TEACHING ENGLISH PRONUNCIATION TO SPEAKERS OF BRAZILIAN PORTUGUESE

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INTRODUCTION

Teaching pronunciation to second language learners probably began with the first attempts to teach a foreign language. Methods have ranged from pure mimicry (with or without the use of a language lab), to the use of articulatory phonetics employing diagrams of the vocal apparatus to show place and manner of articulation, and even to the use of instrumental data, such televised spectrograms. What can be said despite these varied efforts is that L_2 learners still speak with an accent and they almost inevitably are eager to improve their pronunciation.

Opinions about the value of teaching pronunciation vary widely. There are those who claim that as long as the student's accent does not interfer with communication then it is not worth spending the time to improve his/her pronunciation. But what'interfer with communication' means or how this can be determined is never fully specified.

Let us consider foreign accent as a type of interference or noise in the speech signal. The heavier the accent the more interferonce there is for the listener in deciphering the message, which means that communication is impaired. Just as it is difficult to understand a radio station with a lot of static, it is difficult to understand a spoken message with a lot of 'foreign noise' (i.e. accent). Furthermore, subtle meaning is often conveyed in the

pronunciation, e.g., anger, fear, interest, or boredom. If the listener has to constantly strain to understand the speaker, part of the message will necessarily be lost.

How much 'foreign noise' can be tolerated without interferring with the message varies from listener to listener. However, we should recognize that the teacher is much better at deciphering speech than the non-teacher who has had little contact with foreign speakers. Teachers become very good at understanding their students, but if the students can't be understood outside the classroom these teachers have failed.

In addition to the purely communicative function of pronunciation it is closely tied to affective factors in second language acquisition. An L_2 learner who is extremely self conscious about his/her heavy accent is less likely to open his/her mouth than a person who has been praised for pronunciation. Improvement in accent can build self confidence and self image-powerful factors in language acquisition. Improvement in pronunciation can be a source of pride and thus the impetus which increases motivation which in turn can cause the student to improve in other areas of language acquisition as well.

WHAT IS A FOREIGN ACCENT?

If a Brazilian has a very heavy accent, his or her English simply sounds like Portuguese. More specifically, interference is the main cause for the accent, i.e., the Portuguese phonological system has been transferred into the speaker's production of English. Although interference is the greatest causal factor in foreign accent, it is not the only factor. Hypercorrection can also occur, e.g., the student who exaggerates the pronunciation of American r or aspirated voiceless stops. In addition, there are some

developmental factors involved (similar to first language acquisition processes). The pronunciation of most students improves over time but how and what these developmental stages are has not been studied adequately.

Interference, however, has been studied extensively and is readily observable in foreign accents. It can be broken down into the following categories:

Phoneme Substitution

An L_2 speaker has the tendency to substitute the nearest equivalent of the L_1 phoneme when speaking L_2. For example, an American may use /r/ for French /R/; a Brazilian may use /ʁ/ for English /ð/.

Phonological Rules

Phonological rules, which alter the pronunciation of the phonemes depending on the phonological environment, are also readily transferred from L_1 to L_2. These rules are largely unconscious and consequently the most difficult to overcome because the student doesn't realize they occur in either L_1 or L_2. For instance, an American who uses a velarized l ([ɫ], which occurs syllable final in English) when pronuncing French *il* gives the word a heavy American accent; a Brazilian who fails to aspirate initial voiceless stops such as in the word *pie* (because stops are unaspirated in Portuguese), has foreign accent.

Phonotactics

Phonotactics concerns the patterning of sounds, e.g., the possible sequences in a language, which sounds occur in which positions, and if and what type of consonant clusters are permitted. The tendency one has when speaking a foreign language is to

restructure the words to make them fit native patterns. For example, many Brazilian students pronounce *student* as [istudənt] and *asks* as [æskis], because * [# st] and * [sks] are impossible in Portuguese. Therefore, to render these sequences pronounceable an [i] is inserted. The loan word *futebol* (from *football*) is pronounced fu [či] bol because * [tb] does not occur in Portuguese. (Also note [ti] → [či] in many dialects).

