A SMALL-SCALE INVESTIGATION INTO THE INTELLIGIBILITY OF THE PRONUNCIATION OF BRAZILIAN INTERMEDIATE STUDENTS

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Introduction

As a non-native teacher of English as a foreign language in Rio de Janeiro, Brazil, I have always been concerned with the quality of my students' pronunciation, and how well they might or might not be easily understood by native speakers, as well as by other speakers of English as a foreign or second language.

This concern led me to carry out a small-scale investigation, in which I attempt to evaluate how much a Brazilian accent (Rio de Janeiro variety) can affect the intelligibility of students when speaking to listeners of different nationalities who are not native speakers of English. I also attempt to identify characteristics of this accent that might be the main sources of intelligibility problems, so as to gain some insight into which areas to concentrate on and prioritise when teaching pronunciation.

The background

It is generally accepted in ELT nowadays that learners of English as a foreign or second language do not necessarily need to have a native-like pronunciation. Intelligibility seems to be seen as a much more desirable goal than phonetic accuracy for most teachers and learners, depending on their purpose for learning the language, and on their individual aims (Kenworthy, 1989: 3 & 13). An example of the importance being attached to intelligibility rather than native-like pronunciation is David Brazil's *Pronunciation for Advanced Learners of English*, in which he rejects what he calls 'the perfectionist tradition, which demands native-speaker-like control of the sounds of a particular accent, and which regards everything else as an "error"'. Instead, his intention is to help the learner to 'see pronunciation from the point of view of how it can best enable them to make their meanings and intentions clear to a listener' (Brazil, 1994: 1-2).

If we consider Brazil's above definition of intelligibility, and Kenworthy's (1994: 3) suggestion that pronunciation teaching should aim at making learners *'comfortably intelligible'* to their listener, we are left with the question of who exactly this listener might be. In her definition of intelligibility, Kenworthy (1994: 13-14) prioritizes the communication between non-native speakers (NNSs) and native speakers (NSs), i.e., she considers the listener to be a NS who, when engaging in conversation with a NNS, should feel reasonably 'comfortable' in his or her attempt to understand the speaker.

Jenkins (1996: 15) considers this view rather inadequate. In her article she argues that 'English is nowadays spoken far more between NNSs from different L1s (i.e. in "interlanguage talk") than between NNSs and NSs', due to the fact that people around the world have "chosen" English as the medium for international communication. Intelligibility should then be considered mainly from the point of view of this interlanguage talk, since 'deviant pronunciation causes far greater problems of understanding for NNS than for NS listeners' (Jenkins, 1996: 16). She also points out that it is essential that different varieties of "foreign versions" of English pronunciation retain some degree of similarity if intelligibility is to be preserved. She then suggests an approach for pronunciation teaching and learning that focuses on what she calls 'a common core of English phonology' (Jenkins, 1996: 17-18), which would serve as the basis for pronunciation teaching and learning so as to preserve intelligibility in international communication contexts. The nine areas in this 'common core' in which she believes deviations should be eliminated are summarized below:

1. *Vowel quantity*: the distinction between long and short vowels is more important than vowel quality, and should be clear in speech.

2. *Diphthongs*: here, again, diphthong length rather than quality should be the main concern.

3. *Consonant conflations except those involving / θ / and / ð /*: substitution of a consonant for another can cause confusion for both NS and NNS listeners (except for / θ / and / ð /).

4. *Phonetic realisations*: some approximations may lead to unintelligibility.

5. *Consonant cluster simplification*: consonant deletion to simplify clusters can affect intelligibility; vowel additions seem to cause fewer problems.

6. *Word stress*: essential for NS listeners' comprehension.

7. *Prominence and weak forms*: in terms of NNS production, teaching should focus on appropriate prominence; but only on recognition as far as weak forms are concerned.

8. *Nuclear/contrastive stress but not tone*: stress put on wrong word within a sentence may lead to confusion.

In my investigation of Brazilian students' possible intelligibility problems, I decided to concentrate on their communication with other NNSs, as they are more likely to need English for interaction with people of different nationalities than with native speakers. I also decided to take Jenkins's nine 'core areas' into consideration, so as to contrast them with my findings, and to help me come to a conclusion about which of these areas pronunciation teaching in Rio de Janeiro should focus on more deeply.

