to be expected? If a student produces a correct form, does that necessarily mean that the student has learned the correct rule? These sorts of issues are part of what teachers need to be aware of when assessing the success or failure of their teaching. Or, to take an example from a mystery novel, *Speaker of Mandarin* by Ruth Rendell, Inspector Wexford is in a museum and accompanied by Mr. Sung who is showing him the well-preserved body of a woman who had lived 2000 years earlier. Mr. Sung says "Let's go" and Inspector Wexford takes the opportunity to provide an English lesson (p. 4).

Wexford: I wish you wouldn't keep saying that. If I may suggest it, you should say, "Shall we go? Or "Are you ready?"
Sung: You may suggest. Thank you. I am anxious to speak good. Shall we go? Are you leady?
Wexford: Oh, yes, certainly.
Sung: Don't reply, please. I practice. Shall we go? Are you leady? Good, I have got it. Come, let's go. Are you leady to go to the site? Reply now, please.

Thus, after practicing "Shall we go?", Sung, when it is time to make a spontaneous utterance, reverts back to "Let's go." Further, when Sung believes that he is repeating, and therefore, practicing, his repetition of "Are you ready?", his utterance is no different than his original faulty utterance.

Cross-cultural communication and language use
We have noted some expectations that teachers have about students. Similarly, in interactions with speakers of another language/culture, we have certain expectations and we often produce stereotyped reactions. For example, we may find ourselves making judgments about other people based on their language. It turns out that many stereotypes of people from other cultures (e.g., rudeness, unassertiveness) are based on patterns of nonnative speech. These judgments in many instances are not justified, because many of the speech patterns that nonnative speakers use reflect their nonnativeness rather than characteristics of their personality. As an example, consider the following exchange between a teacher and a former student (NNS = nonnative speaker; NS = native speaker):

(1-1) From Goldschmidt (1996, p. 255)
NNS: I have a favor to ask you.
NS: Sure, what can I do for you?
NNS: You need to write a recommendation for me.

Many teachers would, of course, react negatively to the seeming gall of this "request," perhaps initially thinking to themselves, "What do you mean I *need* to write a letter?" when most likely the only problem is this nonnative speaker's lack of understanding of the forceful meaning of *need*. A second example occurred in the life of one of the authors. An international student whom the professor did not know emailed to ask the professor for an appointment, stating that she was interested in the discipline of SLA. The professor wrote back with a suggestion of a time that they finally agreed on. The student arrived at the appointed time and said:

(1-2) NNS: You wanted to see me?

Many would, of course, also react negatively to the seeming strangeness of the introduction, probably initially thinking, "What do you mean I *wanted* to see you; it's you who wanted to see me." So, understanding second language acquisition and, in this case, how nonnative speakers use language, allows us to separate issues of cross-cultural communication from issues of stereotyped behavior or personal idiosyncrasies.

But it is not only cross-cultural questions that are at issue. In the following example, understanding L2 phonology could have helped in the recent but brief horse-racing scandal when a Chilean jockey, after winning the Kentucky Derby, was accused of carrying something in his hand other than his whip. Apparently, he had told a reporter that he wore a Q-Ray, which is a therapeutic bracelet used for arthritic conditions. What had been understood was a "Q-ring," which apparently the reporter had never heard of, probably because it doesn't exist. So, despite the fact that he didn't know what it was, the reporter assumed it to be something illegal. Had the reporter minimally recognized that perception of nonnative speech often occurs through the filter of our native language phonological system and that that perception is not always accurate, the problem might have been avoided. That coupled with the fact that he had never heard of a Q-ring might have suggested the need to seek greater clarification and the two or three day scandal could have been avoided.

Language policy and language planning

Many issues of language policy are dependent on a knowledge of how second languages are learned. For example, issues surrounding bilingualism, such as the English Only Movement in the United States, or the many different types of bilingual education (including immersion programs) can only be debated if one is properly informed about the realities and constraints of learning a second language. National language programs often involve decision making that is dependent on (a) information about second language learning, (b) the kinds of instruction that can be brought to bear on issues of acquisition, and (c) the realities and expectations one can have of such programs. All too often, these issues are debated without a clear understanding of the object of debate; that is, the nature of how second languages are learned.

In sum, second language acquisition is a complex field whose focus is the attempt to understand the processes underlying the learning of a second language. It is important to reemphasize that the study of second

language acquisition is separate from the study of language pedagogy, although this does not imply that there are not implications that can be drawn from second language acquisition to the related discipline of language teaching.

Many disciplines quite clearly find themselves as part of the humanities (e.g., literature) or part of the sciences (e.g., biology). Second language acquisition, because of its complexity and its reliance on and import for other disciplines, is not placed so easily. SLA is part of the humanities, in the sense that it is part of the branch of "learning (as philosophy, arts, or languages) that investigate[s] human constructs and concerns as opposed to natural processes (as in physics or chemistry) and social relations (as in anthropology or economics)" (from Merriam-Webster online dictionary), although clearly there are areas of the field that do consider social relations as an integral part of learning. Given that the humanities are concerned with human constructs and concerns, language acquisition is relevant, for one way of understanding the human condition is through an understanding of language. While this is probably uncontroversial, unfortunately this central area of humanistic study is often confined to general issues of language and the human capacity for language as referring to studies of primary language knowledge and the acquisition of primary language. But this book assumes that we cannot adequately examine the nature of language knowledge if we confine ourselves to only a small portion of the world's population; that is, monolingual native speakers.

Second language acquisition, while rightfully part of the humanities, is also part of the social sciences, defined (Merriam-Webster online) as "a branch of science that deals with the institutions and functioning of human society and with the interpersonal relationships of individuals as members of society." Given that second language acquisition deals with interpersonal relations as it does when studying many issues of language use, it is definitely part of the social sciences. Interactions involving nonnative speakers of a language are undoubtedly highly frequent in the broader context of the world's interactions, and, thus, the study of these interactions has a central place in the social sciences and cognitive science. Finally, since some SLA research focuses on the biology of the brain, and what SLA neurophysiology can show about neural workings, SLA itself can be considered a part of the developing cognitive neurosciences.

1.2 Definitions

The study of any new discipline involves familiarizing oneself with the specific terminology of that field. In this section, we present some basic terminology common to the field of second language acquisition,

accompanied by brief definitions. Other terms are introduced and defined as the text progresses.

Native Language (NL): This refers to the first language that a child learns. It is also known as the primary language, the mother tongue, or the L1 (first language). In this book, we use the common abbreviation NL.

Target Language (TL): This refers to the language being learned.

Second Language Acquisition (SLA): This is the common term used for the name of the discipline. In general, SLA refers to the process of learning another language after the native language has been learned. Sometimes the term refers to the learning of a third or fourth language. The important aspect is that SLA refers to the learning of a nonnative language *after* the learning of the native language. The second language is commonly referred to as the L2. As with the phrase "second language," L2 can refer to any language learned *after* learning the L1, regardless of whether it is the second, third, fourth, or fifth language. By this term, we mean both the acquisition of a second language in a classroom situation, as well as in more "natural" exposure situations. The word *acquisition* in this book is used broadly in the sense that we talk about language use (sometimes independently from actual acquisition). Some might prefer the term *Second Language Studies* (SLS) as it is a term that refers to anything dealing with using or acquiring a second/foreign language. However, in this book, we continue to use the term *SLA* as a cover term for a wide variety of phenomena, not because the term is necessarily the most descriptively accurate, but because the field has come to be known by that acronym.

Foreign Language Learning: Foreign language learning is generally differentiated[1] from second language acquisition in that the former refers to the learning of a nonnative language in the environment of one's native language (e.g., French speakers learning English in France or Spanish speakers learning French in Spain, Argentina, or Mexico). This is most commonly done within the context of the classroom.

Second language acquisition, on the other hand, generally refers to the learning of a nonnative language in the environment in which that language is spoken (e.g., German speakers learning Japanese in Japan or Punjabi speakers learning English in the United Kingdom). This may or may not take place in a classroom setting. The important point is that learning in a second language environment takes place with considerable access to speakers of the language being learned, whereas learning in a foreign language environment usually does not.[2]

1.3 The nature of language

Fundamental to the understanding of the nature of SLA is an understanding of what it is that needs to be learned. A facile answer is that a second language learner needs to learn the "grammar" of the TL. But what is meant by this? What is language? How can we characterize the knowledge that humans have of language?

All normal humans acquire a language in the first few years of life. The knowledge acquired is largely of an unconscious sort. That is, very young children learn how to form particular grammatical structures, such as relative clauses. They also learn that relative clauses often have a modifying function, but in a conscious sense they do not know that it is a relative clause and could presumably not state what relative clauses are used for. Take as an example the following sentence:

(1-3) I want that toy that that boy is playing with.

A child could utter this fully formed sentence, which includes a relative clause ("that that boy is playing with"), without being able to articulate the function of relative clauses (either this one, or relative clauses in general) and without being able to easily divide this sentence into its component parts. It is in this sense that the complex knowledge we have about our native language is largely unconscious.