Prosodic Factors

Prosodic or suprasegmental phenomena include stress, duration tone and intonation, and other rhythmic characteristics. Interference can easily be observed. For example the following frequently occurs: the English of Italians has Italian intonation, French speakers stress the last syllable, Spanish speakers produce syllables of equal duration, which are typical of Spanish but not of English, speakers of Portuguese cut off the ends of words, e.g., *messy* sounds like *mess*.

COMPARISON OF ENGLISH AND PORTUGUESE SEGMENTAL PHONOLOGY

In the sections which follow, I will highlight some of the differences between English and Portuguese and offer some suggestions on how to teach pronunciation. Some of these problems are well known by teachers, while others, to my knowledge, have not been discussed anywhere in the literature.

A thorough knowledge of both English and Portuguese phonology is necessary in order to be effective in teaching pronunciation. Merely having a native model at hand does not guarantee good pronunciation of the students. For students with poor pronunciation pure imitation obviously has not been effective. Using imitation as the only means of teaching pronunciation is no more effective or

systematic than a teacher who corrects a student's grammar with the explanation that a particular construction is wrong because it doesn't sound right. Just as it is important to be able to analyze grammatical errors systematically, so it is important to analyze pronunciation problems in the same way. Therefore, knowledge of the phonological systems of the two languages is important.

It is also useful to practice pronunciation of complete sentences even for beginners and not be stuck to minimal pair drills. A student whose pronunciation is limited to minimal pairs may be very good at pronouncing minimal pairs but when these same words occur in complete utterances a heavy accent appears because of sandhi and prosodic phenomena, which are necessarily neglected when practicing pronunciation of isolated words.

Segmental Differences

Almost anyone familiar with Portuguese and English can recognize phonemic differences. Since these are the most obvious differences I shall be very brief.

Portuguese dental /d/ and /t/ are often substituted for English alveolar /d/ and /t/ as well as /θ/ and /ð/. American English /r/ is often pronounced as [h] or [x] by speakers of Portuguese whose initial or intervocalic /r/ is not trilled (but rather [x]). [r] in English can be formed in two basic ways. The first is to curl back the tip of the tongue toward the back of the mouth (a retroflex position). The second is to hump or bunch up the blade of the tongue toward the roof of the mouth and at the same time bend the sides of the tongue toward (and sometimes even touch) the molars. Students who have difficulty with this sound should imitate the Caipira dialect of Portuguese (where this type or [r] occurs) and then try to transfer this similar [r] to their English.

Vowels are often problematic. The tense/lax distinctions of the high vowels (/I/ and /i/, and /U/ and /u/) are often blurred for speakers of Portuguese. In addition, problems with /ɛ/, /æ/, /ʌ/, /a/ contrasts are very common. Although /æ/ is thought to be very difficult by many because of the non-occurrence in Portuguese, /ɛ/ can also be a problem even though /ɛ/ occurs in Portuguese. This is because English /ɛ/ in most American dialects is somewhat higher than Portuguese /ɛ/ in most Brazilian dialects. Thus, the substitution of Portuguese /ɛ/ for English /ɛ/ may to the American's ear sound more like /æ/ than /ɛ/, e.g., 'I like *phonetics*' may sound like 'I like *fonatics*.'

/ʌ/ is often pronounced as [a] or a slightly raised [a̝], but others produce a somewhat rounded mid vowel or slightly fronted, [ə̹] or [ø̞] (similar to a Frenchman's unstressed schwa). Students who have difficulty with /ʌ/ should first produce [a] and then close the jaw slightly while raising the tongue but not altering the lip position.

Differences in Phonological Rules

Portuguese

1. Palatalization

$$/t, d/ \longrightarrow [\check{c}, \check{j}] \; / \; \underline{\quad} \; [i]$$

In many dialects of Portuguese /t/ and /d/ become affricates before [i], e.g., *tia* and *dia* 'aunt, day', are pronounced [čia] and [ǰia]. This process often carries over to English when students pronounce *teacher* as [čičɾ] or *did* as [ǰiǰ].