The process
The participants

In order to carry out my investigation, I used recordings of three Brazilian adult students at intermediate level whose pronunciation of English – based on my experience as a teacher – presents features that can be said to be typical of a Rio de Janeiro-Brazilian accent. The types of pronunciation deviance each one of them presents are not the same, but together they provide a fairly adequate sample of the *main features* that characterize this accent. Based on my experience as a teacher and on my knowledge of the phonology of both English and Rio de Janeiro-Brazilian Portuguese, as well as on ideas put forward by Lieff and Nunes (1993), these features can be summarized as:

1. Shortening of long vowels / iː /, / uː / and / ɔː /.
   e.g. **beef** pronounced as [ˈbifi]; **loop** as [ˈlupi]; **draw** as [drɔ]

2. Consonant conflations – substitutions of:
   • / h / for / r / in initial position
   • / tʃ / for / t / and / dʒ / for / d / when they precede / iː /, / ɪ / or / j /, or in final position
   • / ʃ / for / s / when it is the first consonant in a cluster in initial position
   • / s /, / f / or / t / for / θ /
   • / d / for / ð / in initial position
   • / v / for / ð / in final position.
   e.g. **red** pronounced as [ˈhedʒi]; **teacher** as [ˈtʃiːtʃɚ]; **stop** as [ˈʃtɒpi];
      thick as [ˈsɪki], [ˈfɪki] or [ˈtɪki]; **there** as [deɚ]; **with** as [wɪvi]

3. Phonetic realizations:
   - substitution of / ʊ / for "dark" / l / postvocalically and syllabically
   - / p /, / t / and / k / are never aspirated.
   - nasalization of vowels preceding / n / (or / m / in final position) and drop of consonant.

   e.g. **milk** pronounced as [ˈmɪʊki]; **table** as [ˈteɪbəʊ];
      car as [kɑr] rather than [kʰɑː] or [kʰɑr]
      sun as [sɑ̃], **room** as [hũ]

4. Paragoge: addition of a short vowel – [i] or [ə] – after consonants ending syllables (except / n /, / ŋ /, / s /, / z / or / l /).

   e.g. **picture** pronounced as [ˈpɪkɪtʃɚ]; and other examples above and below

5. A tendency to put the stress on the second syllable of compound words.

   e.g. **homework** pronounced as [həʊmiˈwɜ˞ki]; **classroom** as [klæsˈhũ]

6. Strong vowel reduction in final unstressed syllables.

   e.g. vowels in final syllables of words like **office**, **level**, **happy**, **taxi** or **after** can hardly be heard at times

7. Weak forms not weak enough (though prominence of full forms is usually clear enough).

Apart from 5, 6 and 7 above, suprasegmental features do not seem to me to represent too serious a problem for the average Brazilian student, perhaps because Portuguese - at least the Rio de Janeiro variety - sounds like a sort of 'middle-of-the-way' language between stress-based and syllable-based, and shares a lot of features with English in terms of sentence stress patterns and intonation.

My choice of intermediate students for this investigation was due to the fact that that tends to be the highest level of proficiency most Brazilian students seem to reach – either because that is when they decide they have learned enough English to communicate reasonably well and then stop studying, or because they reach a proficiency plateau at that level and tend to make very little progress after that. Therefore, intermediate level students could be said to represent the typical Brazilian person using English to communicate in most international situations.

As for the people who would act as listeners and evaluators of the Brazilian students' intelligibility, it seemed logical and fair to use people whose English was at the same level as the speakers'. Also, I decided to follow the assumption that most speakers of English as a foreign language around the world tend to be at the intermediate level.

Although my choice was rather limited by the fact that there were few people of different nationalities available to take part in the investigation, I was able to contact a group of twelve intermediate adult students[1] from nine different countries and native languages, as shown in the table below:

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[1] Nine of these are students on the Intermediate English course at the Chichester College of Science, Art and Technology; the other three are university students at the Chichester Institute of Higher Education, and I used my own criteria to check that their level of proficiency in English could be said to be intermediate.

COUNTRY	NATIVE LANGUAGE	NO. OF PEOPLE
China	Cantonese	2
Denmark	Danish	1
France	French	1
Italy	Italian	1
Japan	Japanese	2
Spain	Catalan / Spanish	1
Sweden	Swedish	1
Turkey	Turkish	1
Western Sahara	Arabic	2

This group of people, though small, seemed to be adequate for the purpose of my investigation, as there were representatives of a fairly good number of different languages, and their views as a group on the Brazilian students' pronunciation could perhaps be considered "international enough".

