

DISCUSSION QUESTIONS

1. Match the seven methods below with the statement that best represents their philosophy of pronunciation teaching. Be prepared in the follow-up discussion to explain the techniques employed in each method that relate to the teaching of pronunciation.

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|--------------------------------|--|
| 1. Grammar Translation | a. Pronunciation should be worked on right from the beginning of language instruction. Any words mispronounced by the student should be corrected by the teacher. |
| 2. Direct Method | b. Language is not learned by repeating after a model. With visual cues the teacher helps students develop their own inner "criteria" for correctness. They must trust and be responsible for their own production in the target language. |
| 3. Audiolingual Method | c. Oral communication is not the primary goal of language instruction. Therefore little attention is given to speaking, and almost none to pronunciation. |
| 4. Silent Way | d. Students should work with language at the discourse or suprasentential level. The ultimate goal is communication. |
| 5. Community Language Learning | e. Students will begin to speak when they are ready. They are expected to make errors in the initial stage and teachers should be tolerant of them. |
| 6. Total Physical Response | f. The pronunciation syllabus is primarily student initiated and designed. Students decide what they want to practice and use the teacher as a resource. |
| 7. Communicative Approach | g. Teachers provide students with a model for nativelike speech. By listening and then imitating the modeler, students improve their pronunciation. |

(Adapted from Larsen-Freeman 1986.)

2. Compare your experience learning the pronunciation of another language in a classroom setting with that of a partner. Ask your partner the following questions:
 - a. What percentage of instructional time was devoted to pronunciation?
 - b. How would you rate the quality of your teacher's pronunciation in the target language (e.g., native/nativelike, good, fair, poor)?
 - c. Which of the following standard techniques for teaching pronunciation did your teacher use, and how?
 - articulatory explanation (e.g., "Put your tongue here . . .")
 - phonetic symbols/description
 - imitation and repetition
 - visual aids
 - d. What type of feedback (if any) did you receive regarding your pronunciation?
 - e. How much use was made of the language laboratory or audiotapes?
 - f. What else contributed to your learning the pronunciation of this language?

3. Which method discussed in this chapter seems most suitable for teaching pronunciation in the following situations:
 - a. students won't talk
 - b. students won't stop talking
 - c. monolingual class
 - d. multilingual class
 - e. large class
 - f. small class
 - g. children
 - h. adults

IN THE CLASSROOM

Assume that you are teaching pronunciation. Here are some common classroom situations that you might encounter. How would you respond?

1. You are teaching a class using Total Physical Response. One of your students asks: "Why aren't we speaking more?"
2. You are using Silent Way with a beginning-level class. One of your students says: "Please correct me every time I make a mistake."
3. You are using the Communicative Approach and doing lots of group work. Your students are unhappy with this. One of them says: "We talk a lot in class but I'm not learning because my partner's accent is worse than mine."

SUGGESTED ACTIVITIES

1. Interview an ESL or EFL teacher. Find out which techniques he or she uses to teach pronunciation.
2. If you are able to locate a teacher who addresses pronunciation systematically, arrange to visit the class. Make a list of the techniques that the teacher employs to teach pronunciation. Can you determine which method(s) is being used and what the teacher's philosophy of teaching pronunciation is?
3. Find out more information about one method of teaching pronunciation. Decide on one technique (e.g., the human computer). Plan a small demonstration lesson and present it in class.

ON THE CASSETTE

Listen to the presentation of the transcription key as represented on page xii. Repeat as needed.

CHAPTER 2

Research on the Teaching and Acquisition of Pronunciation Skills

As outlined in the preceding chapter, the teaching of pronunciation has experienced the same methodological “swings of the pendulum” (Prator 1991) over the years that have characterized the evolution of ESL teaching. With the wide range of curriculum options now available, and the lack of a clear consensus regarding any one best way to teach pronunciation (Macdonald, Yule, and Powers 1994), informed decisions on the part of the teacher or curriculum designer are of paramount importance. This chapter deals with several factors that underlie the effective teaching of pronunciation. These factors focus on the learner, and involve the effects of age, exposure to the target language, amount and type of prior second language instruction, aptitude, attitude and motivation, and the role of the learner’s first language on the phonological acquisition of a second language.¹ Together with the institutional and setting variables (discussed more fully in Chapter 11), insight into these factors helps the reader to identify what is taking place in the complex world of pronunciation research, to judge the current status of research, and to notice the relevance of this research to teaching.

