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UNDERSTANDING THE BRAZILIAN WAY OF SPEAKING ENGLISH

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To better understand the aspects that characterize Brazilians' pronunciation of English, we have formed a study group, formed by researchers, professors, and under-graduate students, to study phonetics, phonology and pronunciation teaching, with a theoretical focus on usage-based phonology (Bybee, 2001, 2010) and exemplar models (Pierrehumbert, 2000, 2001, 2003). The group has had an interesting experience using Praat (Boersma & Weenink), a software for acoustic analysis of speech data. The objective of this article is to demonstrate the basis for the formation of the group and to show how the participants have been using their own speech data, recorded in our laboratory, to understand the acquisition of English phonology by Brazilians. As a result of the experience, group members have improved their own pronunciation, developed educational activities to use in teaching pronunciation, and carried out their own research projects.

INTRODUCTION

Foreign language teacher development should require a solid training in phonetics and phonology for the effective teaching of pronunciation. English teachers, especially in light of the role of English as an international language, should be prepared to teach their students not only to produce the sounds of the language in an intelligible form, but also to understand the speech of speakers from many backgrounds. There was a time when the choice for the teaching / learning of English was limited to the varieties of American or British English. Today the focus is on English as a Lingua Franca and the possibility of communication with English users around the world.

In this context, the university must be the locus for discussion about this new paradigm, both between teachers and students, and with teachers from public and private schools. The discussion should not be limited to theoretical and philosophical questions about language acquisition and teaching, but should prioritize discussion of pronunciation teaching practices within this new perspective.

Also important for teacher development is to be a member of an association dedicated to the development of the professional activity. English teachers in Brazil have BRAZ-TESOL, the largest association of teachers of English to speakers of other languages in the country. Founded in 1986, BRAZ-TESOL is a nonprofit organization with over 2,000 members and is affiliated with TESOL International USA, the UK IATEFL, and is a member of the Southern Cone TESOL. In Curitiba, our city, teachers can count on the BRAZ-TESOL Regional Chapter, which in addition to promoting events for the development of English teachers, also organizes special interest groups in several areas related to the teaching of English.

Whereas the main concern of an association like BRAZ-TESOL is with the improvement of teaching practices, the main concern of the university is with the theoretical basis for the professional activity. Having that in mind, we proposed a partnership between UTFPR - Federal Technological University of Parana, specifically through DALEM, Department of Modern Foreign Languages, and BRAZ-TESOL, through its Regional Chapter Curitiba, more specifically its Pronunciation RIG – Regional Interest Group, for the formation of a study group on phonetics and phonology for the teaching of English.

Composed of university professors, English teachers from public and private schools, and students, the group laid the groundwork for its studies in the first meeting. Firstly, teachers and students are registered in a CNPq¹ Research Group. The theoretical bases for studies from the group were to come from three fronts: a probabilistic view for language acquisition, English as a Lingua Franca, and acoustic phonetics for instrumental analysis. From these early definitions, the group established and defined its operation. This article presents the theoretical concepts that underlie these studies, the use of PRAAT as a tool for understanding the main characteristics of Brazilians speaking English, and the research topics selected by the group.

The Theoretical Bases

Three models were chosen as a framework for the group studies: Probabilistic Linguistics, Usage-based Phonology and Exemplar Model. Frequency of use, gradience of categories and multirepresentation of forms are coincident aspects of language that permeate the three models.

According to Bod, Hay & Janedy (2003), language shows evidence of a probabilistic system. All levels of representation in phonetics and phonology show statistical variation and speakers have implicit knowledge of language change (Pierrehumbert, 2003). In usage-based phonology, grammar is seen as the cognitive organization of the experience a speaker has with language (Bybee, 2006). In this model, three points are crucial: the creative role of repetition, the effects of frequency and the emerging character of grammar. Following the same line of thought, in the Exemplar Model there are also three fundamental bases: phonetic details, gradience of mental representations, and the frequency. As a result of contact with the language, the speaker will form an exemplar map, forming clouds, and taking into account social, pragmatic, semantic, morphological, phonological and phonetic factors (Pierrehumbert, 2000, 2001).

As can be seen, the three models are formed from the same pillars: the effects of frequency, the gradience of linguistic forms, and the dynamic character of language. This in itself would justify the choice of the theoretical basis. However, another choice for the studies, the perspective of English as a Lingua Franca, also was seen as a good match for the assumptions of those three models.