The data-gathering materials and activities

The first step towards gathering the necessary information for the investigation was to select the content of the text that was to be recorded by the Brazilian students. It was important that the text or texts contained words or group of words that included as many of the features of the Brazilian accent described above as possible. Also, it seemed appropriate to use full, coherent texts rather than isolated sentences or words, for when people engage in real communication intelligibility is supported by context and text cohesion. Therefore I chose to use two short texts – quick jokes (please see figure 1) – in which there would be enough opportunities for the characteristics of the Brazilian students' accent to show. Two of the students (Student A and Student B from now on) were asked to read the first and second texts respectively. I tried to make sure they read them as naturally as possible as their voices were recorded, and also pointed out to them that they could check the correct pronunciation of any unknown or unfamiliar words beforehand, not only to help them feel more comfortable, but also – and mainly – because the focus of the investigation was on *accent features, not on pronunciation mistakes*. I also used a third text – a short interview led by one of my colleagues – in which the third student (Student C) was recorded as he talked about himself for about one minute without previous preparation (please see figure 1 for text content).

The twelve listeners who took part in the investigation were explicitly told what their role in it was, and that it was not their listening abilities that were being tested. The process of exposing them to the recorded tapes and gathering information from them followed three steps, which were repeated with each one of the three texts:

1. The recorded text was played once, for the listeners to have an idea of the context and get used to the speaker's voice and personal prosodic habits (which would normally happen in a face-to-face conversation).

2. The listeners were given the transcript of the text, and asked to cover it with a sheet of paper. The text was played again, one sentence at a time. The listeners then uncovered each sentence after listening to it, and underlined the words or group of words they had found difficult or impossible to understand.

3. The listeners were given a table where they entered the words they had underlined, and were asked to make a comment – if they could – about why they thought they had found it difficult to understand them. The relevant part of the recording was played again whenever the listeners thought they needed to refresh their memories.

The data

Since my knowledge of the usual pronunciation and listening comprehension difficulties characterizing the average student of the different nationalities of the listeners is practically non-existent, I decided only to focus on those intelligibility problems identified by at least four of the nine different nationalities. By doing so I tried to avoid the risk of taking individual listeners' difficulties as Brazilian speakers' intelligibility problems that could be generalized.

The table (figure 2) shows the words that caused the listeners most problems, and what they thought could have been the cause of the problems (the phrasings of the reasons shown in the table are not the exact words used by the listeners, but my own summarized version of what they said).

Considering that they were listening to recorded texts rather than to real people in live conversation, it can be said that the listeners' level of understanding was remarkably good. In fact some of them even laughed at the jokes as they listened to the recordings for the first time, even though they obviously could not understand every single word. Also, it was quite remarkable that only isolated words, rather than chunks, were the sources of problems for these listeners. This seems to indicate that the level of intelligibility of these particular Brazilian students can be said to be generally quite high. Another interesting result that can be observed in the table is the fact that no specific nationality seemed to have more or less difficulty in understanding them.

However, the specific data shown in the table reveal some very interesting facts about what does or does not seem to affect these students' intelligibility:

1. The most common problem related by the listeners was the difficulty in hearing or identifying the final syllables in the words *gazing, happen, wavy, patches* and *semester*. Other listeners mistook some of these words for shorter or one-syllable words (*gaze, happy, wave,* [pæʃ] or [pæts], *month*). Also, there was the unanimous opinion that only the first syllable in *telephone* could be heard. This seems to indicate that what was mentioned above as a <u>strong vowel reduction in final unstressed syllables</u> is a major problem for the intelligibility of Brazilians from Rio de Janeiro[2].

2. Eight out of twelve listeners (and seven out of nine nationalities) found it difficult to identify the word *replied*, and five of them said they thought the word *he* had been uttered. Five people did not recognize the word *returned*, which also happens to begin with the phoneme / r /. Although none of the listeners could explain why they had not recognized it, it seems to me that this difficulty is also related to the fact that the speaker used / h / for / r / when pronouncing this word, which Student B had also done when pronouncing *replied*. Therefore it could be said that this particular <u>conflation</u> seems to be an important cause of unintelligibility.

3. Other conflations or un-English phonetic realizations (such as in Student A's pronunciation of *these* as [diz] and of *while* as [waɪʊ], and Student B's pronunciation of *straight* as [ʃtreɪʃ] and *think* as [tɪŋk]) were not even perceived by the listeners.

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[2] As a Portuguese speaker myself, I could tell that those syllables *were* pronounced, but much less loudly than they would have been by a native speaker of English, for example.

4. Although there were several instances of the paragoge of the vowel [i], even following conflations of / tʃ / for / t / and / dʒ / for / d / in several words (such as in Student B's pronunciation of *...you did the last time...*[ju ˈdʒidʒi də ˈlɑstʃi taɪmi]), they did not seem to affect intelligibility.

One interesting fact – but rather difficult to explain – was some listeners' difficulty in understanding the word *bones* in Student A's speech. I can only suppose it was caused by his mispronunciation of the diphthong / əʊ / as [wə]. However, this seems to be an isolated problem, a feature of this particular student's pronunciation of this word, as he did not have the same problem when pronouncing *told* or *ago*, for example. Most Brazilian students would pronounce this diphthong as the Portuguese diphthong / oʊ /, which is present in some native varieties of English as an equivalent to / əʊ /, and would probably be perfectly acceptable for most listeners.

