

interlanguage phonology in the 1980s (see Ioup and Weinberger 1987) had several focuses, which included: (1) models of phonological development, (2) theories of interlanguage phonology, (3) acquisition of syllable structure, (4) acquisition of suprasegmentals, and (5) the varying phonological production of learners resulting from the formality of the speech situation in which learners are engaged, the anxiety they are experiencing (see Tarone 1988), and so on.

MARKEDNESS THEORY

A fourth theory that has contributed to the field of second language acquisition is **markedness theory**, which proposes that in every linguistic opposition – phonological or semantic – there is one member of any pair of opposites that is psycholinguistically **unmarked** (more basic or neutral, more universal, more frequent, first acquired) and one that is **marked** (more specific, less frequent, more limited, later acquired). This theory is helpful in explaining phonological differences among languages. For example, according to markedness theory, English (which allows both voiceless /p, t, k/ and voiced /b, d, g/ stop consonants in word- or syllable-final position) is more marked with respect to stop consonants in final position than are German and Russian (which permit only voiceless stop consonants /p, t, k/ in this position).

Markedness theory was first proposed and developed by Trubetzkoy (1939) and Jakobson (1941) along with other linguists from the Prague School. In terms of current research on second-language phonological acquisition, markedness theory has been applied by Eckman (1977) in his markedness differential hypothesis. In essence, Eckman's work combines elements of the previously discussed hypotheses, asserting that although it is "necessary to compare descriptions of the native and target languages in order to predict areas of difficulty, . . . this alone is not sufficient" (p. 60).

Eckman's theory is a direct response to criticisms of the contrastive analysis hypothesis – specifically, that it did not (1) accurately predict which areas of target language phonology would be most difficult for learners of a given language group or (2) predict which exact sounds would be substituted by the learner. In the case of German and English, for example, the contrastive analysis hypothesis can establish that these two languages place very different limitations on the positions in which the voiced stops and fricatives /b, d, g, v, z/ occur, with German (with some dialectal variation) allowing them only in syllable-initial position and English allowing a much more varied occurrence (see Moulton 1962). Having established this difference, the contrastive analysis hypothesis can predict that learners from these two language backgrounds would have difficulty pronouncing (i.e., voicing or devoicing) the final stops and fricatives in the other language; contrastive analysis alone, however, is not able to establish a *directionality* of difficulty. In other words, it could not predict whether native English speakers would have more difficulty learning to pronounce the final consonant of the German word *Bad* "bath" as /t/ or whether native German speakers would be more apt to have difficulty voicing the final /d/ of the English word *bad*.

Eckman proposes to remedy this deficiency by constructing a hierarchy of difficulty for phonological acquisition that utilizes insights from markedness theory. His markedness differential hypothesis claims to accurately predict that German speakers (whose language *prohibits* them from voicing stops and fricatives in final position) will, when speaking English, experience difficulty in producing the marked voiced-consonant forms in final position. On the other hand, English speakers (whose native language allows either voiced or voiceless final stops and fricatives) will, when speaking German, experience relatively less difficulty in learning to ignore the marked forms and to use the unmarked forms exclusively in syllable-final position.

This line of linguistic investigation should, according to Eckman, help us augment the insights gained from contrastive analysis and predict not only which sounds learners would have difficulty with, but which problems would be more difficult for a linguistically homogeneous group of learners.

LANGUAGE UNIVERSALS

Rather than assume (as most structural linguists have) that languages can differ from each other unpredictably and without limit (Joos 1958), the linguists who study **language universals** assume that all languages share common properties and that their surface differences might actually be quite unimportant.

The quest for language universals has taken two different paths:

1. Jakobson's (1941) seminal work, which greatly influenced Chomsky's (1986) model of "universal grammar" with its **principles** (given elements) and **parameters** (permitted variations), as well as Chomsky's arguments for positing an innate language acquisition device in all humans
2. Greenberg's (1962) typological or implicational language universals, which examine aspects of language that are common to many, and sometimes all, languages

In terms of sound systems, both versions of the universalist hypothesis start from the observation that given all the sounds the human vocal apparatus could possibly produce, the languages of the world draw on a remarkably finite inventory of sounds and share remarkably similar combinatory and hierarchical principles that explain how natural languages are spoken. For example, all languages have vowel sounds and consonant sounds, and within these categories there are sounds that contrast with each other in predictable ways.