The Perspective of Teaching / Learning English as a Lingua Franca

Given the expansion of English, it is said that the language does not belong to the people that have English as their native language anymore, because the number of non-native speakers is double the combined population of the English speaking countries (Crystal, 2010). Furthermore, communication in English without the presence of a native speaker is an increasing probability. According to Jenkins (2000), speakers of English as an L1 no longer have the right to dictate the

¹ CNPq – Conselho Nacional de Desenvolvimento Científico e Tecnológico – National Counsel of Technological and Scientific Development.

standards of pronunciation for its use as an L2. Having that in mind, what would the ideal pattern be?

Jenkins proposes an ideal model for teaching pronunciation of English as an international language: that of fluent bilingual (non-native) speakers, as they would be more realistic and appropriate models than speakers of English as an L1 (Jenkins, 2000). From her research, the author established a series of priority items in relation to teaching English pronunciation, which she calls the Lingua Franca Core (LFC). Containing characteristics of American English, British English and varieties of English as L2, the LFC, according to Jenkins, allows for a focus on intelligibility, and she argues that specific characteristics of native varieties that are difficult for the learner to acquire should not be considered for teaching if not relevant in international communication.

Along with the theoretical basis for the studies, and the perspective of English as a lingua franca, the group intended to perform acoustic analyses of speech data.

The First Semester – Methodology

From the choices made, the group established a schedule and started the activities with a review of the sound systems of English and Portuguese. Next there was a discussion about the characteristics of English produced by Brazilian speakers. There has been a great deal of research work about Portuguese-English interphonology conducted at several universities in Brazil and abroad. Afterwards data was collected and a corpus composed of speech samples recorded by foreign visitors at the University and the group members themselves, was formed for analysis and awareness. The idea was to compare the data produced by native speakers with those produced by Brazilians to examine the phenomena described in those studies about Portuguese-English interphonology. Due to the perspective adopted by the group, it is important to mention that those phenomena were treated as special features of Brazilian speech, not as errors. Moreover in the line of English as a Lingua Franca, while priority will be given to the items of LFC² (Jenkins 2000), other items that are not considered by Jenkins but are part of Brazilians' characteristic speech will also be considered in the analyses.

After the composition of the corpus, there was a search for papers in which the items of the LFC are the focus. The next step was to edit sound files and compare the data produced by native English speakers and Brazilian English speakers, with the use of PRAAT³.

Finally the members of the group, mostly in pairs or trios, chose research topics to initiate their own studies based on Probabilistic Linguistics, Usage-based Phonology and Exemplar Model, having the underlying premise that lexical frequency and experience with language are essential to the development of the cognitive structures in language acquisition.

The Lingua Franca Core and the Brazilian Way of Speaking English

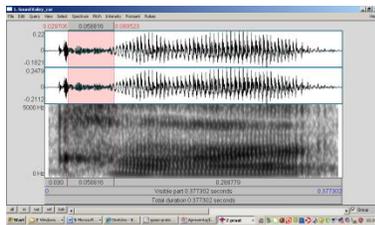
According to Jenkins (2000), if a person wants to be intelligible in ELF communication, four areas are essential: individual consonant sounds, groups of consonants (clusters), vowels and nuclear stress placement. Regarding the consonants, Walker (2010, p. 29) alerts that “because of the impact the substitution of consonants has on ELF communication, the LFC requires speakers

² LFC – Lingua Franca Core – “a list of pronunciation items central to maintaining mutual intelligibility of ELF” (Walker, 2010).

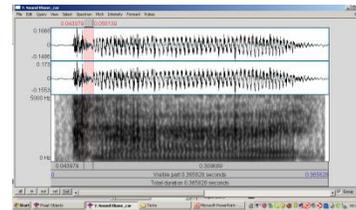
³ PRAAT is a computer program for acoustic analysis, developed by Paul Boersma and David Weenink, from the University of Amsterdam, downloadable for free at <http://www.fon.hum.uva.nl/praat/>, access on April, 2013.

to be competent, both receptively and productively, in all but two of the consonant phonemes of English.” The exceptions are the consonants /θ/ and /ð/, sounds for the ‘th’, as in *think* and *then*, and the production of dark [ɹ]. Jenkins argues that possible substitutions of the fricatives /θ/ and /ð/, and the replacement of the dark [ɹ] for the clear /l/ or /ʊ/ are unproblematic for EIL⁴ intelligibility. The LFC also includes phonetic features for the optimal pronunciation of consonants, such as the voiceless plosives /p/, /t/ and /k/, which are pronounced with aspiration [ʰ] in initial position in stressed syllables. That is an aspect of English pronunciation that is important in our context because Brazilians tend not to produce the aspiration (Arantes, 2007; Cohen, 2004; Zimmer & Alves, 2007). In Figure 1, we can clearly see a larger aspiration in the first consonant of the word *car* produced by an American speaker, compared with the production of a Brazilian speaker. The highlighted portion shows the extent of the voicelessness from the aspiration (the Voice Onset Time) or lack of aspiration.