There are a number of aspects of language that can be described systematically. In the next few sections we deal with the phonology, syntax, morphology, semantics, and pragmatics of language.

1.3.1 Sound systems

Knowledge of the sound system (phonology) of our native language is complex. Minimally, it entails knowing what sounds are possible and what sounds are not possible in the language. For example, a native speaker of English knows that the first vowel sound in the name *Goethe* [œ] is not a sound in English. This knowledge is reflected in recognition as well as in production, as generally a close English sound is substituted when one attempts to utter that word in English.

Phonological knowledge also involves knowing what happens to words in fast speech as opposed to more carefully articulated speech. For example, if someone wanted to express the following idea:

(1-4) I am going to write a letter.

That person, assuming a U.S. English speaker, would undoubtedly say something like the following.

(1-5) I'm gonna wriDa leDer.

Consider the following exchange:

(1-6) Tom: What are you gonna do?
Sally: I'm gonna wriDa leDer.
Tom: You're gonna do what?
Sally: I'm gonna wriDa leDer.
Tom: What? I can't hear you.
Sally: I'm going to write a letter [articulated slowly and clearly].

We can see that speakers know when to combine sounds and when not to. We know that in "normal, fast" speech we combine words, but that in clearer, more articulated speech we do not.

A final point to make is that, as native speakers of a language, we know not only what are possible sounds and what are not possible sounds, but we also know what are possible combinations of sounds and what sounds are found in what parts of words. We know, for example, that in English, while [b] and [n] are both sounds of English, they cannot form a "blend" in the way that [b] and [r] can: **bnick*[3] versus *brain*. Or to take another example, consider the sound at the end of the word *ping* [ŋ], which is frequent in English. However, it cannot appear in the beginning of words in English, although it can in other languages.

1.3.2 Syntax

In this section, we briefly describe what speakers know about the syntax of their language. This is what is frequently known as grammar, referring primarily to the knowledge we have of the order of elements in a sentence. We point out briefly that there are two kinds of grammar that are generally referred to: (a) prescriptive grammar and (b) descriptive grammar. By prescriptive grammar, we mean such rules as are generally taught in school, often without regard to the way native speakers of a language actually *use* language. We have in mind such rules as "Don't end a sentence with a preposition," "Don't split infinitives," "Don't begin a sentence with a conjunction," "Don't use contractions in writing," and "Use *between* with two items and *among* with more than two" (Associated Press rule; as cited in Safire, 1999, p. 24). To illustrate that these so-called rules are something other than appropriate, McCawley (also cited in Safire) gives the following example: *He held four golf balls* between *his fingers*. Even though there are more than two fingers involved, one cannot say: **He held four golf balls* among *his fingers*.

On the other hand, linguists are concerned with descriptive grammars:

They attempt to describe languages as they are actually used. Thus, when talking about knowledge of syntax, we are referring to descriptive grammars. The rules just stated are not true of descriptive grammars because native speakers of English frequently violate the prescriptive rules.

As with phonological knowledge discussed in section 1.3.1, native speakers of a language know which are possible sentences of their language and which are not. For example, below, we know that sentences 1-7 and 1-8 are possible English sentences, whereas 1-9 and 1-10 are not possible or are ungrammatical:

(1-7) The big book is on the brown table.
(1-8) The woman whom I met yesterday is reading the same book that I read last night.
(1-9) *The book big brown table the on is.
(1-10) *Woman the met I yesterday whom book same the is reading read I last night that.

So part of what we know about language is the order in which elements can and cannot occur. This is of course not as simple as the preceding examples suggest. Are sentences 1-11 and 1-12 possible English sentences?

(1-11) Have him to call me back.
(1-12) That's the man that I am taller than.

For many speakers of English these are strange sounding, for others they are perfectly acceptable.

Not only do we know which sentences are acceptable in our language, we also know which sentences are grossly equivalent in terms of meaning. For example, sentences 1-13 and 1-14 have the same general meaning in the sense that they refer to the same event:

(1-13) Tom was hit by a car.
(1-14) A car hit Tom.

While we know that both sentences above can be assumed to be paraphrases of one another, we also know that they have slightly different functions in English. If someone asks, *What did that car hit?*, the most likely answer would be *It hit Tom* rather than *Tom was hit by it*. Thus, we as native speakers know not only what is equivalent to what, but also when to use different grammatical patterns.

Another aspect of language that we know is how meaning is affected by moving elements within a sentence. For example, adverbs can be moved in a sentence without affecting the meaning, whereas nouns cannot. Sentences 1-15 and 1-16 are roughly equivalent in meaning:

(1-15) Yesterday Sally saw Jane.
(1-16) Sally saw Jane yesterday.

but 1-17 and 1-18 do not share a common meaning.

(1-17) Yesterday Sally saw Jane.
(1-18) Yesterday Jane saw Sally.

Thus, knowing a language entails knowing a set of rules with which we can produce an infinite set of sentences. In order to see that language is rule-governed and that we can comprehend novel sentences, consider sentence 1-19:

(1-19) The woman wearing the green scarf ran across the street to see the gorilla that had just escaped from the zoo.

Even though this sentence is probably one you have never encountered before, you have little difficulty in understanding what it means.

But it is important to note that syntax is complex, often abstract and in many instances difficult to describe. For example, we typically think that the subject of a sentence is the performer of some action, as in 1-18 above where Jane is doing the action of seeing, but what about *Josh seems happy*? We know that Josh is the subject, but he isn't performing any action, nor is *it* performing an action in the sentence *it's raining cats and dogs*.

1.3.3 Morphology and the lexicon

The study of morphology is the study of word formation. In many cases, words are made up of more than one part. For example, the word *unforeseen* is made up of three parts: *un*, which has a negative function; *fore*, which means earlier in time; and *seen*, which means visualized. Each part is referred to as a morpheme, which can be defined as the minimal unit of meaning.

There are two classes of morphemes that we can identify: bound and free. A bound morpheme is one that can never be a word by itself, such as the *un* of *unlikely*. A free morpheme is one that is a word in and of itself, such as *man*, *woman*, *book*, or *table*. Words can be created by adding morphemes, as in the following children's favorite:

establish
establish + ment
dis + establish + ment
dis + establish + ment + ari + an + ism

Not only do we know how to form words using affixes (prefixes, suffixes, infixes), but we also know what words can go with other words, as in *Mt. Everest is a high mountain*, but not **The Empire State Building is a high building*.

1.3.4 Semantics

The study of semantics refers to the study of meaning. This, of course, does not necessarily correspond to grammaticality because many ungrammatical sentences are meaningful, or at least interpretable, as can be seen in the following sentences.

(1-20) *That woman beautiful is my mother.
(1-21) *I'll happy if I can get your paper.

These and many other sentences that are uttered by nonnative speakers of a language are perfectly comprehensible, despite the fact that they do not follow the "rules" of English. The reverse side of the picture is the sentence that is grammatically formed but that, because of the content, is meaningless (at least without additional contextualization), as in 1-22:

(1-22) That bachelor is married.

Knowledge of the semantics of a language entails knowledge of the reference of words. For example, in English we know that a *table* refers to an object with a flat top and either three or four legs and that a *leaf* most often refers to part of a tree. But as native speakers we also have to be able to distinguish between the meaning of the *leaf* of a tree and the *leaf* of a table. When we hear an advertisement on television for a table with extra *leafs*, it is this knowledge of homonyms that comes into play to help us interpret the advertisement in the manner intended. For a learner, of course, it is not so easy, as he or she might struggle to imagine a table with tree leaves.

Additionally, it is important to note that the limits of a word are not always clear. What is the difference between a *cup* and a *glass*? For many objects it is obvious; for others it is less so.

Referential meanings are clearly not the only way of expressing meaning. As native speakers of a language, we know that the way we combine elements in sentences affects their meaning. Sentences 1-23 and 1-24 are different in meaning. Thus, we understand that syntax and meaning interrelate.

(1-23) The man bit the dog.
(1-24) The dog bit the man.

In some languages the translation equivalents of those sentences (with possibly different intonation contours) can be interpreted as referring to the same event.

1.3.5 Pragmatics

Yet another area of language that we consider and that is part of what second language learners need to learn has to do with pragmatics, or the way in which we use language in context. For example, when we answer the telephone and someone says *Is John there?*, we understand that this is a request to speak with John. It would be strange to respond *yes* with the caller saying *thank you* and then hanging up unless the caller did not want to carry on the conversation with John present or only wanted to know whether or not John was present. Clearly, the phrase *Is X there?* in the context of telephone usage is a request to speak with someone and not an information question. When the intent is the latter—as for example, a parent checking on the whereabouts of a child—the conversation might be slightly modified.

(1-25) Father 1: This is John's father. Is John there?
Father 2: Yes.
Father 1: Thanks, I just wanted to know where he was.