THE LEARNER

The first issue encountered in designing the pronunciation curriculum is perhaps the one most immediately evident – the learners themselves. As Wong (1987b: 17) aptly points out, the teaching of pronunciation “is not exclusively a linguistic matter,” and we need to take into consideration such factors as our learners’ ages, exposure to the target language, amount and type of prior pronunciation instruction, and perhaps most importantly their attitude toward the target language and their motivation to achieve intelligible speech patterns in the second language.²

As teachers in the pronunciation classroom, we clearly have little control over certain of these factors, such as our students’ ages and their amount and type of prior language instruction. However, we need to be aware of how these factors figure in determining performance in speaking English (or alternatively in coloring attitudes toward such performance). For those factors that we can influence (i.e., attitude and motivation), we need to be aware to what degree they determine the acquisition of target language phonology.

¹See Leather and James (1991) for an excellent overview of these topics from the researcher’s perspective. An alternative teacher-oriented review of relevant research is Pennington (1994).

²See Wong (1987b) for a more complete description of the critical role these learner variables play as well as suggestions for helping students become more intelligible within a communicative approach.

Before proceeding to situational variables, let us then briefly examine each of these learner-based factors.

AGE

Given the ability of many adult second language learners to attain targetlike proficiency in morphology and syntax, their apparent inability to attain nativelike proficiency in pronunciation has often intrigued linguists and nonlinguists alike. Scovel (1969, 1988) terms this lack of adult facility in acquiring second language pronunciation the "Joseph Conrad phenomenon" after the famous Polish-born author who, despite the brilliant control of the lexis, syntax, and morphology of English displayed in his literary works, was unable to reach anywhere near the same levels of perfection in his acquisition of English phonology. (Conrad's speech, in fact, remained partly unintelligible to English speakers throughout his life.) Subscribing to the philosophy "You can't teach an old dog new tricks," many would claim along with Scovel that adults are unable to achieve perfect or targetlike pronunciation in a second language. This view goes hand in hand with the generally held notion that prepubescent children with adequate exposure to a second language can achieve perfect or near perfect pronunciation with relative ease.

One line of research that supports these claims was originally formulated by Penfield and Roberts (1959) and Lenneberg (1967). This research posits a period (occurring around puberty) after which brain **lateralization**, or the assigning of certain functions to the different hemispheres of the brain, is completed. The period prior to the completion of lateralization, called the **critical period**, represents the biologically determined period of life during which maximal conditions for language acquisition exist. The implications of this theory as it relates to second language acquisition are quite clear. Scovel (1969) and later Krashen (1973) claimed that along with lateralization (which according to Krashen occurs as early as age 5) comes an increasing loss of brain plasticity, which renders an individual incapable of achieving nativelike pronunciation in a second language after puberty.

Not all second language researchers, however, subscribe to the critical period hypothesis. Flege (1981) cites the lack of empirical evidence to substantiate this claim, contending that "neither physiological maturation nor neurological reorganization renders an adult incapable of speaking a foreign language without an accent" (p. 445). Others (e.g., Brown 1994) would argue that psychomotor considerations figure into the picture as well. In other words, while nativelike command of morphology and syntax in a second language may be the result of plasticity in the central nervous system, the command of second language phonology also involves the neuromuscular realm, which may play an even more crucial role in the overall picture (Bob Jacobs, personal communication). Finally, many would argue that the critical period hypothesis overlooks such differences between child and adult second language acquisition as exposure to the target language, linguistic expectations of interlocutors,³ ego permeability, attitude toward the second language, and type of motivation.

Overall, then, the importance of the critical period is somewhat downplayed today, and the claim that adults cannot achieve nativelike pronunciation in a second language is not infrequently countered with anecdotes about successful adult second language learners who have "beaten the odds." Scovel (1988), however, argues that the few true successes are balanced out by a comparable number of total failures (i.e., the severely autistic who never even acquire their native language). He also suggests that when native speakers compliment a foreigner on "perfect" pronunciation there is usually some exaggeration involved – for example, when people say, "I'm amazed that you sound just like a

³For a discussion of the differing expectations that native speakers have of children and adults learning a second language see Hatch, Wagner Gough, and Peck (1985).

native speaker!" they really mean, "You speak my language brilliantly – especially for a foreigner!"