CAR



American Speaker



Brazilian speaker

Figure 1. Comparison of aspiration of /k/ in the word *car* by and American speaker and a Brazilian speaker.

Another special characteristic of the Brazilian way of speaking English is the palatalization of the alveolar plosives /t/ and /d/. According to Cristofaro-Silva (2011, p. 168), palatalization is the phenomenon in which a consonant acquires palatal or close to palatal articulation. In Brazilian Portuguese, palatalization of alveolar stops occurs before front high vowels or a palatal glide. The waveform and the spectrogram in Figure 2 show the palatalization in the end of the word *beside*, produced because of /i/ paragoge.

BESIDE



Figure 2. Production of the word *beside* with /i/ paragoge and palatalization of the /d/, producing a final syllable [dʒi].

⁴ EIL – English as an International Language.

Regarding consonant clusters, several researchers have analyzed the tendency of Brazilian speakers to add an epenthetic vowel to break difficult consonant clusters, especially those produced with the addition of the *-ed* morpheme to form the past tense of regular verbs (Alves, 2004; Delatorre, 2006; Gomes, 2009). Likewise there is a tendency for a paragogic vowel in words ending in consonants that are not allowed in the end of syllables in Portuguese (Cruz, 2008; Ferreira, 2007; Koerich, 2002; Silva Filho, 1998). The waveforms and spectrograms below (Figure 3) show clearly the resyllabification process performed by the Brazilians. Brazilian speaker 1 (B1 level) resyllabifies the word *passed* with an epenthetic vowel, adding an extra syllable to the word while Brazilian speaker 2 (A1 level) produces a three-syllable word with epenthesis and paragoge.

PASSED



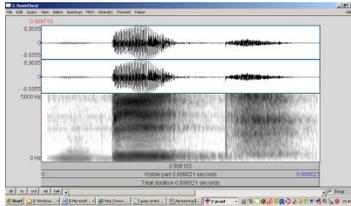
Figure 3. Production of the word *passed* by an American speaker and two Brazilian speakers in two different levels of proficiency (B1 and A1).

As regards vowel sounds, Jenkins mentions two considerations: quality and quantity. “While vowel quantity is reasonably stable across varieties of English, vowel quality is not” (Jenkins, 2000, p. 144). This is the factor which led Jenkins to argue for a focus of attention on the long-short differences between vowels rather than on the quality of each one⁵.

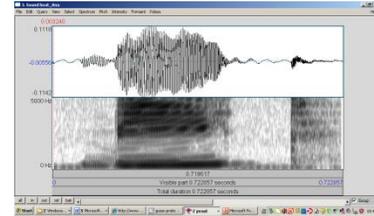
Rauber (2006), in her analysis of production and perception of /ɪ-i/, /ʊ-u/ and /ɛ-æ/ by Brazilians, concludes that “native-like performance seems to take place only in isolated cases, and maybe it is not possible or very unlikely to be acquired if one does not live in a country where the target language is the predominantly spoken language” (p. 149). In the waveforms and spectrograms below (Figure 4), the Brazilian speaker’s vowel /i/ is longer than that of the American’s. Being in a very advanced level of the language, the speaker preserves a phonetic contrast between /ɪ/ and /i/ with exaggerated length, corroborating the dissimilation hypothesis posited by Flege, Schirru & MacKay (2003, p.471): “category dissimilation will occur only if a new L2 category is relatively close in phonetic space to a pre-existing L1 category”. Comparing productions of English vowels by Italian speakers, the authors hypothesized that the early bilinguals, who seldom used Italian, would have a production with more movement than the native speakers who were monolinguals would. That prediction was supported by tokens with exaggerated movement produced by participants who were bilinguals from an early age.

⁵ The LFC includes need for a good approximation to the native speaker quality of the central vowel /ɛ̃/ (Walker, 2010, p. 34).