2. Voiceless Vowels and Deletion

$$\underset{[+hi]}{\breve{V}} \longrightarrow [-voi] \; / \; \underset{[voi]}{C} \underline{\quad\quad} \underset{[voi]}{C}$$

$$\breve{V} \longrightarrow [-voi] \; / \; \underline{\quad} \; ([s]) \; \#$$

$$\underset{[-voi]}{V} \longrightarrow \emptyset$$

In running speech vowels can become voiceless in certain environments and then delete, e.g., ['vɔtus] ⟶ ['vɔtus] ⟶ ['vɔts] *votos* 'votes', ['xaʲupi'kenu] ⟶ ['xaʲupi'kẹnu̥] *rádio pequeno* 'little radio', ['lɛvi] ⟶ ['lɛ ʲi] *leve* 'light'. This unconscious tendency often transfers into English pronunciation and a sentence such as 'after the movie she asked me to coffee at the party' can sound like 'after the move she asked me to cough at the part.'

3. Voice Assimilation

/s/ ⟶ [z] / [+voi]

Because of this process, words with [s] that are followed by a voice environment tend to be pronounced with z instead of s by Brazilians, e.g., *pass by, less well, ice milk.*

4. /l/ ⟶ [w] /— $

In most Brazilian dialects syllable final /l/ becomes [w]. Thus, *mal* 'badly' and *mau* 'bad' are both pronounced [maw]. In Brazilian English *go* and *goal* can become homophones, a pronunciation which does not occur in most American dialects.

5. /ĕ,ŏ/ ⟶ [i,u] / ⟶ ([s]) #

If this process, common to most dialects, is carried over to English the following will occur: *Yellow* ⟶ yell [u].

6. Consonant Distribution

(a) Syllable Final: Only /r,l,s/

English words with syllables ending in other consonants are problematic because the tendency is to insert [i], e.g., the loan words *futebol* (< football) and *hotdog* are pronounced [futʃi'bow] and [ɔtʃi'dɔgi].

(b) Syllable Initial Cluster: Only Obstruents + /l,r/

Words with other clusters are usually changed to fit Portuguese patterns, e.g., the department store *Sloper* is pronounced either [izloper] or [siloper], depending on the region; *sleep* tends to be pronounced either [izlipi] or [silipi].

(c) No Final Consonant Clusters

Special care should be given to final clusters occurring in English because they often carry morphological information, e.g., *books*, *passed*. Brazilian tend to simplify the consonant cluster or insert [i] to break up the cluster: *she kissed Bill* ⟶ she ki [z] Bill or she ki [siʧi] Bill.

English

1. Aspiration of Voiceless Stops

The voiceless stops (/p,t,k/) are aspirated at the beginning of a word and when they begin a stressed syllable. Portuguese stops are normally unaspirated. Consider English [p^hIn] *pin* vs. [spIn] *spin*, [kən't^{h}en] *contain* vs. [kən'stren] *constrain*. A Brazilian speaker who substitutes unaspirated [p] for [p^h], for example, may run the risk of being misheard as [b], because in English the presence of aspiration is more important for the identification of the stop than the lack of voicing.

2. Flapping

$$/t,d/ \longrightarrow [ɾ] / \left\{ \begin{array}{l} \acute{V} \text{ —— } V \\ \text{ —— } \# \; V \end{array} \right\}$$

/t/ and /d/ in American English are normally flapped intervocalically after a stressed vowel and word final when the next word begins with a vowel: ['æɾəm] *atom* vs. [ə't^{h}amIk] *atomic*, [æɾ'ɾɛdz] *at Ed's*. Perhaps because Portuguese /ɾ/ is distinct from /t/ and /d/ Brazilians are reluctant to flap American /t/ and /d/, even though a similar sound occurs in Portuguese (but as a separate phoneme). Yet, the lack of this flap in American English gives a somewhat stilted or artificial sound to words such as *water* when pronounced [wɔt^{h}ɾ].

3. Velarization of /l/

$$/l/ \longrightarrow [ɫ] / \text{ —— } (C)\ (C).$$

This velarized, postvocalic l (a threaty, dark sound) is usually difficult for Brazilians because in most Brazilian dialects syllable /l/ becomes [w] . (See above).

[li] *lee* vs. [il] *eel*

4. Diphthongization of Tense Vowels

English tense vowels (/i,e,u,o) usually have a glide ([y,w]) following them, and they are longer than the lax vowels: [siy] *see*, [meyd] *made*, [suw] *Sue*, [gow] *go*. Even though Portuguese has the diphthongs /ei/ and /ou/ (as well as /e/ and /o/) in casual or running speech these diphthongs tend to monophthongize to [e] and [o] . If this tendency is transferred to English pronunciation it gives these vowels a foreign sound (except to speakers of extremely Northern American English where monophthongs occur).

