Perceived Intelligibility of Japanese Loanwords by Japanese Learners of English Versus Actual Intelligibility in International Contexts

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Perceived Intelligibility of Japanese Loanwords by Japanese Learners of English Versus Actual Intelligibility in International Contexts

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This paper describes the results of two separate but interrelated surveys investigating the intelligibility or otherwise of Japanese loanwords (gairaigo) derived from English. In the first study, gairaigo that were highlighted in Eigo Note 1 (a textbook designated by the Ministry of Education, Culture, Sports, Science and Technology for use in elementary schools) as being potentially unintelligible if pronounced in the Japanese way, were recorded as single words and also within example sentences. These recordings were then placed in a survey for non-Japanese English speakers in order to discover whether the words were in fact unintelligible. In the second part of this project, the same words were shown to first year Japanese university students who were asked to identify which they thought would be unintelligible to non-Japanese listeners. The results suggest two things. First, many gairaigo are much less difficult to understand than perhaps otherwise thought, and also that there are discrepancies between what Japanese speakers think might be unintelligible and those words which do actually cause problems.

Keywords: Intelligibility, English as a lingua franca, World Englishes, pronunciation

1. Introduction
The spread of English around the globe has resulted in it becoming an international language par excellence, (Held, McGrew, Goldblatt, & Perraton, 1999; McKay, 2002). As a result of this spread, English is no longer the language of a limited number of countries and native speakers. Yet when taught as a foreign language, the native speaker, usually from the US or UK, or to a lesser extent one of the ‘Inner Circle’ countries (Kachru, 1985), is still often treated as the unassailable model for learners, and any diversion from this norm is seen as abnormal, or at best, an area for further improvement. In ELT, this ‘native speaker model’ generally pervades many teaching areas including pronunciation, listening, and even pragmatics.

This is generally the case in Japan where major textbooks still tend to prioritize native speakers as the preferred norm-providers (Matsuda 2002), and language schools advertise their ‘authenticity’ with obviously ‘native-looking’ teachers (Seargeant, 2009). At the same time, discussion of Japanese English or Japanese accented English is more often than not of a negative nature (Harris, 2012a).

English-derived foreign loanwords in Japanese (called gairaigo in Japanese) constitute a continually growing and developing section of Japanese vocabulary. Referring to statistical surveys within Japan, Stanlaw (2004) estimates that loanwords make up between 5 and 10 percent of daily Japanese vocabulary and explains that even in 1977 a loanword dictionary contained 27,000 entries.

Gairaigo are often viewed negatively as an impediment for Japanese students learning English (Shepard, 1996). Daulton (2003) is one of the few positive voices regarding the usefulness of gairaigo and suggests that nearly half of the 3000 most-frequently occurring word families of English have correspondence in Japanese. He argues that this “built-in lexicon” is a valuable resource for learners in the acquisition of English vocabulary (Daulton, 1999).

This paper reports on two studies related to the same set of gairaigo, one which tested them for intelligibility among non-Japanese speaking English speakers and the other examining the beliefs of Japanese learners of English as to whether these words would be intelligible or otherwise in international communication.
2. Background

English in Japan is generally taught with Inner Circle pronunciation models, (particularly General American or Received Pronunciation) as the goal for many learners. This goal is arguably so unreasonable that the vast majority of learners are destined to fail, which disadvantages that majority (Honna & Takashita, 1998), resulting in a loss of confidence and motivation or even in them just giving up completely. Kirkpatrick (2007) points out that this also affects non-native English teachers. Rajagopalan (2004) blames it for creating “an extremely enervating inferiority complex among many a non-native speaker learner/teacher” and for helping to “spawn unfair and discriminatory hiring practices” (p. 114).

This inferiority complex can definitely be seen among Japanese elementary school teachers, who have recently been tasked with teaching English to grade 5 and grade 6 elementary school students. Many of these teachers have no prior experience teaching English and are not fluent in the language, so even though they are teaching only very basic English, they have low confidence in their abilities to do even that, and pronunciation is one of the areas that they worry about.