In tandem with these universals about the sound systems of languages, there are related principles of phonological acquisition that predict, for example, that sound A is acquired before sound B. The most influential work regarding language universals in the study of phonological acquisition has been that of Jakobson (1941).¹⁰ Given Jakobson's implicational hierarchy:

Stops → Nasals → Fricatives

we can predict that a language with fricatives will also have nasals and stops (but not necessarily vice versa). Likewise, a language with nasals will also have stops (but not necessarily vice versa).

Macken and Ferguson (1987) use Jakobson's hierarchy to state universals of phonological acquisition implied by the hierarchy:

- Stops are acquired before nasals.
- Nasals are acquired before fricatives.

They note that substitutions made in the early stages of acquisition can also be predicted:

- Fricatives will be replaced by stops.

Eckman (1991) combines earlier work on interlanguage analysis, markedness theory, and Greenbergian implicational universals in order to apply the **Interlanguage Structural Conformity Hypothesis** (ISCH) to the acquisition of pronunciation. The ISCH, which holds that implicational universals can be used to explain certain facts about the form of interlanguages without any reference to the learners' first language, was first proposed by

¹⁰Kiparsky and Menn (1987) remind us that Jakobson's hierarchies help us account for, among other things, regularities in the consonant inventories of languages.

Eckman, Moravcsik, and Wirth (1989) in a study that examined syntax (i.e., interrogative structures) rather than phonology. Eckman's 1991 study tested the relevance of the ISCH to phonological acquisition using two implicational universals from Greenberg (1978) as his starting point:

Fricative + stop principle: If a language has at least one final consonant sequence consisting of stop + stop (e.g., *kicked* /kɪkt/), it also has at least one final consonant sequence consisting of fricative + stop (e.g., *risk* /rɪsk/).

Resolvability principle: If a language has a consonant sequence of a given length (e.g., three consonants: *spry* /spray/) in either initial or final position, it also has at least one consonant sequence with one less consonant in the same position (i.e., in this case two consonants: *spy* /spay/).

These principles are hierarchical and do not work in reverse: Languages can have fricative + stop sequences without having stop + stop sequences, and languages can have sequences of two consonants without having sequences of three consonants in the same position.

We expect that further research in language universals will ultimately exploit the links between phonological universals and universals of phonological acquisition (see Leather and James 1991). However, we also agree with Macken and Ferguson (1987), who – based on their learner observation and research – argue that language universals alone will never perfectly predict phonological acquisition. Instead, they put forward two hypotheses that they feel are more accurate:

1. Phonological acquisition, like other forms of linguistic and nonlinguistic learning, involves a process of discovering patterns, via form testing, and revising hypotheses – a process referred to as regularizing.
2. At least some linguistic universals are not due to the operation of an innate language acquisition device; rather, they derive from the interaction of the learner and a patterned input.

With these hypotheses Macken and Ferguson lead us quite logically to a consideration of our last theoretical model for phonological acquisition, information processing theory.

INFORMATION PROCESSING THEORY

Information processing theory, which attempts to account for phonological acquisition without ignoring the effect of the native language on second-language phonological acquisition, derives from work in cognitive science. Within this field, which does not concern itself primarily with language acquisition, the research of Schneider and Schiffrin (1977) and Rumelhart and Norman (1978) provides useful insight into how the brain processes new information. According to Rumelhart and Norman, learners exhibit a distinct tendency to interpret new information in terms of their existing knowledge structures, commonly referred to as *schemata*. Schneider and Schiffrin propose that previously stored information can be processed in one of two manners – either via controlled processing (i.e., processing requiring attention and awareness) or via automatic processing (i.e., processing that is not controlled, modified, or inhibited). Automatic processing differs from controlled processing in that it is not capacity limited, and thus several automatic processes can be carried out in parallel, whereas controlled processes can be carried out only one at a time. These two modes of processing are not mutually exclusive; rather, they are often conducted in tandem as information is accessed.

Information processing theory predicts that in the acquisition of second language phonology, learners will exhibit a distinct tendency to interpret sounds in the second lan-

guage in terms of the set of sounds that they control as part of their first language system. In addition, they will tend to process phonological information automatically, even in the early stages of second language acquisition, since the higher-level tasks of conceptualizing and formulating in the second language require controlled processing. This automatic processing of phonology, especially prevalent in adults, helps to account for the fossilized nature of much of second language pronunciation (Barbara Baptista, personal communication).