More recently, cognitive scientists have concerned themselves with the issue of aging as it relates to brain plasticity and the creation of perceptual networks. Rather than positing one critical period for language acquisition, these researchers propose that there are a number of *sensitive periods* during which different aspects of language acquisition occur. Research in the field further indicates that children and adults perceive sounds in a very similar manner (Lieberman and Blumstein 1988), and that differences between the two age groups may be related more to the information available (i.e., to external circumstances) than to any innate differences in ability (Massaro 1987). In fact, according to cognitive scientists, the idea of the adult brain "atrophying" or in some way becoming incapable of producing new sounds is an erroneous one, since the brain retains a measure of flexibility or "plasticity" throughout its life (Diamond 1988).

However, it is undoubtedly the case that adults will acquire the phonological system of a second language in a manner different from that of their first language, given that the acquisition of the new sounds in the second language must be integrated into already existing neural networks. As Jacobs puts it (1988: 327), "Biological factors impose limitations much the same as psychological and sociocultural factors . . . , but none of these variables in isolation impose an absolute upper bound on [second language acquisition]." Adults are then capable of rising to the challenge of performing competently in a new sound system.

Of course, factors other than the brain's ability to create new neural networks for the processing and production of the target-language sounds also play a role. Scott (1989), for instance, demonstrates that auditory perception diminishes with age, especially for those over 60 – a factor that would definitely hinder older adults in their attempts to acquire targetlike pronunciation in a second language. A similar caution is sounded by Jacobs (1988), who notes that the environment in which adults typically learn a second language (i.e., the classroom) may not be as rich as that experienced by children acquiring a second language in a more natural, input-rich environment. Thus when we discuss child/adult differences in phonological acquisition we may be comparing the proverbial apples and oranges. Finally, Ausubel (1964), Guiora (1972), Schumann (1975), and others note that the disparity between child and adult performance may be explained through a complex interplay of social and psychological factors (discussed later). In sum, we should be cognizant of such external factors when drawing any conclusions about age.

The implications of the foregoing theories with regard to the teaching of pronunciation deserve reflection. For example, if (as some research indicates) adults are capable of acquiring a high degree of pronunciation accuracy in a second language but are more impeded in their acquisition of target language phonology by nonlinguistic factors than are children, then we need to build into courses for adults more fluency and confidence-building activities;⁴ we should also have our adult learners seriously examine their personal goals in the pronunciation class. Likewise, if Scovel's (1988) claims concerning the inability of most adults to achieve targetlike pronunciation are valid, then teachers need to redefine the goal of the pronunciation class as comfortable intelligibility rather than accuracy, and ensure that this goal is reflected in the methods, activities, and materials of the ESL class.

EXPOSURE TO THE TARGET LANGUAGE

According to the language learning theories of Postovsky (1974), Asher (1977), and Krashen (1982), among others, learners acquire language primarily from the input they

⁴See also Chapter 10 and the excellent volumes by Wong (1987a) and Bowen and Marks (1992) for a discussion of confidence-building activities.

receive, and they must receive large amounts of comprehensible input before they are required to speak. If true, learners' exposure to the target language will be a critical factor in determining their success. In EFL settings, especially those where students have little opportunity to surround themselves with native input in the target language, the burden will fall more on the teacher to provide an adequate model of the target language, and to ascertain that students have opportunities outside of class (e.g., in language-laboratory or learning-center environments) to experience samples of the authentic oral discourse of native speakers; similarly, it will fall to teachers to encourage out-of-class conversational use of the target language. However, even in ESL settings, where the learners are surrounded by the English-speaking world, many speakers live in linguistic "ghettos" with relatively little exposure to native speakers of the target language in their homes and even in their work sites. Again, in such cases, the teacher should try to maximize students' exposure to the target, and to encourage them to expand their own domains of linguistic competence, stressing the importance of language exposure in the process of acquiring all aspects of language: pronunciation, grammar, and vocabulary.

AMOUNT AND TYPE OF PRIOR PRONUNCIATION INSTRUCTION

Assuming that we are dealing with learners who have had prior exposure to English, we also need to examine the amount and type of prior pronunciation instruction students have had. In EFL settings, instruction may have taken the form of repetition drills led by a teacher whose own pronunciation differed from the target norm. Alternatively, in an ESL multiskills class, pronunciation may not have been explicitly dealt with at all, and students may not have been fully aware of their pronunciation problems. Whatever the scenario, we need to recognize that in any pronunciation class at the intermediate or advanced levels of proficiency, we may be dealing with somewhat fixed or systematic pronunciation errors. Thus the syllabus and techniques that we implement must be tailored to the types of problems we discern among our students.