Contrast with the nine 'core areas'

Based on the information gathered and on my interpretation of the listeners' difficulties and of the reasons they gave for not understanding the words, it becomes apparent that some of Jenkins's nine 'core areas' seem to apply to what was considered unintelligible in the speech of the three Brazilian students.

The fact that the students' substitution of / h / for / r / was considered a major source of problems seems to confirm her point that consonant conflations are an essential area for error elimination. She also says that conflations involving / θ / and / ð / do not tend to cause confusion, which was confirmed by the fact that none of the twelve listeners even mentioned not understanding words containing several variants of these conflations. The same can be said of her point about paragoge.

There are some areas, however, in which the results presented above do not seem to match Jenkins's views. Although the three Brazilian students clearly reduced the length of long vowels in their speech, this did not in the least affect the listeners' comprehension of words like *read, speak* and *sort* (unfortunately there were no instances of / uː / in the texts). On the other hand, the change in the quality rather than the quantity of Student A's diphthong / əʊ / did cause problems.

The main source of intelligibility difficulties for the listeners – the strong reduction of final syllable vowels by the speakers – is not included by Jenkins in her 'core areas', but must definitely be considered a major area for error elimination in the speech of Brazilian students.

Conclusion and considerations for ELT in Rio de Janeiro

Since this is a small-scale investigation into such a vast subject as intelligibility, it can hardly be said that any of the results presented here are at all conclusive. However, this first attempt at investigating the specific area of Brazilian students' intelligibility led me to the conclusion that a deeper, larger-scale investigation needs to be carried out in order to discover more detailed information about what makes Brazilian accents in general more or less intelligible to other speakers of EFL. Despite its limited scope, the present investigation already raises some interesting issues concerning the teaching of pronunciation in Rio de Janeiro. For example, it seems to suggest that one of the first focuses of teachers should be on raising students' awareness of their reduction of final syllable vowels, and helping them overcome it. Recent articles by Brazilian EFL teachers such as Lieff and Nunes (1993) tend to put too much emphasis on teaching "correct" pronunciation, with little or no prioritization of areas that should be focused on. A detailed study of what would be essential for intelligibility could therefore be of great help in this prioritization.

Figure 1

STUDENT A

Old Bones

While gazing at dinosaur fossils in New Mexico, a tourist asked a guide how old the bones were.
'These happen to be exactly one hundred million and three years old,' said the guide.
'How can you be so exact?' asked the tourist.
'Oh, I just have a good memory,' replied the guide. 'An archaeologist came here and told me these bones were a hundred million years old, and that was exactly three years ago.'

STUDENT B

The Haircut

This guy goes into a barber shop, and says 'I want my hair cut, so that it is long here, here and here…, sort of wavy in this section but straight just below, sort of spiked on this diagonal, and with bald patches here, here and here.'
The barber looked at him and replied, 'I don't think I can do that!'
'Why not?' said the guy. 'It's exactly what you did the last time I was here!'

STUDENT C

Interview

Interviewer: How long have you been studying English?
Student: Four years, but er… last semester I stopped. I cancelled my enrolment, and returned this semester.
Interviewer: Oh, that's really good. And what do you do to practise your English when you're not in class?
Student: Er… I read… er… letters from Cambridge and speak sometimes on the telephone… to Cambridge too.
Interviewer: Oh, so you have plenty of opportunity to practise. Thank you very much.
Student: My pleasure.

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Figure 2

Student	Unintelligible Word	Number of people who found word unintelligible	Number of different nationalities	Reasons given and number of people who gave the same reason
A	gazing	9	8	Couldn't hear last syllable - 4 Thought word was *gaze* - 3 Couldn't explain - 2
A	happen	7	7	Couldn't hear last syllable - 5 Thought word was *happy* - 1 Couldn't explain - 1
A	bones	6	6	Heard word as [bwənz] - 1 Couldn't explain - 5
B	wavy	7	6	Couldn't hear last syllable - 3 Thought word was *wave* - 2 Couldn't explain - 2
B	patches	9	7	Couldn't hear last syllable - 2 Heard [pæʃ] or [pæts] - 4 Couldn't explain - 3
B	replied	8	7	Thought B had said *he + word* - 5 Couldn't explain - 3
C	returned	5	5	Couldn't explain - 5
C	semester	6	5	Couldn't hear last syllable - 3 Thought word was *month* - 2 Couldn't explain - 1
C	telephone	5	4	Knew what the word was but could only hear first syllable - 5

References

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