Information processing theory further postulates three modes of learning (Rumelhart and Norman 1978). In the first mode, accretion, the learners add new structures to their existing schemata or knowledge structures. In the second mode, restructuring, learners reorganize already-existing structures and create new schemata based on the preexisting patterns. Finally, in the tuning mode, learners further modify the new and/or old schemata, making them more accurate, general, or specific.

Until this point, the information processing account of second-language phonological acquisition appears to resemble somewhat the contrastive analysis hypothesis discussed earlier. However, second language phonologists who subscribe to an information processing view claim that rather than substitute the native language phoneme for that of the target language, speakers produce a compromise, or "middle ground" between the two – as in Flege's (1981) phonological translation hypothesis. According to Flege, the "seeming compromise between [the native and target language] patterns of phonetic implementation may reflect a restructuring of the phonetic space so that it encompasses the two languages" (p. 451).¹¹

To translate this theory into more practical terms, imagine a native speaker of Brazilian Portuguese learning North American English. In this speaker's native-language vowel schema, there are seven oral monophthongal vowels /i, e, ε, a, ɔ, o, u/. On confronting the target language, the speaker may notice that the English vowel system contains a similar vowel for each of these native-language vowel sounds.¹² The learner may also recognize that English has the additional unfamiliar vowels /ɪ, æ, ʊ, ʌ/. Following Rumelhart and Norman's theory, acquisition would occur as follows. The speaker would try to add the new vowel sounds to the existing vowel schemata (accretion). Since the existing schemata are inadequate to account for the new input without interfering with the relative position of the vowels, the speaker would be forced to first restructure the existing schemata – ostensibly arriving at the compromise position suggested by Flege. With time and additional input, and assuming no fossilization, the speaker would fine-tune this system, arriving at an increasingly targetlike production of the vowel sounds.¹³ As with the other theories discussed here, more empirical evidence is needed to confirm current thought on information processing and validate it as regards a learner's phonological acquisition of a second language. However, this field of research is very promising in terms of providing insight into the role played by first language transfer.

NEW DIRECTIONS IN RESEARCH

Whereas earlier research on the acquisition of English pronunciation by second language speakers tended to focus on the acquisition of individual vowel or consonant phonemes,

¹¹Note that Flege defends his hypothesis by pointing out that it is in complete accordance with evidence from interlanguage phonology studies indicating that with increased exposure to the target language, the phonological utterances of speakers will become more targetlike.

¹²This assumes that the learner will identify English /ey/ and /ow/ with the Portuguese monophthongs /e/ and /o/ rather than with the Portuguese diphthongs /ei/ and /ou/.

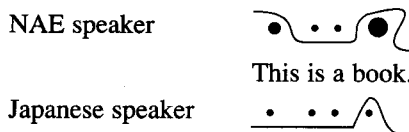
¹³This example is from research by Baptista (1992), who justifies the grouping of English /ey/ and /ow/ with the Portuguese monophthongs /e/ and /o/ by reference to a distinction made by Lehisté and Peterson (1961) between "single-target complex nuclei" like English /ey/ and /ow/ versus true English diphthongs such as /ay/, /aw/, and /ɔy/.

much of the most recent research has dealt with learners' acquisition of English intonation, rhythm, connected speech, and voice quality settings.

INTONATION

One of the pioneering studies in the acquisition of American English intonation (Backmann 1977) used two Spanish-speaking male consultants and one native male speaker of American English as a control. Backmann demonstrated that with increased residence in the United States and better language proficiency, the more advanced Spanish speaker had modified the flatter two-tone intonation contours characteristic of his native Spanish such that his intonation in English better approximated the more highly differentiated three-tone contours typical of the American English speaker. The newly arrived Spanish speaker – with minor modifications – transferred his flatter Spanish intonation to English.

