

# Interlanguage pronunciation systems : A study of the pronunciation of /r/ and /l/ by Japanese learners of English<sup>1)</sup>

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The purpose of this paper is to try to reproduce the results of Paterson (2002), which set out to investigate pronunciation errors made by a Japanese learner of English. The primary focus of the paper was to identify weaknesses in the learner's spoken English and recommend remedial action if necessary. In the course of that investigation, the study found that, when it came to the pronunciation of the sounds represented by the letters 'r' and 'l', the phonetic context had a much greater influence on the surface form than the correct underlying form. That is to say, when preceded by a /p/ or followed by a front vowel, they tended to be pronounced more like /r/, whereas when followed by a back vowel, they tended to be pronounced as /l/, regardless of whether the correct pronunciation was /r/ or /l/. So, in the minimal pair 'play' and 'pray' both would be pronounced as /preɪ/. The above paper was based on a single recording made by one Japanese learner of English. Therefore, the aim of this study is to see whether the same holds true for other Japanese learners of English.

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## Introduction

Pronunciation is an area of interlanguage research that has not been fully developed, especially from a pedagogical point of view. While there is a demand from learners and their teachers to look for ways to improve pronunciation, there also seems to be a general feeling that the relatively low return does not justify the considerable investment of time and effort required to improve it, and most learners simply do not need such a high level of mastery. Because of this it is important for teachers to adopt an approach that gives maximum benefit for the time spent. There is not enough class time to correct every error, so teachers must choose those that have the greatest effect on comprehension. In order to do this, teachers need to know which sounds cause the greatest difficulty for their learners.

Pronunciation, or accent, is the feature of a learner's interlanguage that most clearly distinguishes them from a native speaker. Most native speakers can distinguish different accents and quickly make judgments about place of origin, social status, etc. 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 L2 easily and achieve native-speaker competence, but that after this period L2 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. (Larsen-Freeman and Long 1991 : 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 L1. In the case of Japanese learners of English, the most notable examples are the contrasts 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 of 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 integral part of a person's identity and culture, so they might feel resistant to the idea of abandoning it in favor of the L2 community.

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 in pronunciation between learners, and even the pronunciation of individual learners can exhibit variation in different contexts. 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.

The English sounds /r/ and /l/ are 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". Vance (1987) cites Kawakami (1977), Ladefoged (1971) and Catford (1977) as describing the Japanese liquid as an "apico-alveolar tap [ɾ]" where "the tip of the tongue is thrown against the alveolar ridge" (Vance, 1987 : 27). 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 fossilization may have occurred and it might be too late to address the issue. Furthermore, as the majority of junior high-school and high-school 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, generally associated with behaviorism,

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 which specific errors will occur or when and in what form.

## Method

Recordings were made of five-minute one-on-one conversations between the researcher and 25 students using a MD recorder, of which, four were selected at random for the current study. The subjects were four first-year non-English majors at a Japanese university, 1 female (Student 1) and 3 male (Students 2 - 4). Transcripts were made of each conversation, and all occurrences of /r/ and /l/ in the written form of the word were identified and highlighted using the search facility in Microsoft Word. The pronunciations of these words were then checked in the *New Shorter Oxford English Dictionary* (New SOED, 1996), and any words in which the /r/ or /l/ are not normally pronounced, were eliminated from the study. These were mostly words where they are used to lengthen a vowel, such as “work” /wɜ:k/ or “walk” /wɔ:k/. The remaining words were then transcribed from the recordings using the pronunciation guide in the New SOED, which is based on the IPA International Phonetic Alphabet.

In the previous study (Paterson, 2002), the subject had a model conversation and was allowed to rehearse the dialogue several times until she was satisfied with the recording. In the current study, I wanted to capture spontaneous speech, and so the conversation topics were kept free. The disadvantage of this was that use of the target forms could not be controlled, which meant that a larger sample was required in order to get sufficient data for analysis. This was outweighed by the advantage of capturing the subjects’ natural pronunciation as opposed to an idealized form

which might be produced when there is a greater focus on form. I found that there was a high level of consistency in the pronunciation of words that they used repeatedly.

## Results and Discussion

In the current study there was much less consistency in pronunciation, probably owing to the greater number of variables than the previous study (Paterson, 2002), such as ; the learners' generally lower level of English, their limited English speaking experience, individual variations in pronunciation, etc. The aim of the current study was to try to reproduce the results of the previous study. However, with the exception of Student 2 there was little evidence of a distinction being made between /r/ and /l/. All subjects generally pronounced both as the Japanese /r/, which generally sounds more like an /l/ to English native speakers. Of the words that should be pronounced with an /l/ sound, 74% were pronounced as /l/. Whereas, only 34% of words that should be pronounced with an /r/ sound were pronounced as /r/, most of which (79%) were produced by Student 2. Student 2, who was the more advanced of the four subjects, showed some evidence of pronouncing /r/ after bilabial and alveolar plosives /p/, /b/, and /t/, but not after velar plosive /k/. Student 2 was also the only subject to pronounce /l/ sounds as /r/. This suggests that the learners overall level of English ability has an influence on their pronunciation of /r/, and that for Japanese speakers, the English /r/ is the more marked form compared to /l/ and tends to develop later.

In the case of occurrences of /r/ and /l/ in onsets, the place of articulation of the vowel does not appear to have any significant influence on the surface form. As stated above, Students 1, 3, and 4 tended to pronounce both /r/ and /l/ underlying forms as /l/ regardless of whether there was a front or back vowel. Student 2 exhib-

ited little influence of vowel place of articulation, pronouncing them mostly as /r/.

## Conclusion

The results of this study suggest that for Japanese speakers, the English /r/ is a more marked form than /l/, but that with gains in overall English ability and experience that it can be acquired. The results for Student 2 seem to confirm the results of the earlier study with regard to bilabial plosives with additional evidence of influence from alveolar plosives on the pronunciation of /r/ in the surface forms.

The above evidence seems to suggest that an interlanguage continuum does exist from L1 to L2 forms, whereby they tend to produce the L1 form in earlier levels and gradually acquiring the L2 form as their level of ability improves. However, it is difficult to confirm this based on the current evidence owing to the small samples of data available from both studies. A larger database of learner English is required along with more sophisticated means of analyzing the learners' pronunciation.

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