Similarly, word order, as discussed earlier, may have an effect on meaning (see sentences 1-23 and 1-24) in some grammatical contexts, but in others it does not.

The following conversation exemplifies this:

(1-26) (Setting: Ice cream store; child, age 4)
Child: I want a raspberry and vanilla cone.
Shopkeeper: OK, one vanilla and raspberry cone coming up.
Child: No, I want a raspberry and vanilla cone.
Shopkeeper: That's what I'm getting you.

In this instance, the child is using word order to reflect the ordering of scoops of ice cream; the shopkeeper is not. Thus, what we have learned as adult native speakers of a language is the function of word order in our language. In English, it does not necessarily refer to the ordering of physical objects.

1.4 The nature of nonnative speaker knowledge

We have briefly characterized some areas of language knowledge that a native speaker has of a language. Knowing a second language well means knowing information similar to that of a native speaker of a language. Given the complexity of the knowledge that must be learned, it should be clear that the study of the acquisition of that knowledge is a highly complex field.

The basic assumption in SLA research is that learners create a language system, known as an interlanguage (IL). This concept validates learners' speech, not as a deficit system, that is, a language filled with random errors, but as a system of its own with its own structure. This system is composed of numerous elements, not the least of which are elements from the NL and the TL. There are also elements in the IL that do not have their origin in either the NL or the TL. These latter are called new forms and are the empirical essence of interlanguage. What is important is that the learners themselves impose structure on the available linguistic data and formulate an internalized system (IL).[4] Central to the concept of interlanguage is the concept of fossilization, which generally refers to the cessation of learning. The *Random House Dictionary of the English Language* (Flexner and Hanck, 1988, p. 755) defines fossilization of a linguistic form, feature, rule, and so forth in the following way: "to become permanently established in the interlanguage of a second language learner in a form that is deviant from the target-language norm and that continues to appear in performance regardless of further exposure to the target language."

Because of the difficulty in determining when learning has ceased, some hold (e.g., Long, 2003) that it is more appropriate to refer to stabilization of linguistic forms, rather than to fossilization or permanent cessation of learning. In SLA, one often notes that learners reach plateaus that are far from the TL norms. Furthermore, it appears to be the case that fossilized or stabilized interlanguages exist no matter what learners do in terms of further exposure to the TL. Unfortunately, a solid explanation of permanent or temporary learning plateaus is lacking at present due, in part, to the lack of longitudinal studies that would be necessary to create databases necessary to come to conclusions regarding "getting stuck" in another language.

1.5 Conclusion

In this chapter we have presented a series of basic definitions to help the reader begin the journey of the study of second language acquisition. As has been seen, inherent in an analysis of interlanguage data is a focus on the learner and on the processes involved in learning. In the following

chapters we present additional information about interlanguages, beginning with a discussion of ways of analyzing second language data.

Suggestions for additional reading

Inside Language. Vivian Cook. Edward Arnold (1997).
Language: Its Structure and Use, 5th ed. Edward Finegan. Heinle (2008).
An Introduction to Language, 8th ed. Victoria Fromkin, Robert Rodman and Nina Hyams. Heinle (2007).
Essential Introductory Linguistics. Grover Hudson. Blackwell (2000).
Linguistics: A Very Short Introduction. P. H. Matthews. Oxford University Press (2003).
Contemporary Linguistics: An Introduction. William O'Grady, John Archibald, Mark Aronoff, and Janie Rees-Miller. Bedford/St. Martin's Press (2005).
The Language Instinct: How the Mind Creates Language. Steven Pinker. Morrow (1994).
Linguistics: An Introduction. Andrew Radford, Martin Atkinson, David Britain, Harald Clahsen, and Andrew Spencer. Cambridge University Press (1999).

Points for discussion

1 A teacher has drilled students in the structure known as indirect questions:

> Do you know where my book is?
> Do you know what time it is?
> Did he tell you what time it is?

As a direct result of the drills, all students in the class were able to produce the structure correctly in class. After class, a student came up to the teacher and asked, "Do you know where is Mrs. Irving?" In other words, only minutes after the class, in spontaneous speech, the student used the structure practiced in class incorrectly. Describe what you think the reason is for this misuse. Had the lesson been a waste of time? How might you go about finding answers to these questions?

2 Consider the distinction between *second language acquisition* and *foreign language learning* as discussed in this chapter. Take the position that they are fundamentally different. How would you defend this position? Now take the opposite position. Consider how the position you take might is affected by the linguistic areas of phonology, syntax, morphology, semantics, and pragmatics.

Next, look at the distinction from a social point of view. Discuss your answers in terms of specific examples from your experience, such as the learning of Spanish in Spain versus the learning of

Spanish in the United States, or the teaching of English in the United States versus the teaching of English in Asia.

3 Consider the differences between child language acquisition and adult second language acquisition. Specifically, consider the example provided in 1-3.

(1-3) I want that toy that that boy is playing with.

With regard to this sentence, we state in this chapter that "A child could utter this fully formed sentence, which includes a relative clause ('that that boy is playing with'), without being able to articulate the function of relative clauses (either this one, or relative clauses in general) and without being able to easily divide this sentence into its component parts. It is in this sense that the complex knowledge we have about our native language is largely unconscious."

Do you think that this comment is also valid for adults learning a second language? Specifically, do you think that an adult needs to consciously learn the grammar of relative clauses *before* being able to use them spontaneously in interlanguage? Take an example from your own language-learning or language-teaching experience, or one that you know of, and relate it to these child versus adult distinctions. In thinking about this question, take into account the concept of fossilization (as defined in this chapter) versus the concept of stabilization.

4 We state in this chapter that, with regard to fossilization, a solid theoretical explanation of permanent plateaus is lacking at present. In pairs, create a list of some of the main reasons for the well-attested existence of fossilization in interlanguage. Share your list with that of another pair and come up with a common list.

5 In section 1.3.2, we describe the types of knowledge that individuals have about sentences in their native language. We note that there is variation in native speakers' acceptance of sentences, as in sentences 1-11 and 1-12.

(1-11) Have him to call me back.
(1-12) That's the man that I am taller than.

Are these sentences acceptable to you? If not, what would you say instead? In what situations, if any, would you say these sentences? Consider how and when such variation might occur in terms of second language syntactic knowledge. For example, a student ended an academic note to a teacher with this spontaneous interlanguage blessing:

Wish peace be with you.

Other students (of the same NL) who were then asked to produce a blessing in a (nonspontaneous) task produced many variations, including this one:

> Wish peace be to you.

Is this the same sort of variation as described earlier? Why or why not? How does it affect your answer to know that the original sentence occurred spontaneously and the others did not?

6 Consider in general the nature of nonnative speaker knowledge. In what ways is it similar to or different from native speaker knowledge? We stated in this chapter that nonnative speakers form interlanguages that consist not only of elements from their native language and the target language, but also "autonomous" elements. In this light, consider the following sentences, produced by an Arabic speaker of English:

> I bought a couple of towel.
> There is many kind of way you make baklawa.
> There are about one and half-million inhabitant in Jeddah.

In these examples, which linguistic items (and arrangements of items) do you hypothesize come from the target language, which come from the native language, and which are autonomous? As a way to begin, think about whether learners of English with first languages other than Arabic are likely to utter similar sentences.

7 In this chapter, we discussed possible motivating factors for the study of second language acquisition. What other reasons might there be for investigating how second languages are learned?

8 Following are English translations of compositions written by two schoolchildren in their native language (Tatar) and compositions written by the same children in Russian, their L2. In all instances, the children were describing a picture.

> *Child 1: Written in Tatar (L1)*
> The long awaited spring has come. The days are getting warmer and warmer. The blue sky is covered by white fluffy clouds. They skim like sailboats through the sky. The ice is breaking away on the river to the north. The birds have returned after having flown from us to a warm region. The apples have bloomed. Children are planting tomatoes, cucumbers, onions, and other vegetables. They are watering the trees. Azat is planting flowers. Rustam is watering the apples. The children are happily working in the garden. They are very happy.

Child 1: Written in Russian (L2)
In the schoolyard there is a large garden. Children are digging in the earth. Children are working in the garden. In the garden there is a pine tree, an oak, and tomatoes. An apple tree is growing there. They are planting flower beds.

Child 2: Written in Tatar (L1)
It was a beautiful spring day. The sun was shining. The birds who had returned from distant lands were singing. The trees were swallowed up by the greenery of the luxuriant spring foliage. The children have come into their garden. There the apple trees have already blossomed. Rustam is watering the flowers. The remaining children are planting vegetables. The teacher is watching the work of her pupils. She's pleased with their work, she smiles.

Child 2: Written in Russian (L2)
In the schoolyard there is a large garden. Children are working there. The garden is big. In the garden there are trees. A child is planting a tree. A child is pouring water from a watering pot. In the garden a poplar is growing.