More recently Todaka (1990) compared available instrumental data on the intonation contours typical of similar utterance types in NAE and Japanese and then acoustically measured the English intonation produced by twenty Japanese speakers (ten male, ten female) studying in the United States. Todaka found that the Japanese speakers – like Backmann's Spanish speakers – erred in the direction of transferring their first-language intonation patterns to English. The Japanese speakers did this in two ways: (1) by not utilizing a broad enough pitch range in their English and (2) by not sufficiently stressing and lengthening prominent stressed syllables carrying pitch changes. This difference can be illustrated as follows:



Todaka suggests that by using a “hyper-pronunciation” training method (i.e., one that initially exaggerates pitch contours and the duration of stressed syllables in English), Japanese speakers can be taught to broaden their range of pitch and to give prominent stressed syllables the longer duration that English requires to carry the broader, more dramatic pitch changes characteristic of its intonation.

RHYTHM

As Todaka's (1990) study indicated, accurate intonation is dependent on accurate rhythm. Further interesting research has been done in this area. Anderson-Hsieh and Venkatagiri (1994) acoustically measured the production of intermediate- and high-proficiency Chinese speakers of English and compared syllable duration of stressed syllables as well as pausing with that of native NAE speakers.¹⁴ These researchers found that the intermediate speakers failed to differentiate duration sufficiently in stressed (i.e., prominent) versus unstressed syllables and that they paused frequently and longer, often inappropriately. The high-proficiency Chinese speakers, on the other hand, had acquired near-native proficiency on the variables studied. The researchers conclude that it is indeed possible to learn appropriate syllable duration as well as length and frequency of pauses.

In another study, Chela Flores (1993) claims that rhythm, in particular the appropriate lengthening of stressed syllables and shortening of unstressed syllables in English, is the most widely experienced pronunciation challenge for speakers of other languages. After experimenting with different approaches for teaching English rhythm to Spanish

¹⁴The proficiency level of the subjects in this study was measured by their SPEAK test scores. See Chapter 12 for more information on this test.

speakers, Chela Flores reported that teaching typical English rhythm patterns first in isolation from lexical items or phrases, then by matching patterns to items or phrases, and finally by imposing the patterns on words, phrases, and sentences, her Spanish speakers were able to make great strides toward producing better English rhythm – especially under controlled production conditions. She concluded that extended practice would be needed for the learners to automatize these new rhythmic patterns.

CONNECTED SPEECH

The ability to produce appropriately connected speech is another promising area of research involving suprasegmentals. In a study comparing the connected speech modifications of Japanese ESL learners (five intermediate and five high proficiency) with those of five American English native speakers, Anderson-Hsieh, Riney, and Koehler (1994) examined the effects of language proficiency, native language transfer, and style shifting on speaker performance. The researchers used a sentence-reading task and also elicited more spontaneous speech to investigate speaker performance in four areas: (1) alveolar flapping (in words like *letter*); (2) intersyllabic linking (C-C, C-V, V-V), where C equals any consonant and V equals any vowel; (3) vowel reduction in unstressed syllables; and (4) consonant cluster simplification.¹⁵ For alveolar flapping, overall linking, and consonant cluster simplification there was a significant difference between the intermediate group members (who did not employ these connecting forms appropriately) and the high-proficiency group members (who approximated the performance of native speakers fairly closely). Those areas where the performance of both the intermediate and high-proficiency Japanese speakers differed significantly from that of the native English speakers all involved vowels: C-V linking, V-V linking, and vowel reduction, a tendency due in part to native language transfer. Finally, the researchers in this study found that all three groups produced more linking and deletion on the elicited narrative task than on the sentence reading task; however, both groups of Japanese ESL learners exhibited fewer modifications on this task than the native speakers, who often omitted weak syllables and did rather radical restructuring of underlying phonological forms. The researchers concluded that language proficiency, native language, and style shifting are indeed factors that influence the connected speech of Japanese ESL learners.

VOICE QUALITY

In addition to its vowel and consonant inventory and its characteristic stress and pitch patterns, every language has certain audible characteristics that are present most of the time when native speakers talk (Abercrombie 1967). This phenomenon is referred to as **voice quality**. Laver (1980) describes three types of voice quality settings: supralaryngeal settings (i.e., settings above the larynx that involve phenomena such as tongue position, lip rounding or spreading, presence or absence of nasality, etc.), laryngeal settings or phonation types (i.e., whether the voice can be characterized as whispery, creaky, modal/neutral, or falsetto), and overall muscular tension. He reviews the research before 1980; for example, Hanley, Snidecor, and Ringel (1966) compared pitch and loudness among groups of Spanish, American English, and Japanese speakers and found that the Spanish and Japanese groups spoke with higher pitch and lower volume than did the Americans.¹⁶

To control for anatomical differences among speakers, which had not been done in earlier studies, Todaka (1993) used a screening test to identify four bilingual speakers (two male, two female) of Japanese and English.¹⁷ Utilizing a variety of physiological and acoustic techniques, he found that both the male and female bilinguals spoke with higher

¹⁵The topic for the elicited narrative was “the most exciting or dangerous experience that I have ever had.”