APTITUDE, ATTITUDE, AND MOTIVATION

Are some learners inherently more capable of acquiring a good pronunciation than others? Skehan's (1989) overview of Carroll's (1965, 1981) research on language aptitude is useful here. According to Carroll, there are four traits that constitute language aptitude:

1. *Phonemic coding ability*: the capacity to discriminate and code foreign sounds such that they can be recalled⁵
2. *Grammatical sensitivity*: the ability to analyze language and figure out rules
3. *Inductive language learning ability*: the capacity to pick up language through exposure
4. *Memory*: the amount of rote learning activity needed to internalize something (a new sound, a lexical item, a grammatical rule, the pronunciation or spelling of a word, etc.)

Our main concern here is the first trait, although the memory trait is also relevant. Some learners are in fact fairly balanced in these four traits, whereas others have very strong patterns of strength and weakness. Learners weak in phonemic coding ability would therefore have much more difficulty achieving a readily intelligible pronunciation than those with high aptitude in this domain. Teachers (and pronunciation syllabuses) need to be sensitive to such learner differences and not expect all learners to achieve the same level of success in the same amount of time.

⁵According to Skehan, phonemic coding ability is the language aptitude trait that relates least to one's general intelligence. This suggests that "having an ear for language" may be qualitatively different from other language aptitudes or traits.

Snow and Shapira (1985), on the other hand, discount the importance of aptitude, pointing out that we have all demonstrated language learning ability via acquisition of our native language. One argument against assigning the determining role to aptitude, according to these researchers, is the fact that low-ability learners (as measured by language aptitude tests) are in fact often able to attain fluency in a second language while some high-ability learners are not.⁶

As should be evident by now, the network of factors influencing an individual's acquisition of second language phonology is a tremendously complicated one. Indeed, as Stevick (1976) suggests, we need to go beyond language aptitude and educational or cultural experience to see how individuals and their personalities affect the learning process. Of help in understanding learners' attitudes toward the target language and their motivation (or lack thereof) to acquire this language is research that examines the effect of personality and the acculturation process on language acquisition.

Guiora (1972) notes that personality, or in his words language ego, is at the very core of the language learning process, especially where the skill of pronunciation is concerned. "Speaking a foreign language entails the radical operation of learning and manipulating a new grammar, syntax, and vocabulary and, at the extreme limits of proficiency, modifying one of the basic modes of identification by the self and others, the way we sound" (p. 144). Pointing out the often dramatic discrepancy between certain individuals' attainment in pronunciation versus their attainment in other skill areas, Guiora postulates that accent or pronunciation is a unique feature of language performance – one that can provide "the key to the extent to which the individual is psychologically capable of stepping into a new system of communication" (p. 144).⁷

Following in Guiora's footsteps is Schumann's work on the role that acculturation plays in the process of language acquisition. Schumann (1975) echoes Guiora's hypothesis that **ego permeability** (i.e., the extent to which the ego can be flexible and adapt) and personality factors are at the heart of second language acquisition. Schumann further states that in adults, the development of firm ego boundaries, along with individuals' attitudinal and motivational orientations, can place constraints on the cognitive process of language learning. Given such constraints, adults might well be hindered from attaining their biologically determined capabilities.

Schumann's **acculturation model** (Schumann 1986) clearly delineates the role that social and affective variables may play in language acquisition. This model, based on the premise that certain social and affective variables "cluster" into a single variable of acculturation, states that learners will acquire the target language to the degree that they acculturate. Two types of determining factors are: (1) those concerned with the language learning of a group of people, or sociocultural variables (e.g., social dominance patterns, size of the foreign language population, amount of congruence between the foreign and target language cultures); and (2) factors concerned with individual differences, or affective variables (e.g., ego permeability, personality, type of motivation, degree of culture shock). Schumann notes that sociocultural variables do not prohibit successful second language learning. That is, individuals may learn languages successfully under sociocultural conditions that are not favorable, or vice versa – they may not learn a language under sociocultural conditions that are highly favorable. Thus although the two sets of variables always

⁶For a more thorough discussion of the role of aptitude in second language acquisition and a summary of the research on individual differences, see Skehan (1989).