What kind of information (e.g., descriptive, evaluative) do these children include in their NL descriptions of these pictures? In their TL descriptions of the pictures? What similarities/differences are there between the NL and TL versions of these pictures?

9 In pairs, answer "True" or "False" to the following statements. Justify your responses. Once you come to a consensus, compare your answers to those of another pair.

a Any child without cognitive disabilities can learn any language with equal ease.
b Learning a second language is a matter of learning a new set of habits.
c The only reason that some people cannot learn a second or foreign language is that they are insufficiently motivated.
d All children can learn a second language accent-free.
e No adult can learn a second language accent-free.
f All human beings have an innate capacity to learn language.
g Vocabulary is the most important part of learning a second language.
h Vocabulary is the most difficult part of learning a second language.
i Language instruction is a waste of time.

j Learning a second language takes no more time than learning a first language.

10 We mentioned that it is difficult to know when learning is ceased. This is the case for our first language as well. To understand this better, think of areas of your first language that you sometimes "stumble" over (e.g., *She laid the book on the table*). List two or three other such areas. Then, think about vocabulary. Are there words in your native language that you are not sure of the meaning of? Pick an arbitrary page of a monolingual dictionary. How many words do you not know?

2

RELATED DISCIPLINES

2.1 SLA and related disciplines

There are many research areas that are related to the field of second language acquisition, some of which were mentioned in chapter 1. This chapter briefly touches on some of these "neighboring" disciplines as a way of introducing the reader to these areas, showing similarities and dissimilarities. While SLA is now an autonomous area of research, it had its roots and initial justification in other areas—for example, language teaching—and it has been strongly influenced by other disciplines, such as linguistics and psychology. However, it had a special relationship with child language acquisition in that child language acquisition formed the basis of research in second language acquisition, with many of the original second language research questions stemming from the same questions in child language acquisition. Other areas, such as third language acquisition or heritage language acquisition, are special instances of second language acquisition and, particularly in the case of heritage language learning, have developed in recent years. Finally, bilingual acquisition blends issues related to second language acquisition and those related to first language acquisition.

We begin this chapter with a brief overview of some of the issues addressed in these related fields. We only give cursory coverage because to do otherwise would take us away from the main focus of this book, second language acquisition. We feel that it is important to give some information on these related areas, however, because they shed light on some of the complexities of SLA. They each have a well-developed history of their own and in most cases even have journals devoted to their issues. In this chapter, we are able to do little more than summarize the scope of work in these areas.

The relationship of each to second language acquisition is different. Some, namely third language acquisition and heritage language acquisition, have a derivative relationship, developing out of related but more specific concerns. Bilingual research has a parallel development with

concerns that diverge to some extent from those of second language acquisition, considering, for example, the onset of learning for both languages. To make divisions of types of acquisition, as we have done in this chapter, is somewhat artificial, but necessary for expository purposes. We treat each of these areas below.

2.2 Third language acquisition/multilingualism

As mentioned in chapter 1, second language acquisition has become a cover term for acquisition after a first language has been learned. It often incorporates many different types of acquisition, including third, fourth, and so on, and includes heritage language learning (to be discussed in the subsequent section). This notwithstanding, there is a research area that is becoming more prominent, that of third language acquisition. Since there are multiple languages involved, the questions addressed are quite interesting and inherently more complex than those involved in true second language acquisition. And, individual histories become important. As noted by Cenoz and Genesee (1998, p. 16),

> Multilingual acquisition and multilingualism are complex phenomena. They implicate all the factors and processes associated with second language acquisition and bilingualism as well as unique and potentially more complex factors and effects associated with the interactions that are possible among the multiple languages being learned and the processes of learning them.

As we will see throughout this book, there a number of variables that can impact the extent to which one of the languages involved (the L2 or the L1) will influence the acquisition of the L3. Among these are the age at which L3 learning begins, the context of acquisition, individual characteristics, and language distances among the three (or more) languages.

Examples of language influence can be seen in a number of areas. In 2-1, from Selinker and Baumgartner-Cohen (1995), an English speaker who has just come from France is attempting to speak German.

(2-1)

Tu	as	mein Fax	bekommen?
you	have	my Fax	gotten
French	French	German	German

"Did you get my fax?"

The sentence is built on German grammar with split verbs, *as . . . bekommen* ("have . . . gotten"), but with the French subject pronoun (*tu*) and auxiliary *avoir* ("as"). Other examples come from Dewaele (1998), who

gives examples from native speakers of Dutch with English as an L2 producing French as L3 utterances, as in 2-2 and 2-3:

(2-2) Ils veulent gagner more, euh, plus . . .
They want to earn more, uh, more . . .
(2-3) Les gens sont involvés
The people are involved

In 2-3, the correct word is *impliqués* rather than *involvés*. Another lexical mixture is cited by Herwig (2001). A native speaker of English who has French as an L2 and German Swedish as an L3 says *föreslägger* for the Swedish word *föreslär* (the German word is *vorschlagen*—propose).

The difficulty of keeping foreign languages apart was noted by Schmidt and Frota (1986). Their study described an English-speaking learner of Portuguese with Arabic as a prior second language who wondered why he couldn't keep the two languages (Portuguese and Arabic) apart. A well-known quote from King Charles V of Spain (1500–1558) suggests that some individuals have no difficulty keeping languages apart and even assign different functions to each:

> I speak Spanish to G-d, Italian to women, French to men, and German to my horse.

But most individuals do not have such control and are not so compartmentalized. Why one cannot keep languages and interlanguages apart and why the mixing and merging of various languages known and being learned occurs are issues at the heart of research on multilingualism. Many learners have described the experience of influence from even unrelated languages ("talk foreign," as described by Selinker and Baumgartner-Cohen, 1995) as in the case involving Portuguese and Arabic. Another example (personal communication) comes from a native speaker of English who had been in Turkey for quite some time. He was traveling in Germany, where he had been before, when he reported on his attempt to speak German: "To my horror, out came Turkish."

There are many areas that impact third language acquisition, including sociolinguistic, psycholinguistic, and cross-linguistic influences. With regard to sociolinguistic issues, there are a number of issues to consider, such as the purpose for learning a second or third language. For example, in many parts of the world, or in many industries or professions, English has become the virtual *lingua franca*, or language used for basic communication, as is the case for Spanish in some areas of the United States. This is quite different from a bilingual home situation. From a psycholinguistic perspective, there are differences for multilingual speakers in how the lexicon is organized. With regard to cross-linguistic influences,

we presented examples above that demonstrate how learners of a third language have multiple resources to draw on. Some of the determining variables might be proficiency in the languages known, as well as in the target language, age of user, and linguistic closeness of the languages in question, among others.

2.3 Heritage language acquisition

Heritage language speaker is a relatively recent term, having its origins in the education literature.[1] Heritage language speakers are, broadly speaking, those who have been exposed to a language of personal connection (Fishman, 2001). Valdés (2001b) notes that "it is the historical and personal connection to the language that is salient and not the actual proficiency of individual speakers. Armenian, for example, would be considered a heritage language for American students of Armenian ancestry even if the students were English-speaking monolinguals" (p. 38) and she characterizes a heritage language learner (living in an English-speaking environment) as someone who is "raised in a home where a non-English language is spoken, who speaks or at least understands the language, and who is to some degree bilingual in that language and in English" (2001b, p. 38).

For research into this type of second or foreign language acquisition, an important issue is the exposure and use of the language in childhood. And here, as can be easily imagined, there are numerous problems because exposure and use can vary from individual to individual. Unlike much of the literature on heritage language learners, which considers the language of the ancestral family with or without exposure and use, Polinsky (in press) defines heritage language as the language "which was first for an individual with respect to the order of acquisition but has not been completely acquired because of the switch to another dominant language. An individual may use the heritage language under certain conditions and understand it, but his/her primary language is a different one" (p. 1).

The recognition of heritage language learners as a variable in second language research is recent. Often the concept of heritage language speaker is (unknowingly) ignored, and these individuals are consequently included in studies. Sorace (1993a) is an exception in that she explicitly controlled for heritage language speakers in her study on the acquisition of Italian by eliminating them from her database; "none had Italian origins" (p. 35).

Heritage language acquisition is a form of second language acquisition and a form of bilingualism. Heritage language learners have knowledge of two languages (the home language and the language of the environment/school), and they are usually dominant in the second language. There is a

wide range of linguistic knowledge that heritage speakers have, including those who were born in the second language environment and those who came to the second language environment during their school years. Another consideration is the amount of input in the home, ranging from only the heritage language spoken in the home (with perhaps parents only speaking the heritage language) to those situations in which the heritage language is spoken only sporadically.