¹⁶A good overview of voice quality variation addressed to teachers can be found in Esling (1994).

pitch when speaking Japanese than when speaking English. He also found that the two female bilinguals spoke with a breathier voice in Japanese than in English but that the males did not.¹⁸ Todaka attributed both types of voice quality differences to the interaction of language-specific and sociocultural factors.

More research is needed using either very large subject pools or very well selected bilingual subjects if we are to get accurate information about voice-quality setting contrasts across languages, and if we are to apply these differences to pronunciation instruction (e.g., getting learners to use increased muscle tension when articulating certain sounds, to speak louder or softer, to lower or raise their relative pitch, etc.). For the moment, we know that voice quality differences do contribute to a foreign accent and that they stem from both linguistic and sociocultural factors. Many of the differences reported in the current literature on voice quality are too subjective or too unreliable to merit pedagogical application at the present time. However, we wish to emphasize (as Esling 1994 does) that part of pronunciation acquisition is awareness of and control over voice quality settings appropriate to the second language settings, which may be quite different from those of the first language.

CONCLUSION

We have certainly come a long way from the oversimplified view that a learner's first language background entirely dictates the second language acquisition process. We have also arrived at a much more enlightened view concerning the role of the individual in this process, recognizing that extralinguistic factors also play a very large role in determining the sequence.

Current consensus regarding the acquisition of second language phonology can perhaps best be summed up as follows (see also Macken and Ferguson 1987; Tarone 1987a):

1. Native language transfer plays a role in a learner's acquisition of the sounds of the second language, but it is only one piece of the puzzle.
2. The extent of influence that negative transfer exerts may differ from learner to learner, and may also vary depending on the type of phonetic structure (e.g., segmental or suprasegmental contrast) being acquired.
3. There are some aspects of interlanguage phonology that parallel the first language acquisition of children, indicating the partly developmental and partly universal nature of phonological acquisition.
4. There is variation in performance accuracy among learners, depending on whether they are conversing in more formal (i.e., control-facilitating) or informal (i.e., automaticity-facilitating) registers.

To these observations we believe we can add the following, based on our research survey:

5. Whether discussed in terms of a critical period, a sensitive period, or some other label, the learner's age is a factor in phonological acquisition. Other things being equal, the earlier the learner's exposure to native speakers of the target language, the

¹⁷Subjects were screened by several native speakers of Japanese and several native speakers of English, who independently agreed that the four speakers in the study were native speakers of Japanese and English, respectively.

¹⁸There are two possible explanations. Perhaps breathiness is gender-based and typically female in Japanese. Alternatively, a post hoc test with monolingual Japanese speakers revealed that the two males were perceived as having a slight accent (i.e., were rated as less fully bilingual than the females). Perhaps the male subjects' lack of breathiness contributed to this assessment of nonnativeness if in fact men tend to have a breathy voice in Japanese.

better the acquisition of phonology; the younger the adult learner, the more his or her pronunciation can be improved.

6. For the overwhelming majority of postpubescent adolescents and adults, a readily intelligible – rather than a nativelike – pronunciation is a more realistic pedagogical goal.
7. Whether we appeal to aptitude (phonemic coding ability), psychomotor skills, or other factors, it appears that acquiring phonology is qualitatively different from acquiring syntax and lexicon. Thus we have young immigrant learners of English who master pronunciation yet have serious gaps in grammar and lexicon. Conversely, there are adults who more or less master English syntax and lexicon yet who have obvious problems with pronunciation.
8. Quite apart from age, aptitude, or first language, the learner's attitude, motivation, language ego, and other sociocultural and sociopsychological factors clearly influence the degree of pronunciation proficiency achieved (or not achieved).

