

Systematic pronunciation errors by a Japanese learner of English

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In this paper, I investigated pronunciation errors made by an intermediate level Japanese learner of English and propose remedial action where necessary. In the course of the analysis some interesting patterns emerged with respect to errors relating to the consonants [l] and [r]. These errors were not random occurrences, but, fit into regular patterns related to the phonetic environment in which they occur.

Introduction

Pronunciation is an area of language teaching that can cause difficulty for both teachers and learners as it requires considerable time and effort to master for a relatively low return, and in most cases such a high level of mastery is simply not necessary. Because of this it is important for teachers to adopt a pedagogical approach when dealing with it. There is not enough class time to correct every error, so teachers must choose those that most affect comprehension. I encountered an example of how such misunderstandings can occur the first time I came to Japan, a young lady asked me if I had a [rAbΔ], it took me some time to work out that she meant "lover", or girlfriend, and not "rubber". On another occasion a friend tried to tell me "We are having a big election in Japan now", unfortunately, they mixed up their /l/ and /r/.

An accent is the feature of a learner's interlanguage that most clearly identifies them as a non-native speaker. Most native speakers can distinguish different

accents and can identify the background of a speaker, native or non-native, by their accent. So most native English speakers, after hearing me speak, would be able to identify my speech as Antipodean, although only those with experience of these accents might be able to recognize it as New Zealand English as opposed to Australian.

There is a very fine distinction between pronunciation and accent. Richards et al (1992) define pronunciation as ; "the way a certain sound is produced. Unlike articulation, which refers to the actual production of speech sounds in the mouth, pronunciation stresses more the way sounds are perceived by the hearer, and often relates the spoken word to its written form." (p. 296), and accent as ; "a particular way of speaking which tells the listener something about the speaker's background. A persons pronunciation may show (a) the region or country they come from, (b) what social class they belong to, (c) whether or not the speaker is a native speaker of the language" (p. 1). These terms are very closely related, in this paper I will use accent to mean the overall sound of person's speech as a whole, and pronunciation to mean the way specific sounds are produced.

Why do accents occur ?

Of all the areas of second language acquisition, pronunciation is the most obvious sign of first language transfer. Transfer is when a language learner uses previously learned language skills or knowledge in the second, or subsequent, languages. When this results in errors then it is called interference. There have been several theories put forward to explain why phonetic transfer occurs, of which I will look at a few.

The first is physiological ; the learner is simply unable to retrain their articulatory muscles to produce the sounds of the new language. It is not unknown for adult L2 learners to achieve native like pronunciation, but, these people tend to

be the exception rather than the rule. The critical period hypothesis

states that there is a period (i. e. up to a certain age) during which learners can acquire an L 2 easily and achieve native-speaker competence, but that after this period L 2 acquisition becomes more difficult and is rarely entirely successful. Researchers differ over when this period comes to an end. (Ellis, 1994 : 699)

Estimates of this maximum age generally range between 6 years old (Long 1990) to puberty (Scovel 1988). For pronunciation at least, this suggests a person is born with the innate ability to form the sounds of any language, but that after a certain age this ability is lost. Larsen-Freeman and Long (1991) offer a neurological explanation :

Prior to puberty, ..., a critical period exists during which the brain is more plastic and allows, among other things, the transfer of a function from one hemisphere to the other when the former has been injured and for new patterns of behavior to be efficiently processed. This loss of plasticity is significant in that it signals a loss of flexibility of 'neuro-physiological programming of neuromuscular coordination mechanisms' (Scovel 1981, p.37), something that would be expected to adversely affect an individual's ability to control the articulators necessary in SL pronunciation. (; 164)

In other words the muscles become attuned to producing the mother tongue and they cannot easily be retrained, consequently this universal ability is lost. This means that it is difficult for a learner to articulate a new sound, or combination of sounds, that do not already exist in the L 1. In the case of Japanese learners of English, the most notable examples are the distinctions between /r/ and /l/, /s/ and /ʃ/, and /v/ and /b/.