Heritage learners often do not become bilingual speakers because they do not continue to speak the heritage language as much as they speak the language of the non-home environment. In some cases, they may not have heard or spoken the heritage language since they were very young because their families switched to the language of the environment. Heritage language learners form a heterogeneous group, since their experiences of the language may be very different. Some learners may have been raised by parents who only spoke the heritage language. However, when they went to school, English may have become their dominant language. Other learners may have only received very limited input of the heritage language in the home while they were very young. Nonetheless, it is generally accepted that the nature of language learning for heritage language learners differs from language learning involving non-heritage language learners (Campbell and Rosenthal, 2000; Valdés, 1995, 2001b). Heritage speakers often possess a subtly different knowledge base of the heritage language than L2 learners of that language with no prior background. In addition, they often differ from monolingual speakers of their heritage language. Sometimes these differences may be subtle and sometimes they may be quite fundamental. Some recent studies have investigated the linguistic differences between heritage language and non-heritage language learners (e.g., Carreira, 2002; Ke, 1998; Nagasawa, 1995; Montrul, 2002, 2004; Polinsky, 1995, 2000, in press; Gass and Lewis, 2007).

2.4 Bilingual acquisition

Bilingualism is a broad term and, like heritage language acquisition, has many forms and configurations. Often the term *bilingual* is used loosely to incorporate multilingualism, as is clear from the introduction to a section of a book by Bhatia and Ritchie (2006). Bhatia (2006) states that "the investigation of bilingualism is a broad and complex field, including the study of the nature of the individual bilingual's knowledge and use of two (*or more*) languages" (emphasis ours) (p. 5). Cenoz, in her review (2005) of Bhatia and Ritchie's book, states "the editors make a remark in the introduction about the use of the word 'bilingualism' in the title of the book and say that they do not exclude additional languages and that the chapters in the book include the 'full range of multilingualism'.

However, the use of the term 'bilingualism' is problematic because the Latin prefix 'bi' means 'two' . . ." (p. 638).

The concept of *bilingualism* is interpreted differently in the field of SLA versus fields such as psychology and education. That is, SL researchers reserve use of the term for only those that are truly, as shown through some linguistic measure, the equivalent of native speakers of two languages. Thus, from the perspective of second language researchers, *bilingual* is a difficult term. In its strict meaning, it refers to someone whose language is in a steady state and who has learned and now knows two languages. That is, *bilingual* refers to an end point; "someone is bilingual." Within a second language research context, the end-point interpretation of the term is generally not a focus of inquiry. Rather, second language researchers, because of their interest in discovering the second language acquisition process, might focus instead on near-native speakers or advanced language learners. In general, SLA researchers are most interested in individuals who are in the process of learning, not those who have learned two languages earlier.

This use of the term does not appear to be the case in some of the psychological and educational literature on bilingualism.[2] For example, Edwards (2006) starts off his article on the foundations of bilingualism by saying "Everyone is bilingual. That is, there is no one in the world (no adult, anyway) who does not know at least a few words in languages other than the maternal variety. If, as an English speaker, you can say *c'est la vie* or *gracias* or *guten Tag* or *tovarisch*—or even if you only understand them—you clearly have some command of a foreign tongue . . . The question, of course, is one of degree . . ." (p. 7). He goes on to say, "it is easy to find definitions of bilingualism that reflect widely divergent responses to the question of *degree*" (p. 8). Bhatia (2006) states this in an interesting way when he says "the process of second language acquisition—of becoming a bilingual" (p. 5). In other words, the end result of second language acquisition is a bilingual speaker. Given that bilingualism is seen as the end result and given that we know that native-like competence in a second language is rare, there is some difficulty in discussing bilingualism in this way. Thus, Bhatia and Edwards are referring to two different phenomena. Edwards is saying that one is bilingual at any point in the SL learning process, whereas Bhatia is referring only to the end point and does not deal with whether or not that end point has to be "native" or not. In other words, the issues seem to be of degree—whether or not one is *bilingual* even if not a native speaker of the L2—and of end point—whether or not one is *bilingual* if still in the process of acquisition. SL researchers are more likely to require native competence and also to reserve use of the term for the end state. The bilingualism literature, it seems, allows more latitude in both of these factors.

Valdés (2001a) also discusses the issue of degree when she says "the term *bilingual* implies not only the ability to use two languages to some degree in everyday life, but also the skilled superior use of both languages at the level of the educated native speaker" (p. 40). She acknowledges that this is a narrow definition, for it considers the bilingual as someone who can "do everything perfectly in two languages and who can pass undetected among monolingual speakers of each of these two languages" (p. 40). This she refers to as the "mythical bilingual." She argues that there are, in fact, different types of bilinguals and that it is, therefore, more appropriate to think of bilingualism as a continuum with different amounts of knowledge of the L1 and L2 being represented. In this view, the term *bilingualism* can refer to the process of learning as well as the end result, the product of learning.

Some researchers make a distinction between second language learners and bilinguals, as is clear from the title of an article by Kroll and Sunderman (2003): "Cognitive processes in second language learners and bilinguals: the development of lexical and conceptual representations." In this article, the authors refer to "skilled adult bilinguals," presumably the rough equivalent of *advanced language learners*.

Finally, Deuchar and Quay (2000) define bilingual acquisition as "the acquisition of two languages in childhood" (p. 1), although they point to the difficulties involved in this definition given the many situations that can be in place. They point to De Houwer (1995), who talks about *bilingual first language acquisition*, referring to situations when there is regular exposure to two languages within the first month of birth and *bilingual second language acquisition*, referring to situations where exposure begins later than one month after birth but before age two. Wei (2000, pp. 6–7) presents a useful table of various definitions/types of bilinguals.

As can be seen from Table 2.1, the terminology used in bilingualism is far-reaching and overlaps to some extent with second language acquisition. For example, *successive bilingual* describes the scope of second language acquisition research. Importantly, however, it is difficult to pigeonhole all types of bilingualism because there are numerous situations in which individuals use two languages, from growing up with two languages, to achieving bilingual status as adults, to having the second language as virtually their only language (e.g., displaced refugees). Further, there are different combinations of ability. For example, there are those who function well in some contexts (talking with one's family), but who are not literate in that language, versus those who function well academically in both languages. Valdés (2001a, p. 41) illustrates what she calls a bilingual continuum in Figure 2.1. The two letters represent two languages; the size and the case of the font reflect different proficiencies.

Table 2.1 Definitions of bilingualism

achieved bilingual	same as *late bilingual*
additive bilingual	someone whose two languages combine in a complementary and enriching fashion
ambilingual	same as *balanced bilingual*
ascendant bilingual	someone whose ability to function in a second language is developing due to increased use
ascribed bilingual	same as *early bilingual*
asymmetrical bilingual	see *receptive bilingual*
balanced bilingual	someone whose mastery of two languages is roughly equivalent
compound bilingual	someone whose two languages are learned at the same time, often in the same context
consecutive bilingual	same as *successive bilingual*
coordinate bilingual	someone whose two languages are learned in distinctively separate contexts
covert bilingual	someone who conceals his or her knowledge of a given language due to an attitudinal disposition
diagonal bilingual	someone who is bilingual in a nonstandard language or a dialect and an unrelated standard language
dominant bilingual	someone with greater proficiency in one of his or her languages and uses it significantly more than the other language(s)
dormant bilingual	someone who has emigrated to a foreign country for a considerable period of time and has little opportunity to keep the first language actively in use
early bilingual	someone who has acquired two languages early in childhood
equilingual	same as *balanced bilingual*
functional bilingual	someone who can operate in two languages with or without full fluency for the task in hand
horizontal bilingual	someone who is bilingual in two distinct languages which have a similar or equal status
incipient bilingual	someone at the early stages of bilingualism where one language is not fully developed
late bilingual	someone who has become a bilingual later than childhood
maximal bilingual	someone with near-native control of two or more languages
minimal bilingual	someone with only a few words and phrases in a second language
natural bilingual	someone who has not undergone any specific training and who is often not in a position to translate or interpret with facility between two languages
passive bilingual	same as *receptive bilingual*
primary bilingual	same as *natural bilingual*
productive bilingual	someone who not only understands but also speaks and possibly writes in two or more languages
receptive bilingual	someone who understands a second language, in either its spoken or written form, or both, but does not necessarily speak or write it

continued

Table 2.1—continued

recessive bilingual	someone who begins to feel some difficulty in either understanding or expressing him or herself with ease, due to lack of use
secondary bilingual	someone whose second language has been added to a first language via instruction
semibilingual	same as *receptive bilingual*
semilingual	someone with insufficient knowledge of either language
simultaneous bilingual	someone whose two languages are present from the onset of speech
subordinate bilingual	someone who exhibits interference in his or her language usage by reducing the patterns of the second language to those of the first
subtractive bilingual	someone whose second language is acquired at the expense of the aptitudes already acquired in the first language
successive bilingual	someone whose second language is added at some stage after the first has begun to develop
symmetrical bilingual	same as *balanced bilingual*
vertical bilingual	someone who is bilingual in a standard language and a distinct but related language or dialect

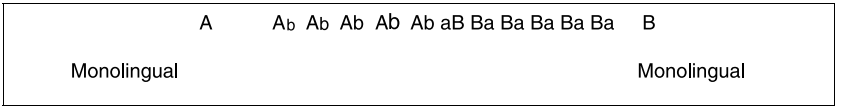

Figure 2.1 Bilingual continuum.