5. Vowel Length

Vowels become shortened when followed by voiceless consonants, i.e., they are longer when word final or followed by voiced consonants. (The durational ratios are approximately 3:2). Consider the following examples: [mey:d] *made* vs. [meyt] *mate*, [ay:z] *eyes* vs. [ays] *ice*.

Perceptually, to English speakers these length differences are more important than voiced/voiceless distinctions. (A number of experiments on perception have shown this to be true). What this means is that a lengthened vowel with a following voiceless consonant, e.g., [ray:s] , to an English speaker sounds like the word with the voiced consonant, i.e., *rise*, rather than what the speaker intended -- *rice*. On the other hand, making the vowel in *eyes* extremely short makes it sound like *ice*. Therefore, when teaching these word final voiced/voiceless contrasts it is far more important to concentrate on length distinctions than on voicing.

6. Unreleased Stops

In running speech English stops are unreleased when the next

word begins with a consonant: [šihélpt^{h}am] • [šihélpt^{h}t^{h}am] *she helped Tom*. Brazilians who are trying to be very careful about pronouncing all these consonant clusters often release them in order to guarantee their presence, but rendering a foreign sound to the utterance. They would do much better if they followed the tendency in their own casual speech of Portuguese: po [ǰit] omar ⟶ po[dt]omar 'you can drink it.'

PROSODY

Prosody, which includes the phonema intonation and pitch, stress, duration, and rhythm and timing, has profound effects on the segmental phonology of a language. (See English rules above concerning aspiration and flapping and relation to stress and Portuguese rules for unstressed raising): /ĕ/ ⟶ [e] ⟶ [i]). I suggest that more attention should be paid to these prosodic phenomena because many of the segmental processes are a natural result of prosodic factors. Concentrating on purely segmental problems while neglecting prosody is like laying a cobblestone street and paying careful attention to the placement of each stone but neglecting where the other stones are placed and ignoring the intended direction of the road.

Intonation

Intonation patterns in English have been described in a variety of linguistic analyses and ESL/EFL materials. Therefore, I shall not discuss them here.

Stress

Stressed syllables in English and Portuguese are longer, louder, and higher pitched, while unstressed syllables are shorter and weaker. In English unstressed syllables tend to become schwa ([ə]):

however, in Portuguese they tend to become [i] or [u]. Compare English casual pronunciation of *potato* [pəteɾə]to how it would be pronounced in Portuguese: [putetu] . Thus, even though vowel reduction occurs in both languages, the quality of the reduced vowels are very different.

Durational Considerations

Instrumental data have shown that English posttonic syllables are longer than pretonic syllables (Delattre 1966), while in Portuguese the inverse is true, i.e., the posttonic syllables are shorter than the pretonic (Major 1982). These durational characteristics (and accompanying phonological processes) tend to be transferred from L_1 to L_2. This suggests why Brazilians have the tendency to excessively shorten final unstressed syllables and even delete them, e.g., *Jimmy*: [ǰimi] ⟶ [ǰimi] ⟶ [ǰim] .

Rhythm and Timing

English has a tendency toward stress-timing, which means that the durations between major stresses are approximately equal, regardless of the number (within limits) of intervening unstressed syllables (Lehiste 1977). Other languages, such as Spanish, are syllable-timed, i.e., the syllables are approximately equal in length regardless of stress. In a stress-timed language such as English, the stressed syllables are exaggerated at the expense of unstressed syllables, i.e., unstressed syllables have to be reduced in order to fil into the isochronous units. In order to accomplish this, vowels in English are tipically reduced to [ə] or even deleted.

Even though Brazilian Portuguese has a tendency toward stress-timing (Major 1981), the vowels are reduced to [i] and [u] and not [ə] (except for /a/. See *Stress* above). Thus, the Portuguese speaker must take special care to centralize the unstressed vowels in

English (i.e., to[ə]) rather than peripheralizing them to [i] and [u]. This can be facilitated by encouraging the speaker to concentrate on the stressed vowels while neglecting the unstressed vowels and relaxing the vocal tract into a neutral 'uh' ([ə]) position. The result of this, although it may sound like directions for how to be sloppy, is to give English its characteristic accent, rather than a Portuguese accent.