BEAT

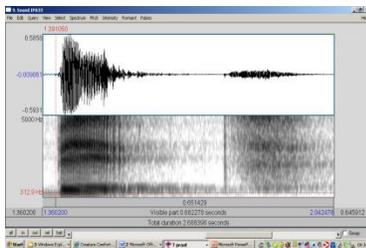


American Speaker

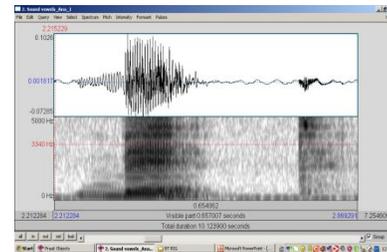


Brazilian speaker

BIT



American Speaker

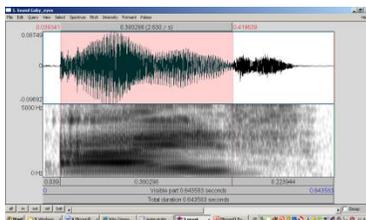


Brazilian speaker

Figure 4. Production of the words *beat* and *bit* by an American speaker and a Brazilian speaker in an advanced level of proficiency.

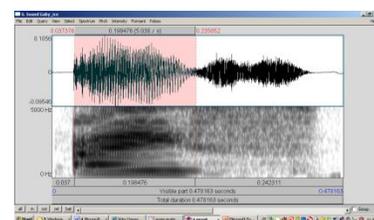
Besides differences in length at the phonological level, as in /I-i/, /U-u/, there are also differences in length conditioned by voicing of the following consonant. A longer vowel in English might be produced when followed by a voiced consonant than when the next consonant is a voiceless one (Kent & Read, 2002). Comparing the waveforms and the spectrograms below (Figure 5), there is more evident difference between the vowel duration of *eyes* and *ice* in the American’s production than in the Brazilian’s production.

EYES

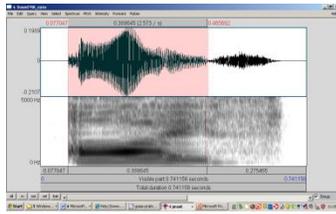


American Speaker

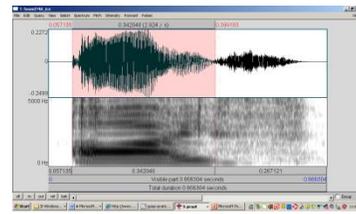
ICE



EYES



ICE

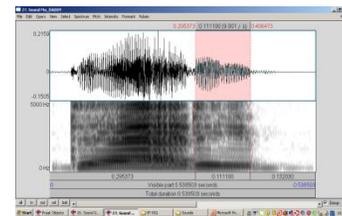
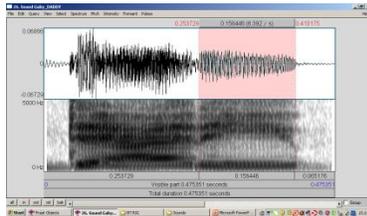


Brazilian speaker

Figure 5. Production of the words *eyes* and *ice* by an American speaker and a Brazilian speaker.

Another context for vowel duration which seems to be a difficulty for Brazilian speakers is that of final /i/ in CVCV words. Ferreira (2007) compared English native speakers' with Brazilians' production of CVCV words ending in “y”, as in *daddy*. She concluded that Brazilians tend to produce a shorter final vowel when compared to native speakers. The waveforms and spectrograms in Figure 6 corroborate those results.

DADDY



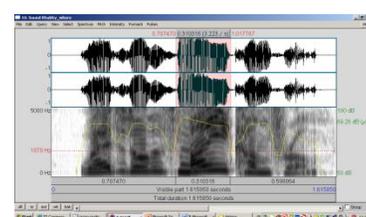
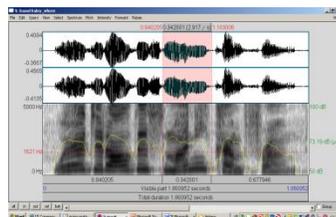
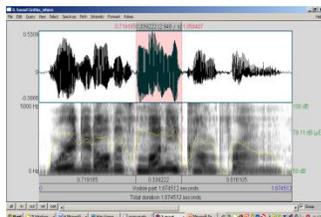
American Speaker

Brazilian speaker

Figure 6. Production of the word *daddy* performed by an American speaker and a Brazilian speaker.

The last of the major pronunciation issues that Jenkins lists in her LFC is nuclear stress placement and division of speech stream into word groups, because, according to the author, the correct placement of nuclear stress is important for intelligibility (Jenkins, 2000). Comparing the production of three native speakers with those of three advanced-level Brazilian speakers (Figure 7), there is consistent stress on the word *money*, in the middle of the sentence by the native speakers, and on the word *from* in the end of the sentence by the Brazilian speakers.

WHERE DID ALL THIS MONEY COME FROM?



American Speaker 1

American Speaker 2

British Speaker

**Brazilian speaker 1****Brazilian speaker 2****Brazilian speaker 3**

Figure 7. Comparison of the nuclear stress placement in the question *Where did all this money come from?* by three native speakers and three Brazilian speakers.