⁷Several studies have attempted to ascertain whether artificially inducing the language ego to become more permeable (i.e., via ingestion of alcohol or valium, or via hypnosis) will result in an increased degree of targetlike pronunciation. The results are somewhat mixed, although the studies provide some evidence of a correlation between ego permeability and accuracy of pronunciation. For details see Guiora (1972), Guiora et al. (1972), and Schumann et al. (1978).

interact, affective variables appear to carry more weight than sociocultural ones in determining any learner's acquisition process.

In applying this model, Schumann differentiates between two types of successful acculturation. In the first type, the learner demonstrates *integrative motivation* – that is, a desire to be socially integrated in the target culture.⁸ In the second type of acculturation, the learner demonstrates the same openness to the target culture, but additionally regards target language speakers as his reference group. This second type of motivation appears to be akin to that described by Graham (1985) as *assimilative motivation*, and implies a desire on the part of the learner to become an indistinguishable member of the target speech community. (Assimilative motivation, which is rare among adult second language learners, is what all children have when learning their first language.) Accordingly, one can hypothesize that this second type of learner would willingly embrace the target culture, and would therefore be more apt to acquire targetlike pronunciation in the second language.

Instrumental motivation, in which an individual learns a second language to attain a certain goal, for instance a job promotion, does not contribute to successful acculturation, according to Schumann. However, other researchers such as Lukmani (1972) argue that the intensity of motivation is often as important as the type of motivation at play. In other words, someone with extraordinarily high instrumental motivation (e.g., someone who wants to sound like a native speaker in order to function effectively as an actor or an espionage agent) may well achieve a better pronunciation than someone with integrative motivation that is quite positive yet less intense.

THE ROLE OF THE NATIVE LANGUAGE

Whether our students are from a homogeneous language group (as is most often the case in EFL settings) or from diverse language backgrounds (as is common in ESL classrooms), we need to consider their native language(s) in deciding on pronunciation priorities. For this we can draw on a growing body of research in second language phonology. This field concerns itself with questions such as the following:

1. To what degree is the process of phonological acquisition in one's first language similar to the process of acquiring the sound system of a second language?
2. To what degree do pronunciation patterns acquired in one's first language govern or determine the process of second language phonological acquisition?
3. Are there underlying language universals in the acquisition of phonology? How can these universals help us gain insights into students' pronunciation of the target language?

Six somewhat overlapping theories or hypotheses of second-language phonological acquisition have been proposed: contrastive analysis, error analysis and avoidance, inter-language analysis, markedness theory, language universals, and information processing theory. Even though these theories are not all mutually exclusive, we will deal with each of them in turn for the purposes of clarity and historical accuracy.

THE CONTRASTIVE ANALYSIS HYPOTHESIS

Certainly the most longstanding theory of phonological acquisition is the *contrastive analysis hypothesis*. Originally proposed to explain all aspects of language acquisition (Lado 1957), this theory holds that second language acquisition is filtered through the learner's first language, with the native language facilitating acquisition in those cases where the target structures are similar, and "interfering" with acquisition in cases where

⁸This form of motivation has often been discussed in the literature as a positive force in language acquisition (see Gardner and Lambert 1972).

the target structures are dissimilar or nonexistent. As with many theories, the contrastive analysis hypothesis initially enjoyed widespread acceptance on all fronts – that is, as a valid explanation for the difficulties experienced by learners in the realms of syntax, morphology, and phonology. However, the theory has since been challenged, primarily on the basis of its inability to predict the degree of difficulty learners would experience with a given item and on the basis of conflicting evidence from error analysis and interlanguage research (discussed shortly).

The most enlightened form of the contrastive analysis hypothesis came from Wardhaugh (1970), who rejected the strong version (that contrastive analysis would be able to predict all learning problems) and argued for the validity of a weak version (that contrastive analysis could explain the cause of many, but far from all, systematic language-learning errors). Today most researchers in the field, while minimizing the role that native language interference plays in other areas of language acquisition, would agree that **interference** (now more commonly referred to as **negative transfer**) is valid in second language pronunciation acquisition. Like Lado and Wardhaugh, these researchers hold that negative transfer is a significant factor in accounting for foreign accents, particularly with regard to the acquisition of more general segmental features such as aspiration and of suprasegmental features such as intonation and rhythm (cf. Broselow 1987; Broselow, Hurtig, and Ringen 1987; Sato 1987; Tarone 1987b).