The second is metacognitive, a learner reaches a point where they are able to

use a particular feature of a language effectively enough to be understood, and consequently, make a conscious, or unconscious, decision that further effort with that feature is unnecessary. This is referred to as fossilization (Selinker, 1972). The task of learning a language is so great that a learner can only give attention to a small part of it at one time. In the case of pronunciation, if a learner does not experience difficulty making themselves understood then they might decide that the time and effort required to overcome it would be better spent on other areas.

The third is sociological, a learner uses their accent as a way identifying with their own group or as a way of emphasizing the distance between themselves and the native speaker group. This is what Schumann (1978) in his acculturation model refers to as psychological distance,

It refers to the distance between a learner and the target language community resulting from various psychological factors such as language shock and rigidity of ego boundaries. (in Ellis, 1994 : 721)

and social distance, which accounts for

why some L2 learners learn very slowly or achieve low levels of proficiency. Various factors such as the size of the learner's L2 group and the learner's desire to acculturate influence the 'distance' between the learner and the target-language community. (in Ellis, 1994 : 723)

Language is an integral part of a person's identity and they might feel resistant to abandoning it completely.

There is also evidence that native speakers use a non-native speaker's pronunciation to determine their language level. They then use this to modify their speech to the level of the learner (Ellis, 1985 a). This suggests that their accent could give non-native speakers some control over the level of input that they receive. Meaning that a stronger accent could result in more simplified input.

No single theory can give a complete explanation of why accents and

pronunciation errors occur. One or more factors could be at work at any given time. There is considerable variation between learners, and any given learner, at any given time can show signs of each at different times. Many factors have to be taken into consideration such as ; the level of the learner, the context in which the utterance occurs, the interlocutor, the learner's emotional state, and the amount of attention being paid to form.

Method

In this study I recorded a learner's speech and then analyzed her pronunciation errors in an effort to identify any areas that might require remedial action.

The Subject

The learner in this study was a native speaker of Japanese. She had studied English for about eight years from junior high school through to junior college, where she majored in English literature and language. However a strong emphasis was put on reading and writing at the expense of speaking and listening, it was only during her studies at junior college that she attended a ninety minute conversation class per week. Over the subsequent seven years, her English study consisted of sporadic self-study using books and tapes, and a three week English course in Australia. At the time the recording was made, she had spent twelve out of the previous seventeen months in New Zealand, where she lived mostly in home-stays and used English for daily communication. She was recently married to a New Zealander she had met about fifteen months prior to the recording. Her English level at the time was about upper-intermediate level.

The Text

The learner selected the text she would read from an audio-lingual course

magazine. It was a transcript of part of an interview, but because she was reading from a text her speech tends to lack the stress and intonation of ordinary speech. Before making the recording she listened to a model on tape and then made practice recordings reading the text about five times checking her own pronunciation. This means that in the final recording, her attention was focused on form. Therefore, it was what she perceived as her best pronunciation. In this way the occurrence of mistakes is minimized and the remainder is actual errors that the learner has little or no control over. I make a similar distinction between a mistake and an error as Corder (1967), "a 'mistake' is a deviation in learner language that occurs when learners fail to perform their competence. It is a lapse that reflects processing problems." (in Ellis, 1994 ; 714), and "an error is a deviation in learner language which results from lack of knowledge of the correct rule." (Ellis, 1994 ; 700). One problem with this definition of an error is that a learner may have knowledge of a form but may not have fully acquired it. At what point does an error become a mistake? This question could fill a whole paper by itself, so for the sake of brevity, I will use the term error to mean both, i. e. any deviation from what would not generally be considered standard pronunciation. This is based on the assumption that the learner's strong focus on form would significantly reduce, or even eliminate, one time mistakes. I have used the phonetic spellings in Allen (1991) as the standard of comparison.

Results

I identified four main types of errors ; failure to distinguish between /r/ and /l/, and /v/ and /b/, inserting different word endings, and word stress. The results are discussed from the most serious and frequently occurring problem to the least.

/r/ and /l/ : This is a very common source of errors for Japanese learners of English. This is because in Japanese they are not separate phonemes, the nearest

sound is a post-alveolar lateral that is half way between the post-alveolar semi-vowel /r/ and the alveolar lateral /l/. When it is written in romaji, a Japanese Romanized script, it is represented by the letter "r". When English is first taught in junior high schools, many texts use the Japanese phonetic script, katakana, to aid pronunciation, this means that many students do not learn the distinction until later, by which time it might be too late and fossilization may have set in. Furthermore, as the majority of English teachers in Japan are native speakers of Japanese with varying levels of ability to distinguish between these sounds themselves, it is probable that this is a self-perpetuating cycle.