One of the reasons for this could be that teachers presume that a native speaker model is necessary. While the Ministry of Education, Culture, Sports, Science and Technology (MEXT) doesn’t formally impose a particular model, there is still implicit support for the native speaker model which can be seen in MEXT-approved textbooks featuring only native speakers in listening activities. For example, Eigo Note 1 and Eigo Note 2 (Ministry of Education, Culture, Sports, Science & Technology, 2009a/2009b) the textbooks created for elementary schools and used widely until March 2012, featured recordings of General American (GA) speakers almost exclusively. These speakers also voiced non-American characters in both books, providing the voices for Japanese, Australian, Russian and Chinese speakers, among others. Even the few exceptions of ‘foreign’ characters with non-GA accents are obviously faked. This is in clear contrast to MEXT statements supporting an international language of communication, for example where it is explained that “for children living in the 21st century, it is essential for them to acquire communication abilities in English as a common international language” (Ministry of Education, Culture, Sports, Science and Technology, 2003).

From April 2012, the textbook used in most public elementary schools changed to Hi Friends 1 and Hi Friends 2, (Ministry of Education, Culture, Sports, Science & Technology, 2012a/2012b) and although some of the activities have been changed, the reliance on GA speakers remains the same.

A telling example of support for the native speaker model is found in lesson six of Eigo Note 1, the book that was designated for fifth graders. In this unit, students discover that words they already know through their knowledge of gairaigo are in fact completely different in ‘real’ English. The suggested goal for this lesson is that students should recognize this difference and carefully pronounce the words in the ‘correct’ way. Many prefectoral boards of education at the time the textbooks were in use provided guidelines for teachers explaining the purpose of the lesson in ways such as the following:

“外来語とそのもととなる語とでは、音が違うことに気付き、英語の音に気を付けて発音しようとする。” (Oita Prefectural Board of Education, 2011)

Transliteration: “gairaigo to sono mototonaru go to deha, oto ga chigau koto ni kitsuduki, eigo no oto ni ki wo tsukete hatsunou shiyou to suru”

Translation: To become aware of the difference between Japanese loanwords and the original English words and to carefully pronounce those words in English.

This simplistic focus on an imaginary dichotomous relationship between Japanese English (which according to this approach can be thought to be ‘wrong’), and a single original and therefore ‘correct’ English does little to introduce the reality of English as an international language. It also creates or strengthens the belief that these words, spoken with a Japanese voice, will be all but impossible for any other English speaker outside of Japan to understand.

This is in spite of the fact that studies in intelligibility of English suggest that Japanese English is among the more intelligible accents in international settings. For example, in a landmark study, Smith & Rafiqzad (1979) surveyed 1300 people in 11 countries who listened to read-
ings by speakers with nine different accents. They found that Japanese speakers were among the top five most intelligible, while “the native speaker was always found to be among the least intelligible speakers” (p. 375). The Japanese participants in that study were described as “speakers of their own educated variety of English” (pg.372), and this is of course a somewhat different issue than that of intelligibility of gairaigo, a much less investigated area and what this paper aims to address.

While it seems many Japan-based educators and students assume that gairaigo will for the most part be unintelligible in communication outside Japan, this is perhaps due to a narrow view of how it will be perceived against a ‘native speaker’ model rather than in the context of international communication.

Stanlaw (2004) outlines various processes of segmental modification that take place when loanwords are introduced in Japanese. Processes such as insertion of epenthetic vowels, (strike becomes sutoraiku), addition of vowels after final consonants and stops (dog becomes doggu and hot becomes hotto), and consonant changes such as /θ/ and /ð/ becoming /s/ and /z/ respectively, are the kind of pronunciation areas that textbooks and class curricula often aim to address as areas for improvement. Yet these are all examples of pronunciation features that are unlikely to cause intelligibility issues in international communication according to models such as Jennifer Jenkins (2000) Lingua-Franca Core (LFC-further discussed below).

3. A note on intelligibility

Nelson (2011) discusses the various uses of intelligibility and how it is often used by different writers to denote different things. Smith & Nelson (1985) proposed a three-way distinction in an attempt to standardize the terminology used to talk about it. They broke it down into three terms, ‘intelligibility’, ‘comprehensibility’ and ‘interpretability’. It is in the sense of the first of these that the word ‘intelligibility’ is used throughout this paper (and the word ‘understand’ for that matter). That is to say it refers to the recognition of a word by a listener as being the word intended by the speaker.