The sound like English these rhythmic and durational patterns must be present; pronouncing individual segments "correctly" (from the standpoint of isolated words) but neglecting prosodic factors can still cause a heavy accent. Furthermore, a student who pays attention to prosody will tend to automatically improve his/her pronunciation of individual segments.

BASIS OF ARTICULATION

Basis of articulation is the overall articulatory posture which varies from language to language. Although there is no convincing instrumental or x-ray evidence to support or refute this notion, it is nonetheless a very useful concept in foreign language tesching. Bilinguals (who have native pronunciation) intuitively sense that Basis exists; they often claim their mouths feel different when speaking the two languages; they sense different sets of muscles are involved. (See Drachman 1973). That different postures do exist can be observed by looking at the facial and lip movements of speakers of different languages: the Frenchman with pursed lips, the Mexican with very relaxed looking lips and tongue, the American with only slight lip and facial movement and the Englishman with even less, the Brazilian with a great deal of lip and cheek movement and tension, often with extreme spreading and protrusion of the lips.

What follows from the concept Basis is that, given a certain posture, specific phonological processes are more likely to occur

than others. These tendencies can be observed in historical change, child language, and dialect variation. For instance, in American English /e/ and /o/ diphthongize in the majority of dialects, yet in Portuguese this does not happen. In fact /ei/ and /ou/ tend to monophthongize, except in formal speech.

I suggest that Brazilian Portuguese Basis involves muscles which produce tenser more extreme muscular movements during articulation when compared to English. This tendency toward extreme movements can be observed in vowel reduction, where vowels are shot to the periphery ([i] and [u]) rather than centralizing as they do in English. For example, /ɛ̆/ can raise to [e] and then to [i]: ['fɛsta] *festa* 'party' but [fes'ɛ̆ivu] ⟶ [fis'ɛ̆ivu] *festivo* 'festive'. I claim that the target position of the vowels in Portuguese are reached much sooner than they are in English (Major 1977). English tense vowels tend to slide into the target position rather late after onset while Portuguese vowels reach the target position rather quickly. This difference can be observed in many American dialects where /e/ and /o/ are diphthongized and have a rather central onset: [ɛ̆y] and [ʌw]; in Brazilian Portuguese this change never occurs. Evidence that Portuguese vowels reach a peripheral target soon comes from observation of the effects of vowels on preceeding consonants. Anticipatory or regressive assimilation is common: [ʲia] *dia* 'day', [tʷu] *tu* 'you' (the [t] is much more labialized than the English [t] in *too*).

I suggest that teachers make use of the concept Basis by encouraging students to observe and imitate the facial postures of native speakers of English. The result should be an overall improvement in pronunciation which would not occur by merely concentrating on individual segments.

CONCLUSION

In this article I have attempted to outline some of the typical pronunciation problems Brazilians encounter when learning English and have suggested ways to teach pronunciation. Several concluding remarks can be made:

1. Teaching pronunciation is important because it is part of the communicative function of language. A heavy accent obscures the message or interfers with communication.

2. Pronunciation is closely tied to affective factors. An improvement in pronunciation can increase self confidence and motivation, thereby favoring improvement in other aspects of language acquisition as well.

3. Knowledge of the phonology of both English and Portuguese is important to the teacher, just as it is important to be aware of the grammar of the two languages (whether or not the teacher chooses to teach grammar rules).

4. Strong emphasis should be placed on prosody and Basis of Articulation because a great deal of segmental phonology naturally results from these phenomena.

Bibliography

Delattre, Pierre. 1966. "A comparison of syllable length conditioning among languages." *IRAL* 4:183-96.

Drachman, G. 1973. "Phonology and the basis of articulation." *Ohio State Working Papers in Linguistics* 15.

Lehiste, Ilse. 1977. "Isochrony reconsidered." *Journal of Phonetics* 5:253-63.

Major, Roy C. 1977. "Phonological differentiation of a bilingual child." *Ohio State University Working Papers in Linguistics* 22:88-122.

_____. 1981. "Stress-timing in Brazilian Portuguese." *Journal of Phonetics* 9:343-51.

_____. 1982. "Influências prosódicas na fonologia do Português no Brasil." To appear in Anais do VII Encontro Nacional de Lingüística. PUC-RJ.