The contrastive analysis hypothesis, commonly associated with behaviorism which was largely discredited during the rise of the Chomskyan linguistics, predicts that errors will occur due to this divergence i.e. where "one item in the first language becomes two items in the target language" (Ellis, 1985 b ; 26). However, it fails to predict exactly what specific errors will occur or when and in what form. In this study, I found that they occurred in a fairly regular pattern. In Appendix 1 I have tabulated all of the words from the passage with 'r' or 'l' in their written form. Of the twenty-nine occurrences eleven were pronounced incorrectly, of these only one was an /r/ pronounced as an [l], this would require further evaluation to determine if there is a problem, and if so, its extent. The ten where /l/ was pronounced as [r], at first glance, appear to fall into two main categories ; adverbs ending with /li:/, "domestically" (line 9), "internationally" (line 9), and "recently" (line 2), and words where the /l/ follows a /p/, either as part of a consonant cluster, "place" (lines 2 & 3), and "pleased" (line 4), or in the onset of the following syllable, "Poland" (line 7), "policies" (line 8), and "Polish" (line 6).

However, if we look at it in more detail, and include 'r' and 'l' regardless of whether they are pronounced correctly or not, several very interesting patterns emerge depending on the phonetic environment in which they occur. Firstly, when

they occur in codas, they are perceived as being correctly pronounced. This is because, with the exception of rhotic accents, in native-speaker English they are generally severely weakened, to the point where they either merge with the preceding vowel or form a kind of diphthong. The learner in this study also does this. Secondly, when they occur in onsets, there are several factors involved. The strongest of which seems to be the syllabic vowel. With only one exception out of fourteen, when they are followed by a closed front vowel, they are invariably pronounced as [r], regardless of whether /l/ or /r/ is the underlying form. The exception was one which was preceded by /g/. Both occurrences with a preceding [g] were pronounced as [l]. All occurrences with a preceding [p] were pronounced as [r]. In the two examples where they occupied word initial position, they were pronounced correctly. This could be because we tend to have a stronger association between a word and its initial letter than subsequent letters (for example, try thinking of all the words you know with, say 'w', in the middle compared to those that begin with it). There were four occurrences that did not fit into any obvious patterns, only one of which was pronounced incorrectly. These could either be random occurrences or there is insufficient data for a pattern to emerge.

All of this suggests that she is able to make the distinction between the two sounds but that it is strongly influenced by the various phonetic conditions in which they occur. In other words, it is explicit but not yet implicit, i. e. it has been learned but not acquired. I would suggest using form focused output exercises to help her to "produce output that may become input for implicit knowledge" (Nation, 1995). For example, "Testing the teacher" where she would "pronounce pairs of words and the teacher says "the same" or "different"." (ibid.). In addition, verbal exercises may also be of some use to help the learner to develop the muscular control necessary to produce these sounds. In the case of this learner the problem is not a significant hindrance to comprehension so rather than use valuable learning

time these could be done by the learner on her own, maybe using a tape recorder, if she felt a strong need to remedy this problem. From a linguistic point of view, this data revealed some interesting phonetic patterns worthy of further investigation.

Using /b/ instead of /v/: This is another common difficulty for Japanese learners of English. This is because Japanese does not have the /v/ phoneme, so until recently, for words borrowed from English they usually use [b]. Consequently, when they speak English they often make this same substitution.

With this learner it is most apparent when the word begins with /v/. For example, in two out of the three occurrences of "very" (lines 1 & 4) she uses /b/ instead of /v/. However, when /v/ occurs later in a word there is little or no clear evidence of this /b/ substitution, in "government" (lines 6 & 9) the sound is partly both, making it difficult to distinguish which sound it actually is. In words like "of" (line 5) and "have" (lines 2, 3, 5, & 8) it is pronounced correctly.