Non-Core Features and Brazilians' Difficulties

Jenkins advocates that the LFC “drastically simplifies the pedagogic task by removing from the syllabus many time-consuming items which are either unteachable or irrelevant for EIL”

(Jenkins, 2000, p. 160). These items are: / θ / - / δ / and final / t /; exact vowel quality, pitch movement, word stress, stress-timing rhythm, vowel reduction, weak forms and the schwa vowel / $\ə$ /, and some aspects of connected speech, such as assimilation and coalescence. Two of those are relevant when we consider Brazilian speakers of English: word stress and the production of schwa.

A good deal of work have been carried out to explain the difficulties of Brazilians with word stress in English following the studies by Baptista in the 1980s (Bertochi, 2009; Brawerman, 2006, 2012; Watkins, Brawerman & Bertochi, 2010). The waveforms and spectrograms in Figure 8 show clearly the syllable change in stress position.

POLICE

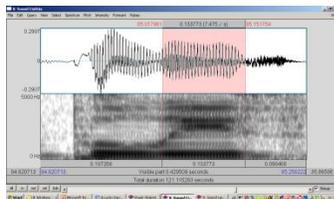
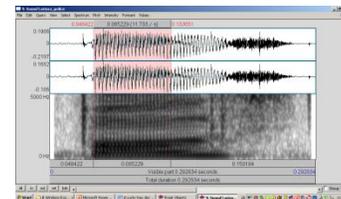
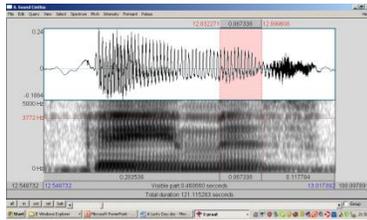
**American Speaker****Brazilian speaker**

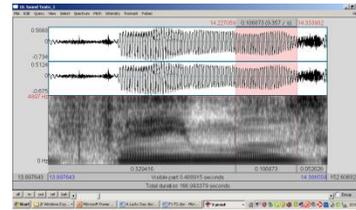
Figure 8. Comparison of word stress placement in the word *police* by an American speaker and a Brazilian speaker.

The other aspect of Brazilian accent in English to be considered here, which is not listed in the LFC, is that of vowel reduction. According to Watkins (2001, p.5), “Brazilian speakers of English [...] continue to use full vowels in some cases where a native speaker would always use a reduced one.” In Figure 9, the vowel / $\ə$ / is produced only by the American speaker. The Brazilian speaker pronounces / $\ə$ ʊs/ instead, probably influenced by spelling.

FAMOUS



American Speaker



Brazilian speaker

Figure 9. Comparison of the pronunciation of the unstressed vowel in the word *famous* by a native speaker and a Brazilian speaker.

From the comparisons above the group members were able to raise awareness about the main aspects that comprise the Brazilian way of speaking English, and were also able to select those aspects that would be interesting to carry on new research projects. The focus of the projects was not only the production by Brazilian speakers, but also on the perception of their speech by other Brazilians, by other non-native speakers, and by native speakers of English, with the purpose of testing the LFC.

Research Projects

From the studies about Portuguese-English interphonology, some items were selected for additional research. In vowel sounds the pairs /ɪ-i/, /ʊ-u/ and /ɛ-æ/ were to be investigated following the results of Rauber (2006). Another issue related to vowel sounds will be vowel length following voiced and voiceless consonants, specifically /s/ and /z/. A third study was about aspiration of the voiceless plosives /p/, /t/ and /k/, focused on perception. The next choice was the realization of words with the *-ed* morpheme. That is a very relevant feature of Brazilian English, with several research studies on the production of epenthesis. The objective was to investigate the perception by speakers of different nationalities of data produced by Brazilians in different levels of proficiency. Last but not least there was a comparison on the production of an interrogative sentence by Brazilians in different levels of proficiency and native speakers of English, with focus on nuclear stress.

FINAL REMARKS

The aim of this paper was to inform about a study group in phonetics and phonology, and the teaching of pronunciation of English as a Lingua Franca. Despite the short period of its existence, the results of their research have been presented in several events. But even more important are the future prospects with all the research in progress and the great possibility of personal and professional development of all participants.

ABOUT THE AUTHOR

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TESOL for over 10 years, more recently coordinating an interest group in English pronunciation teaching. Her current area of interest is forensic phonetics with some research projects under development about disguise, imitation and impersonation. Email address: malucastrogomes@terra.com.br

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