As indicated in Chapter 1, the segmental view of pronunciation has largely given way to a broader, discourse-based view (Pennington and Richards 1986), which includes the interaction between segmental features, voice quality settings, and suprasegmental features. Given this global view, any previously existing perceptions about a division between pronunciation and oral communicative competence is invalidated.

Along with Stevick (1978) and Pennington and Richards (1986), we also point out the vulnerability of learners who, while wishing to attain nativelike pronunciation in the target language in order to avoid the stigma attached to having a foreign accent, may be reluctant to lose their accent for fear of alienating themselves from their native language peers. Thus affective and personality factors (e.g., extroversion, sociability) may either impede or promote acquisition of second language phonology.

In fact, Pennington (1994) suggests that learners perceive three barriers to pronunciation improvement: physiological ("I can't change"), psychological ("I don't need to change"), and sociocultural ("I don't think it's good to change"). She suggests that the goal of instruction is not only to improve learner performance, but also to provide "a basis for change in the psychological and social dimensions of pronunciation" (p. 105).

To be adequately prepared to teach pronunciation, teachers must have at their disposal a working knowledge of articulatory phonetics, theories of second-language phonological acquisition, and an up-to-date command of techniques and procedures to use in the classroom (Parish 1977). But perhaps even more importantly, teachers need to be aware of the affective factors that impede or enhance change so that they can work with students to help them understand how their pronunciation is related not only to their native language but also to their own motivation and personality as well as their view of the target culture (Stevick 1978).

EXERCISES

KEY CONCEPTS

1. Write a brief definition for the following key terms from this chapter. Give examples where relevant.

lateralization	interlanguage
critical period	fossilization
sensitive period	markedness theory
ego permeability	marked/unmarked
acculturation model	language universals
integrative motivation	principles/parameters
assimilative motivation	Interlanguage Structural Conformity Hypothesis (ISCH)
instrumental motivation	information processing theory
contrastive analysis hypothesis	schemata
interference/negative transfer	voice quality
error analysis	phonemic coding ability
avoidance	

2. Match each of the following ideas in recent second language acquisition research with its description by writing the corresponding roman numeral in the blanks. Then summarize the controversy surrounding these theories.

- ___ a. markedness differential hypothesis
- ___ b. critical period hypothesis
- ___ c. interlanguage hypothesis
- ___ d. information processing theory
- ___ e. contrastive analysis hypothesis
- ___ f. acculturation model
- ___ g. error analysis
- ___ h. language universals

- I. Schumann proposes that learners will acquire a second language to the degree that they desire to integrate with the target culture.
- II Eckman predicts sounds that second language learners will find difficult and the order in which learners will acquire these more difficult sounds.
- III. All languages share common properties, and there is a hierarchy of second language acquisition that is not determined exclusively by the learner's first language.
- IV. Cognitive science researchers surmise that second language learners initially demonstrate a distinct tendency to interpret sounds in a target language according to the existing stable set of sounds in their first language.
- V. Selinker proposes that second language learners produce unique utterances that follow a developmental system, partly independent of either the speaker's first language or the target language.

- VI. This theory focuses primarily on learner performance rather than on language contrasts.
- VII. Lenneberg postulates that the best physiological conditions for acquiring a second language exist before puberty.
- VIII. Lado states that the structure of one's first language determines the problems a learner will have in acquiring a second language.

INTROSPECTING ABOUT YOUR OWN LANGUAGE LEARNING

Think about a foreign language that you have learned in school or while living abroad.

1. What pronunciation obstacles have you faced in learning this language? If you have not achieved a targetlike pronunciation, which of the following do you feel help to account for this? Check the boxes that apply.
 - ☐ I don't know where my pronunciation problems lie. I don't notice them.
 - ☐ I know that I transfer sounds from my native language.
 - ☐ I can't hear the difference between some of the target language sounds and my first language sounds.
 - ☐ I can't produce the difference between some of the sounds in my native language and similar sounds in the target language.
 - ☐ It's not important for me to improve my pronunciation. People understand me without trouble.
 - ☐ Even though I can produce some of the target language sounds, it takes too much effort or concentration when I'm speaking.
 - ☐ I like my own accent. I don't want to be like a native speaker or sound like one.
 - ☐ Native speakers of the language comment that my foreign accent is "cute" or "charming." I don't have any motivation to change.
 - ☐ I haven't had enough contact with native speakers. My pronunciation would improve if I had more exposure.
 - ☐ There wasn't enough training or practice in pronunciation when I learned the language.
 - ☐ I learned the language too late. Only younger people can acquire a foreign language without an accent.
2. In class, discuss these factors with another student. Give specific examples for each item that you checked. To what degree are your experiences the same as your partner's? To what degree are they different?