Once again we see that the learner can make the distinction between the two phonemes but when it comes to producing them she sometimes has difficulty retrieving it because of interference from the L1. I would use similar techniques to those above to try to correct this problem, if the learner felt a strong need to remedy it. However, given the relatively low frequency of occurrence of /v/ in English compared to /r/ or /l/, it is a lower priority.

Wrong word endings: There are several words in the text that are read with wrong word endings, such as [prɪz] (line 4) and [sɪmz] (line 7). In both cases they are in the verb+ed form in the text and they are followed by "to". The learner has in both cases used /z/ as the final sound. With [prɪz] it is possible that she ran the final /d/ of "pleased" into the initial /t/ of "to" as the base word has the /z/ in it already. However, with [sɪmz] she definitely inserted the [z] as this only occurs in the finite present tense ending of this verb. This suggests that the learner anticipated a finite present tense ending and did not read it correctly. This would

appear to be a grammatical error rather than one of pronunciation.

Word stress: None of the problems with word stress significantly affect comprehensibility, and so it would not be an effective use of class time to try to correct them. However, they are worthy of mention. Firstly, Japanese is a syllable timed language, as opposed to a stress timed language like English. This makes it difficult for Japanese students to pick up the stress patterns of English. This can result in the kinds of errors that we see in the learner's speech. Such as: randomly putting the stress on the wrong syllable in a word, for example [ko'mju:nɪst] (line 6) instead of ['komju:nɪst] or ['domestɪkɪri:] (line 9) instead of [də'mestɪkli:], or stressing words that are not usually stressed, for example the function words "in" in line 1 which gives the phrase "been very much in the news in the last few years" an iambic rhythm that it would not normally have in natural speech. Also related to the stress patterns of the passage is when she elides "the opportunity" (line 5), where a native speaker would say [ði: opətʃu:nɪti:] she said [ðəpətʃu:nɪti:]. Again, this does not significantly affect comprehension.

Discussion and Conclusion

Classroom time is valuable for both students and teachers, so it needs to be allocated carefully. Unlike the person who asked me if I had a rubber, this learner seems to have reasonable control over her pronunciation, so it should not be given as a high priority as other areas of the learner's speech. I have ranked the problems identified in the order of priority I would give them in a teaching situation. Of these only the /l/, /r/ and /v/, /b/ problems could require some attention as they have the potential to affect comprehensibility. The other thing to consider is that often when learners find that these errors cause comprehension problems for an interlocutor, either in the classroom or in natural settings, they will often self-correct anyway. The best way to deal with them may just be to draw their attention to

them, the teacher could even play dumb and pretend they do not understand when a learner makes an error to get them to negotiate meaning. Word endings would also be given coverage as part of the grammar content of a course.

Owing to the limitations of this study, most notably the fact there is only one subject and the sample of data is fairly small, it does not give definitive results regarding the exact nature of first language interference in pronunciation. A more experimental approach would have been to look at a variety of learners with different levels of English and different language backgrounds and ages. Then to test them in various situations, such as ; reading or speaking with more or less preparation time, in free conversation with a variety of interlocutors, and see how restrictions on the amount of attention they can give to form affect the quality of their pronunciation.

The stereotypical view that many native speakers of English have of Asian, especially Japanese, speakers of English is that they usually have difficulty distinguishing the "l" and "r" sounds. Actors and comedians will often exploit this when they wish to portray Asian speakers. In this stereotypical view this is either portrayed as a random occurrence or every /r/ is replaced with /l/ or vice versa. In contrast, this study found that there is a fairly consistent pattern to the way that errors occur in this area which relates either to the preceding consonant or to a final "-ly" sound typically found in adverbs.