ERROR ANALYSIS AND AVOIDANCE

Banathy and Madarasz (1969) were early critics of contrastive analysis and argued for the need to complement contrastive analysis with **error analysis** (i.e., an analysis of errors that occur in the learners' interlanguage system) – especially if one planned to apply results to language teaching:

Contrastive linguistics – no matter how refined – can only point toward a potential learning problem or difficulty. On the other hand, error analysis can tell us the intensity of the difficulty or the size of the problem. (p. 92)

Richards (1971), another critic of overreliance on contrastive analysis who was also a proponent of error analysis, proposed a three-way classification of language learning errors that he believed would both shed light on the second language acquisition process and better inform language teaching:

1. *Interlingual errors*: those errors caused by negative transfer from the learner's first language
2. *Intralingual errors*: those errors stemming from marked or complex features in the structure of the target language itself and which thus seem to be committed by all second language learners of the target language regardless of their native language
3. *Developmental errors*: those second language errors that reflect the same problems and strategies that young children encounter and use in acquiring the target language as their first language.

Of course, error analysis has also had its critics, who hold that it tends to focus on learners' problems (i.e., what they do wrong) rather than learners' accomplishments (i.e., what they do right). This line of reasoning helped give rise to interlanguage analysis (see next section). In addition, critics made the argument that error analysis ignores the strategy of avoidance (see Kleinman 1977; Schachter 1974), which occurs when learners take advantage of the paraphrase potential of language to avoid – consciously or unconsciously – the use of words or structures that they find difficult. Thus in English one can avoid using relative clauses by forming a paraphrase with two simple sentences. Likewise, if

learners cannot remember whether to say "civility" or "civility," they can paraphrase with "good behavior" or some such expression.

However, to demonstrate the existence of **avoidance** one has to show that second language learners, given a particular task, are using a particular word or structure they find difficult with a significantly lower frequency than native speakers performing the same task. Thus rather than the presence of a systematic error, one accounts for the systematic absence of a form using theories such as contrastive analysis, performance data, or error analysis.

Schachter (1974) originally argued that avoidance did not occur on the phonological level in the way that it did on the syntactic level or lexical level since one could not, for example, avoid the /ð/ in words like *the, this, that* when speaking English. However, several researchers have reported contexts in which phonological avoidance seems to play a role. Heller (1976) tells of Spanish-speaking adults in evening ESL classes who avoid using similar-sounding English-Spanish cognates (e.g., *quality-qualidad*) in their English because they believe such words are Spanish, not English. Celce-Murcia (1977) describes the speech of Caroline, a 2-year-old child acquiring English and French simultaneously, who selected the word that was easiest for her to articulate or approximate regardless of which language she was using at the time:⁹

| Caroline's Speech | French | English |
|-------------------|----------|---------|
| /ku:to/ | couteau | *knife |
| /pu:n/ | *cuiller | spoon |
| /o:m/ | *maison | home |
| /kamyo/ | camion | *truck |

(Celce-Murcia 1977: 36)

Thus it seems as if phonological avoidance is a learning strategy that may occur whenever circumstances permit and that avoidance is not exclusively syntactic and lexical but must be considered a strategy that potentially applies to all areas of second language acquisition.

THE INTERLANGUAGE HYPOTHESIS

At the outset of the 1970s, Selinker (1969, 1972) proposed the notion of **interlanguage**. This term refers to the linguistic codes of second language learners which, according to Selinker, reflect unique systems. At the core of Selinker's construct is the notion that interlanguage grammar can function independently of the speaker's native language or the target language, and that it follows a system all its own based on first language, second language input, language universals, and communication strategies. The term **fossilization**, and its derivatives, also comes from Selinker (1972), who describes it as a plateau in language learning beyond which it is difficult for learners to progress without exceptional effort or motivation.

The notion of interlanguage was further developed by Corder (1974), who visualizes interlanguage as a dynamic continuum along which a second language learner can move toward an increasingly targetlike system. The learner continually processes input from the target language and refines rules or hypotheses in the direction of the target or until there is fossilization.

The research in phonology that was driven by the interlanguage hypothesis centered on the developmental nature of the learner's interlanguage and on investigating the universality of phonological acquisition patterns across age and language groups. Research on

⁹See also Ferguson and Farwell's (1975) study on the phonological acquisition of monolingual English-speaking children in which they report that the children persistently avoid particular sounds.