Source: Adapted from Valdés, G. (2001). Heritage language students: Profiles and possibilities. In J. K. Peyton, D. A. Ranard, & S. McGinnis (Eds.), *Heritage languages in America: Preserving a national resource*. Washington, DC: Center for Applied Linguistics. Used with permission.

Despite this range, there have been and continue to be misunderstandings regarding the advantages of being bilingual. One can think of advantages in a number of domains. Baker and Prys Jones (1998) discuss communicative advantages, cultural/economic advantages, and cognitive advantages. With regard to the first of these, some are fairly obvious, including talking to immediate and extended family members. One can imagine a situation in which families emigrate to a country where another language is spoken; the children learn the new language and only barely understand the language of the parents, having become fluent in the language of the new country, whereas the parents do not learn the language of the environment. The communication gap widens with the unfortunate result of noncommunication between parents and children. Beyond these instances of family communication, bilinguals, living in a

world of regular language monitoring, often show greater sensitivity to the communicative needs of others. Similarly, having experience in more than one culture provides an understanding to cultural differences among peoples. Further, it is obvious that economic advantages abound in all areas of work—from business to sales.

Finally, there are cognitive advantages, including divergent thinking, creative thinking, and metalinguistic awareness. Metalinguistic awareness is the ability to think about (and manipulate) language. In other words, metalinguistic ability allows one to think about language as an object of inquiry rather than as something we use to speak and understand language. Bialystok (2001a, 2001b) has found bilingual children to have superior abilities in judging grammatical accuracy than monolingual children. Bialystok (1987) investigated bilingual and monolingual children's abilities to count words, which reflects knowledge of what a word is and knowledge of the relationship between word and sentence meanings. She found that bilinguals were advantaged over monolinguals in both of these domains: "Bilingual children were most notably advanced when required to separate out individual words from meaningful sentences, focus on only the form of or meaning of a word under highly distracting conditions, and re-assign a familiar name to a different object" (Bialystok, 1987, p. 138). In general, bilinguals tend to have better abilities in those areas that demand selective attention because that is what one has to do when there is competing information (e.g., two languages). Thus, bilinguals' awareness of language comes at an early age. Knowing two languages provides them with the skills to separate form from meaning, which in turn facilitates reading readiness.

One of the phenomena of early language development (see following section on first language acquisition) is babbling. This occurs toward the end of the first year of life. Maneva and Genesee (2002) noted that children exposed to two languages from birth show language-specific patterns in their babbling and, hence, can already differentiate between the two languages before their first birthday. Matching the appropriate language to speakers and/or context is found in children often as young as 2 (e.g., Genesee, Boivin, and Nicoladis, 1996).

A common phenomenon among bilingual speakers is code-switching, which essentially refers to the use of more than one language in the course of a conversation. Sometimes this might happen because of the lack of a concept in one language and its presence in the other; sometimes it might be for humor; and sometimes it might happen simply because of the social context. For example, Grosjean (2001, p. 3) presents the following diagram (Figure 2.2) to illustrate the issue of language mode, which is "the state of activation of the bilingual's languages and language processing mechanisms at a given point in time" (p. 2). The native language (here called the base language) is always totally activated; it is

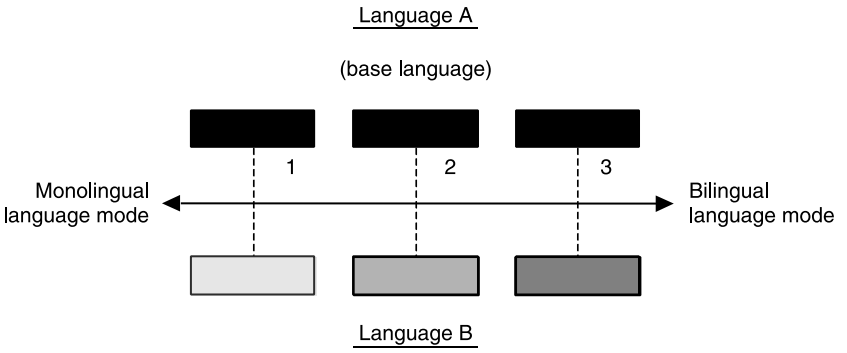

Figure 2.2 The language mode continuum.

Source: Grosjean, F. (2001). The bilingual's language modes. In J. Nicol (Ed.), *One mind, two languages: Bilingual language processing*. Malden, MA: Blackwell.

the language that controls linguistic activities. The guest language, on the other hand, can be in low to high activation depending on the context. Only in bilingual language mode (the right side of the diagram) is there almost equal activation, and it is in these contexts when code-switching occurs.

Bilingualism, or at least some form of knowledge of more than one language, is so common throughout the world that Cook has proposed that the "normal" propensity is for humans to know more than one language rather than taking monolingualism as the default position. He refers to this as *multicompetence*, which he defines as the "knowledge of two or more languages in one mind" (Cook, 2003, p. 2; cf. Cook, 1991, 1992). If multicompetence is the "norm," then there needs to be a re-evaluation of what it means to be a native speaker of a language. Cook (2005) argued that there are effects of multilingualism on how individuals process their native language, even individuals with a minimal knowledge of a second language. Cook further argues that the monolingual orientation of second language acquisition belies the reality of the context of language learning in much of the world where knowledge of more than one language is the norm.

2.5 First language acquisition

We conclude this chapter with a brief discussion of child language acquisition. We do so because this field has been important in the development of SLA, particularly in the 1960s and 1970s, as SLA was beginning to establish itself as a viable research discipline. As we will see in later chapters, much SLA research parallels developments in child language acquisition research and over the years has drawn on concepts from this

research area to understand second language phenomena. Many of the same questions have been and continue to be addressed and some of the same theoretical explanations form the foundation of both fields.

Learning a first language is an amazing accomplishment. It is a learning task perhaps like no other. At the onset of the language-learning odyssey, a child has much to determine about the language that she or he hears.[3] At the end of the journey, every child who is not cognitively impaired has an intact linguistic system that allows him or her to interact with others and to express his or her needs.

To give an example of the complexity that children face, consider the following example:

> How do children figure out the concept of plurality and the language needed to express plurality. Let's think about the input that children receive. A parent might have one potato chip in his/her hand and say "Do you like potato chips?" Or, at another time the parent might say "Do you want a potato chip?" How does the child distinguish between the generic meaning expressed in the first one and the singular meaning of the second? This is further complicated by the fact that in response to the second question, when the child says "yes," he or she probably receives more than one potato chip.

Language is a form of communication, but children communicate long before they have language—at least in the way we normally think of language. Anyone who has lived in a household with an infant is aware of the various means that infants have at their disposal to communicate their needs. The most efficient of these is crying, but there are other more pleasant means as well. Some of these include smiling[4] and cooing. Coos are not precisely like the regular speech sounds of language, but they do suggest that infants are aware of sounds and their potential significance. For example, from approximately four to seven months, infants use these cooing sounds to play with such language-related phenomena as loudness and pitch (Foster-Cohen, 1999).

2.5.1 Babbling

At approximately six months of age, infants turn to more language-like sounds in what is called babbling. Babbling most commonly consists of consonant–vowel sequences (e.g., *bababa*, *dadada*, and later *bada*). It is frequently the case that some of these early babbling sounds are taken to be "words" by parents or caregivers. For example, *mamama* is frequently and perhaps wishfully interpreted as referring to the child's mother, when in fact the sounds may be nothing more than sounds with no meaning attached. The line between babbling and true words is often a fine one.

One device that children use fairly early to express meaning is intonation. Even before they have grammatical knowledge, they can use the appropriate stress and intonation contours of their language to distinguish among such things as statements, questions, and commands. A child can, for example, say *dada* with the stress on the second syllable. One can imagine the child doing so with her arms outstretched with the intention of a command, something like *Pick me up, daddy*! Or, one can imagine a child hearing what appears to be a door opening and saying

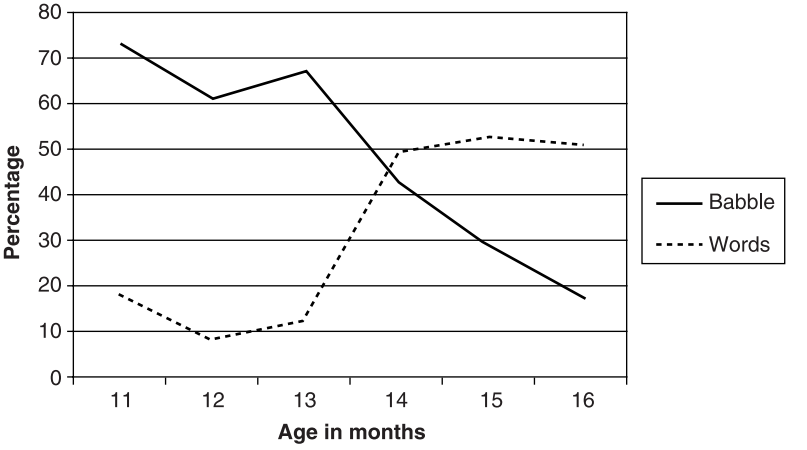

Figure 2.3 Relationship between babbling and words: Child 1 (data from Vihman, 1996, cited in Foster-Cohen, 1999).