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Appendix 1

Table of words containing /r/ or /l/

Word	No. of Syllables	Syllable No.	Stressed syllable	onset	coda	consonant cluster	Preceding Consonant	Preceding Vowel	Following Vowel	/r/ → [r]	/l/ → [l]	/r/ → [r]	/l/ → [l]	Reason
unstable	3	3			y	y	b	ə	-	y				1
global	2	2			y	y	b	ʊ	-	y				1
still	1	1			y		st	i:	-	y				1
internationally	5	2			y		t	ɜ:	-	y				1
while	1	1	y		y		w	aɪ	-		y			1
will	1	1			y		w	ɪ	-		y			1
very(x 3)	2	2		y			b/b/v	e	i:	y				2
domestically	5	5		y			k	ɪ	i:			y		2
internationally	5	5		y			n	ə	i:			y		2
recently	3	3		y			t	-	i:			y		2
everyone	3	2		y			v	e	i:	y				2
areas	3	2		y			-	e	ɪə	y				2
global	2	1	y	y		y	g	-	əʊ		y			3
agree	2	2	y	y		y	g	-	i:			y		3 & 2
Poland	2	2		y			p	əʊ	ʌ			y		4
present	2	1	y	y		y	p	-	e	y				4 & 2
place	1	1		y		y	p	-	eɪ			y		4 & 2
pleased	1	1	y	y		y	p	-	ɪ			y		4 & 2
Polish	2	2		y			p	əʊ	ɪ			y		4 & 2
policies	3	2		y			p	ɒ	ɪ			y		4 & 2
period	3	2		y			p	e	i:	y				4 & 2
last	1	1	y	y			-	-	a:		y			5
recently	3	1	y	y			-	-	i:	y				5 & 2
Filipek	3	2		y			f	ɪ	ə		y			
Counsellor	3	3		y			s	e	ə			y		
Europe	2	2		y			j	əʊ	ɒ	y				
developed	3	3		y			v	e	ɒ		y			

Key for Reasons

1. coda, vowel integration
2. followed by Closed Front vowel
3. following [g]
4. following [p]
5. word initial, non-cluster

Appendix 2

Transcription

1. Eastern Europe has been very much in the news in the last few years, and the
 'i:stæn 'jəʊrɒp hæz | bi:n 'beri: mʌtʃ 'i:n ðə 'nju:z 'i:n ðə 'la:st fju: 'ji:z || en ðə
2. momentous changes that have taken place there recently, and are still
 ,məʊ'mentʌs 'tʃendʒez ðæt hev 'teken preɪs ðiə 'ri:sentri: || end aɪ sti:l
3. taking place, will have an enormous global impact. I think everyone would
 'tekiŋ 'preɪs | wɪl hev æn 'enɔ:,mʊs 'gləʊbəl 'i:mpækt || aɪ θi:ŋk 'evri:,wən wʊd
4. agree these are very interesting, if unstable, times. We are very pleased to
 ə'gri: | ði:z a: 'beri: 'intristi:ŋ || ɪf ən'steɪbəl 'taɪmz || wi: ʒ: 'veri: 'prɪz tu:
5. have the opportunity of talking with Mr. Filipek, Commercial Counsellor at
 'hev ðə ʌpətʃu:niti: ɒv | 'tɔ:kiŋ wið 'mi:stɜ: 'fɪləpek || kə'ma:ʃəl 'kaʊnsərə ət
6. the Polish Embassy, today. Once the communist government was ousted,
 ðə 'pəʊrɪʃ 'embəsi: || ,tu:'deɪ || 'wəns ðə kə'mju:nɪst 'gʌ(v/b)əmənt wəz 'aʊstɪd
7. there seemed to be a period of instability in Poland for a while. How is the
 ðeə 'si:mz tu: bi: ə 'peri:əd ɒv ,ɪnstə'bɪlɪti: ɪn 'pəʊlənd fɔ: ðə 'waɪl || 'haʊ ɪz ðə
8. present government performing, and have they developed firm policies
 'prezent 'gʌvəmənt pə'fɔ:mɪŋ | en hæv ðeɪ ,di:'veləpt fɜ:m 'pɒlɪsi:z |
9. domestically and internationally, and what areas is the government now
 'dɒmestɪ,kɪrɪ: end ,ɪntɜ:'næʃnəri: | end 'wɒt 'eɪə ɪz ðə 'gʌ(b/v)əmənt naʊ
10. putting emphasis on ?
 'pʊtɪŋ 'emfəsi: ɒŋ

Key.

'xxx	= word main stress
xx,xx	= word secondary stress
xxx xxx	= semi-pause
xxx xxx	= pause

$xx \widehat{xx}$	= elision
$xxx\check{x}$	= rising intonation
$xxx\hat{x}$	= falling intonation