DISCUSSION QUESTIONS

1. Describe an ideal learning situation as it relates to acquiring targetlike pronunciation in a second language.
2. What is wrong with the following statement? "John is really intelligent. He speaks both Arabic and Chinese with a perfect accent."
3. Do you think that extroverted individuals will learn to pronounce a second language better than introverted individuals?

4. Of what importance to pronunciation teachers is the distinction between instrumental, integrative, and assimilative motivation?
5. For each of the following statements, check the column that best represents your belief. Be prepared to support your choices during subsequent discussion.

Statement	Always True	Sometimes True	Never True	Unsure
1. Imitating a native-speaker model facilitates the acquisition of a targetlike pronunciation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
2. In order to correctly produce the sounds of English, NNS students require a detailed description of the sound system of English.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
3. It is possible to change the pronunciation of a fossilized learner.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4. A student's first language plays a significant role in his/her phonological acquisition of a second language.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
5. Children acquire nativelike pronunciation of a second language more readily than adults.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
6. Some students have a better "ear" for language than others, and are thus more gifted in the area of pronunciation.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
7. Motivation and personality play a larger role in determining success in the area of pronunciation than aptitude.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
8. A learner's desire to socially integrate into a society may determine his/her level of accuracy in second language phonology.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

IN THE CLASSROOM

1. How would you respond to a student who says "I don't have the ability to pronounce English properly"?
2. Study the following descriptions of five hypothetical individuals, and rank-order them (i.e., assign a number of 1 to 5, with 1 being the highest) according to their chances of acquiring near-native pronunciation in English. In class, compare your rank ordering with that of your classmates, and attempt to arrive at a consensus.

Ulrike: Ulrike is a 32-year-old immigrant from the Federal Republic of Germany. She had twelve years of English language training in the German public school sys-

tem before arriving in the United States. She is married to an American, and is currently working for a large American corporation as a data processor. She has lived in the United States for two years, and has a 6-month-old daughter.

Alex: Alex arrived in the United States in the company of his parents and two sisters as Jewish refugees from the Soviet Union. He was 11 at the time of arrival, and entered a junior high school with a mixed ethnic population. Alex had no English instruction before coming to the United States. He has been in the United States for three years.

Carlos: Carlos was born in Puerto Rico and moved to the United States at the age of 7. He lives in a section of the city where the language spoken is predominantly Spanish, and he uses Spanish at home. He's currently in his junior year of high school, and he wants to be an electrician.

Lan: Lan is a Vietnamese refugee who escaped to Thailand at the age of 16, leaving her entire family behind. After one year in a refugee camp, she managed to enter the United States, completing high school and then enrolling at the university. She completed an undergraduate degree in engineering, and successfully applied for U.S. citizenship. She is currently working for an aviation firm doing design graphics. She's been in the United States seven years, and is engaged to marry a fellow Vietnamese refugee.

Peter: Peter is a Taiwanese immigrant who has been in the United States for eight years. He received a Ph.D. in psychiatry from an American university, and works in the psychiatric ward of a large hospital. His clientele is from mixed ethnic groups. Peter is single.

SUGGESTED ACTIVITIES

1. Interview two or three individuals who have successfully acquired the pronunciation of another language. Find out as much as possible about the strategies they used to acquire the pronunciation of this language. Some questions you may wish to ask include:
 - What motivated you to learn this language?
 - How important was nativelike pronunciation to you?
 - How old were you when you began learning the language?
 - How would you describe the environment in which you learned the language?
 - How would you rate your language aptitude?
 - How similar are the sound systems of your native language and the language that you learned?
 - Were there sounds in this language that you tried to avoid or did not want to pronounce?
2. Select a language with a sound system familiar to you and find a learner of English from this language background. Record the learner describing a family member or friend. Locate five or ten pronunciation errors and analyze these. Do you think the source of error is interlingual, intralingual, or developmental? Bring your recording to class and discuss your findings with other class members.