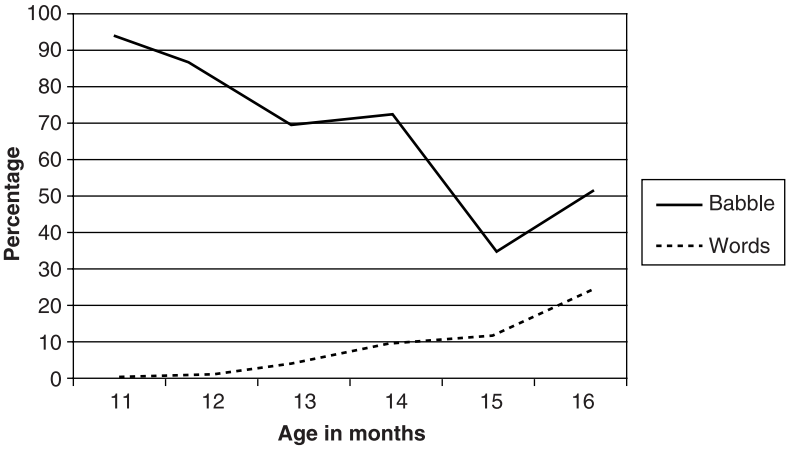

Figure 2.4 Relationship between babbling and words: Child 2 (data from Vihman, 1996, cited in Foster-Cohen, 1999).

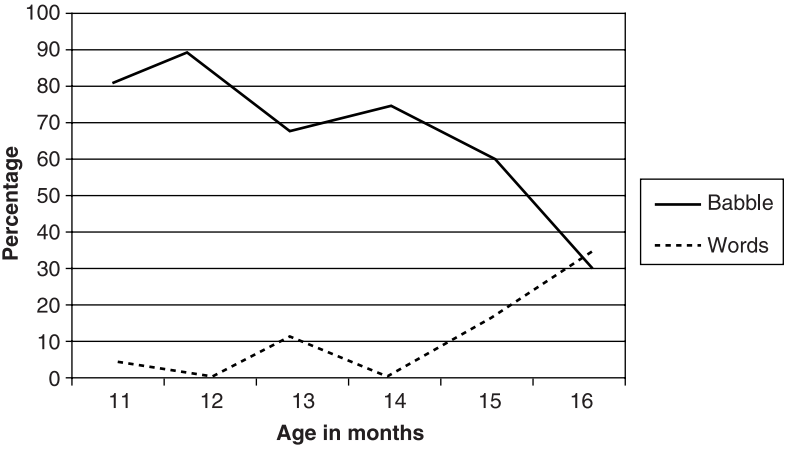

Figure 2.5 Relationship between babbling and words: Child 3 (data from Vihman, 1996, cited in Foster-Cohen, 1999).

dada with rising intonation. This might have the force of a question such as *Is that daddy*?

How does babbling turn into word usage? Does this happen abruptly, or is the change a gradual one? Figures 2.3–2.5 show the relationship between babbling and actual word usage for three children between the ages of 11 months and 16 months.

There are a number of interesting points to be made about these data. First, for all three children, during the five-month period there is a decrease in babbling and an increase in words, although the increase and decrease are not always linear. Second, there appears to be a point where each child "gets" the concept of words as referring to something. Once this occurs (month 14 for Child 1 and Child 2; month 15 for Child 3), there seems to be a drop-off in the amount of babbling that occurs.

2.5.2 Words

What function do words have for children? Words in early child language fulfill a number of functions. They can refer to objects, such as *ba* for bottle; they can indicate a wide range of grammatical functions, such as commands (*I want my bottle*); they can serve social functions, such as *bye* and *hi*. Children have to learn that words can serve each of these functions.

Another point to bear in mind is that words in an adult's language do not always correspond to words in a child's language. "Words" for children might reflect more than one word in the adult language. For example, *allgone* is typically produced at the one-word stage in child language, even though it comprises two words in the adult language.

There are other aspects of adult and child vocabulary that are not in a 1:1 correspondence. Children often overextend the meanings of words they know. For example, Hoek, Ingram, and Gibson (1986) noted one child's (19–20 months) use of the word *bunny* to refer to *doll, hen, shoe, car, picture of people, giraffe, cow, bear, chair, lamp, puzzle, train*, and so forth. At the same age, the child used *bear* to refer to a stuffed toy lion and a picture of a pig. At the same time, a physical object placed on a head (e.g., a book) might playfully be referred to as a *hat*, suggesting that the child can distinguish between objects and their functional uses.

In addition to overextension, children often underuse words. For example, one could imagine a child associating the word *tree* (in the dead of winter) with a leafless tree, but not using the word *tree* to refer to a tree with green leaves. In other words, children often use words with more restricted meanings than the word has in adult usage. This is known as underextension.

2.5.3 Sounds and pronunciation

In these early stages, it is clear that the pronunciation of children's words is not exactly identical to that of adult speech. Among the earliest tasks that children face is figuring out the nature of the sounds they are hearing. Some sounds are distinguished quite early (e.g., the difference between the consonants in [ta] and [da]); others are of course learned later (*wabbit* for *rabbit*). Even when children start using words that more or less resemble adult words, at least in meaning, there are pronunciation differences. Common examples are substitutions, as in the *rabbit* example just given; deletion of syllables, as in *dedo* for *potato* (cf. Ingram, 1986); deletion of sounds, such as *tein* for *train* (cf. Ingram, 1986); and simplification, such as *fis* for *fish*. It is not always clear how to explain these phenomena. Are they a matter of motor control or of perception? The answer is: it depends. Foster-Cohen (1999) provided an interesting example from Smith (1973), whose child couldn't say the word *puddle*. He pronounced it as *puggle*. One could argue that this is a matter of pronunciation abilities, but a further look at this child's pronunciation showed that he used *puddle* for *puzzle*. Hence, this child was making a regular substitution (*g* for *d* and *d* for *z*) but was perfectly capable of making the appropriate sounds, just not in the appropriate place. We also know that children often get angry when adults "imitate" them using their own (children's) pronunciation. For example, when an adult says, "Oh, you want ice cweam [ice cream]," a child is likely to get angry and reply, "No, I want ice cweam, not ice cweam." This shows that children clearly can perceive a difference, although they do not make the difference in their own speech.

2.5.4 Syntax

Earlier we talked about babbling and the move from babbling to words. This initial stage is often referred to as the one-word stage because there is no word combination as of yet. The fact that children at this stage may use words like *allgone* does not contradict this, for this word is likely to be only one word in the child's lexicon. After several months in the one-word stage, children start to combine words (usually at around two years of age). They might say something like *Mommy cry*. What is typical of this phase is that the words that are used are content words (i.e., nouns and verbs). Function words, such as articles, prepositions, and grammatical endings, are notably lacking. As children move beyond the two-word stage, speech becomes telegraphic. The utterances used are much like the ones commonly used when sending a telegram—only the bare minimum so as not to have to "pay" for any more than is necessary. For example, children's utterances might include *Aaron go home, Seth play toy, Ethan no go*. As children's utterances become longer, it is appropriate for researchers to have a measure to determine complexity. Mean length of utterance (MLU) is the standard measure used; it averages number of morphemes over 100 utterances and is a more realistic measure of development than is chronological age.

There are some typical stages that are found in further syntactic development. Lightbown and Spada (2006, pp. 6–7) provide the examples of the acquisition of question formation listed in Table 2.2. Important is the fact that there is a predictable development for all children.

When we return to a discussion of second language acquisition in later chapters, we will see that adults learning a second language also have

Table 2.2 Question formation

Stage 1.	Intonation. *Cookie? Mommy book?*
Stage 2.	Intonation with sentence complexity. *Yes/no* questions. Children use declarative sentence order with rising intonation: *You like this? I have some?* *Wh-* questions. Question word with declarative order: *Why you catch it?*
Stage 3.	Beginning of inversion. *Wh-* questions maintain declarative order. *Can I go? Is that mine? Why you don't have one?*
Stage 4.	Inversion. *Do you like ice cream? Where I can draw them?* Use of *do* in *yes/no* questions (but not in *wh-* questions).
Stage 5.	Inversion with *wh-* questions. When negation needs to be included, the declarative form is maintained. *Why can he go out? Why he can't go out?*
Stage 6.	Overgeneralization of inversion. *I don't know why can't he go out.*

predictable sequences in terms of the acquisition of certain structures. However, the situation with second language learners is more complex because factors involving the native language may assume importance.

2.5.5 Morphology

Much of the impetus for initial work in second language acquisition stemmed from work by Brown (1973) and his astute observation that there was a predictable order of acquisition of certain inflectional morphemes in English. The three children he studied, Adam, Sarah, and Eve, learned English morphemes in roughly the same order despite the fact that this did not always occur at precisely the same age. Brown's research revealed that the emergence of grammatical morphemes was consistent across these children and that this emergence could be related to their overall development, measured in MLUs. Table 2.3 shows the order of acquisition for these three children. What is interesting is that the order does not reflect the frequency of these morphemes in the speech of the children's parents.

There may be a number of reasons as to why this order versus some other order exists. Among them are such notions as salience (e.g., the morpheme *-ing*, as in *walking*, can receive stress and is salient, whereas the morpheme *-ed*, as in *walked*, cannot), syllabicity (are they syllables?), and a lack of exception (the *possessive* ending *-'s* is used without exception, whereas the past tense *-ed* has exceptions in irregular verbs. We return to the order of morpheme acquisition in chapter 5 (section 5.3) in our discussion of second language acquisition.

Another well-known study comes from Berko (1958), who devised a famous "wug" test to determine knowledge of grammatical morphemes. In this test children were shown a picture of a novel animal and were told

Table 2.3 Mean order of acquisition of morphemes

1.	Present progressive (*-ing*)
2/3.	*in*, *on*
4.	plural (*-s*)
5.	Past irregular
6.	Possessive (*-'s*)
7.	Uncontractible copula (*is*, *am*, *are*)
8.	Articles (*a*, *the*)
9.	Past regular (*-ed*)
10.	Third person regular (*-s*)
11.	Third person irregular

Source: Reprinted and adapted by permission of the publisher from *A First Language: the early stages* by Roger Brown, p. 274, Cambridge, Mass: Harvard University Press, Copyright © 1973 by the President and Fellows of Harvard College.

that this was a *wug*. Then they were shown a picture of two of the animals and were led into saying *there are two xxx*. Even preschool children were able to correctly form plurals which showed that they had understood the concept of plurality and the grammatical form to express plurality and were able to apply this knowledge to new contexts. At times, there is regularization of irregular forms (called overgeneralization) and children might say something like *mices*, not recognizing that the word *mice* is already plural. At a later stage, children learn that there are exceptions to regular patterns.

One final point to make is that there are often prerequisites for learning certain forms and that there are often interrelationships among forms. An example can be seen in the acquisition of negatives and questions and the necessary prerequisite of knowledge of auxiliaries (e.g., forms of the verb *to be*, and forms of the verb *to do*). A very early stage involves only rising intonation, but once children are able to put words together, utterances with a *wh-* word (e.g., *where, what, who*) appear at the beginning of an utterance, such as *Where Ann pencil?, Who that?, What book name?* (examples from Foster-Cohen, 1999). As children become more sophisticated, other components begin to appear, such as modals, but there are examples without inversion, such as *What he can ride in?* (example from Klima and Bellugi, 1966). At a later stage, children begin to use auxiliaries and also correct order. As Foster-Cohen (1999) points out, as these question forms are developing for *wh-* questions, there is a similar development for *yes/no* questions. Akmajian, Demers, Farmer, and Harnish (1995), referring to work by Foss and Hakes (1978) and Clark and Clark (1977), also note that negatives show a similar pattern with single words such as *no* appearing first, followed by a negative word at the beginning of an utterance, such as *no eat*, followed by negative modals or negative words in sentence internal position, such as, *He not big, I can't do that*. As with questions, this is followed by a wider range of auxiliaries. Thus, the emergence of a number of different forms and structures is noted.

There are certain conclusions that we can draw about children learning their first language. Throughout this book, we will return to these, as most are applicable in a second language context as well.

- Children go through the same developmental stages, although not necessarily at the same rate.
- Children create systematicity in their language and develop rules to govern their language knowledge and language use.
- The rules that are developed do not necessarily correspond to the rules of the adult language.
- There is overgeneralization of grammatical morphemes.
- There are processing constraints that govern acquisition and use.

- Correction does not always work.
- Language acquisition is not determined by intelligence.

2.6 Conclusion

This chapter has focused on different types of acquisition. They are related to the main topic of this book, second language acquisition, in different ways. Child language acquisition has had the most profound influence in terms of the development of the field, but in more recent years, ties have been strengthened between heritage language learning and second language acquisition and between bilingual/multilingual research and second language acquisition. We have also presented some preliminary discussion of theoretical concepts that have been important in the development of the field of SLA. In the remainder of this book, we focus almost exclusively on second language acquisition and in the next chapter we deal with the important concepts of data elicitation and data analysis.

Suggestions for additional reading

Foundations of Bilingual Education and Bilingualism, 4th ed. Colin Baker. Multilingual Matters (2006).

The Handbook of Bilingualism. Taj Bhatia and W. Ritchie (Eds.). Blackwell Publishers (2006).

Trends in Bilingual Acquisition. Jasone Cenoz and Fred Genesee (Eds.). John Benjamins (2001).

Cross-Linguistic Influence in Third Language Acquisition: Psycholinguistic Perspectives. by Jasone Cenoz, Britta Hufeisen, and Ulrike Jessner (Eds.). Multilingual Matters (2001).

English in Europe: The Acquisition of a Third Language. Jasone Cenoz and Ulrike Jessner (Eds.). Multilingual Matters (2000).

Understanding Child Language Acquisition. Paul Fletcher. Hodder Arnold (2005).

An Introduction to Child Language Development. Susan Foster-Cohen. Longman (1999).

Language Acquisition: The Growth of Grammar. Maria Teresa Guasti. Bradford Books MIT Press (2004).

The Bilingual Edge. Kendall King and Alison Mackey. Harper Collins (2007).

Handbook of Bilingualism: Psycholinguistic Approaches. Judith F. Kroll and Annette M. B. De Groot (Eds.). Oxford University Press (2005).

Child Language: Acquisition and Growth. Barbara Lust. Cambridge Textbooks in Linguistics (2006).

First Language Acquisition: The Essential Readings (Linguistics: the Essential Readings). Barbara Lust and Claire Foley (Eds.). Blackwell (2004).

Childhood Bilingualism: Research on Infancy Through School Age (Child Language and Child Development). Peggy D. McCardle and Erika Hoff (Eds.). Multilingual Matters (2006).

Multiple Voices: An Introduction to Bilingualism. Carol Myers-Scotton. Blackwell (2006).
How Children Learn Language. William O'Grady. Cambridge University Press (2005).
The Bilingual Reader. Li Wei (Ed.). Routledge (2000). Revised edition 2006.

Points for discussion

1 If a researcher doesn't get enough information from his or her subjects before carrying out a study, heritage language learners may be included in the sample without the researcher's knowledge. How could this oversight affect the results of the study? Why would it be important for a researcher to control for this variable?
2 Using Table 2.1, decide which type of bilingual each of the following individuals would be (more than one term may be appropriate).

   a A native speaker of Vietnamese who has been living in the United States for 35 years; speaks English with his American family, friends, and colleagues; and has little or no opportunity to use Vietnamese.
   b A four-year-old child who speaks English with his Canadian father and Japanese with his Japanese mother and lives in Canada.
   c An Italian university student who speaks Sicilian at home and with friends, but watches television and films in Standard Italian and uses the standard at the university.
   d A Ph.D. student who can read Latin texts for her research but doesn't actually speak Latin.
   e You.

3 Consider a situation in which a native speaker of English is in a restaurant in an English-speaking country speaking to some friends in Italian. At a certain point the English speaker asks the waitress (a monolingual English speaker), "Could we have another carafe of *vino*?" What has happened here?
4 What are the stages of child first language acquisition? Give some examples of each stage.
5 Give evidence that children's receptive skills precede their productive skills in first language acquisition.
6 Which stage in the acquisition order of question formation on Table 2.2 do the following child question forms represent?

   a "Where we are going? Do you remember last time?"
   b "Daddy car?"
   c "I don't know where is the doggie."
   d "I have some?"

7 What can you hypothesize about a child's morphological acquisition based on the following statements?

   a "Grandma, I seed a lion at the zoo!"
   b "Gigi run fast!"
   c "Two cookie."

8 For the instructor: Prepare a tape of a language that the students do not know and which is related to a second language that the students may have studied (for example, Portuguese in an English-speaking environment, because many will have studied Spanish). Play the tape once or twice. Ask students how much they understand. Then give them the written version of what they heard. Again, ask what they understood. Then ask what information they used to try to understand this L3—for example, their L1, their L2 (Spanish), real-world knowledge. (We thank Amy Thompson for this suggestion.)

In this and subsequent chapters, the reader is directed to relevant data analysis problems in Gass, Sorace, and Selinker (1999), henceforth (GSS). For this chapter, the relevant problems are 3.5 and 3.6.