4. Method

There are two separate but interrelated parts to this study. First, 20 gairaigo words, including the 18 that appeared in Eigo Note were tested for intelligibility among 26 non-Japanese speakers of other languages, first as words only and subsequently within a sentence to provide some context. The two extra words were included because none of the Eigo Note words include the vowel sound /зː/, which is one vowel sound identified by Jenkins (2000) as being potentially problematic in international communicative encounters if not used properly (see section 7 below).

Next, these 20 words were placed in a survey for first-year Japanese university students. The students were asked which of the words they thought would be unintelligible to non-Japanese speakers of English first as a word only, and then within the sentences that the non-Japanese speakers had heard. The results of each survey are included in the two sections below.

5. Intelligibility with non-Japanese listeners

The first part of this study involved recording a Japanese speaker saying each of the 20 words in a standard Japanese katakana accent. Recordings of each individual word were made, along with a separate recording of the word embedded within a representative sentence, (also spoken in a strong Japanese accent). Attempts were made to make the sentences typical examples that gave some context without giving away the meaning too easily.

For example, the representative sentence for the word camera was “I lost my camera while I was on holiday” (see Table 1 for full details of the word and sentence list). These recordings were then added into an online survey created on the website www.surveygizmo.com and this survey was sent to 30 native or near-native English speakers in eight countries. The people chosen constituted a sample of convenience in that they happened to be known to the researcher.

The first page of the survey requested that people with any experience of learning Japanese or those who had spent more than two weeks in Japan refrain from completing it. The rationale behind this was to try to avoid respondents with exposure to Japan and therefore potential knowledge or experience of Japanese English and a Japanese accent. A total of 30 people responded from New
Zealand, USA, Ireland, Australia, England, Scotland, Turkey and France. Out of this total, three responses were rejected because the respondents had spent more than two weeks in Japan and one due to experience studying Japanese. Therefore, the results of 26 responses will be discussed in this paper.

The survey format was simple. Respondents were instructed to listen to a single word once by pressing a play button. They then typed the English word they thought it was into a textbox, and they were asked to write a word even if they were not completely sure that it was the correct word.

An ideal approach would have respondents noting the certainty of their answer on a scale, but that was beyond the scope of this small-scale exploratory study. If respondents really had no idea what the word was, they were asked to write “no idea”. After doing this, they listened to a representative sentence containing the word. They again typed the word they thought they had heard into another textbox. Respondents were asked to leave their original answer as it was, even if different from their subsequent answer at sentence level. The same format was followed for each of the 20 words. At the end of the survey there were some basic questions regarding nationality, native language, age, and time spent in Japan or studying Japanese.

Of the 20 words investigated, four words, tomato, banana, guitar and piano presented no problems to any of the 26 listeners even at word-only level.

For a further four words, camera, koala, calendar, and donut, all 26 listeners could comprehend the word at sentence level (with most already understanding at word level). The words kangaroo and basketball were understood at sentence level by 86% and 92% of listeners respectively, with most also understanding at word level.

Regarding the remaining eight words from Eigo Note, two of them, gorilla and lemon could be understood by 96% of listeners at sentence level, and cabbage and soccer ball were understood at sentence level by 77% and 69% of listeners respectively. The words cake and milk were very hard for respondents to understand at word level, but context helped them to be understood by 92% of respondents after hearing the sentence.

That leaves only two words from the Eigo Note list of 18 that could potentially be problematic for intelligibility. The least surprising of these two is probably the word television, which because of its difference from the original word, (in gairaigo it is reduced to terebi), was intelligible even at sentence level to only 15% of the respondents. The most difficult word to understand turned out to be glove. Only 12% of listeners could identify it even at sentence level. Possibly this is due to the fact that it has entered into Japanese use with a different vowel sound, (the mid back rounded /o/). Also confounding the problem is that Japanese speakers perhaps pronounce the /l/ as an /r/ approximant and the /v/ as /b/.

Regarding the two extra words which include the /зː/ sound, it is perhaps not overly surprising that neither word was easy for the survey respondents to identify, with word being understood by only 4% of people at word level (although context helped it to be understood at sentence level by 96%), and first, which was understood by only 58% even at sentence level. Table 2 provides an overview of the results.

These results suggest that more than half of the 18
words that Eigo Note highlights as being an issue for intelligibility would actually cause no major communication problems for non-Japanese English speakers listening to Japanese speakers with a strong accent (and of course in a real communicative encounter, speakers could repeat and use body gestures, of which listeners in this survey did not have the luxury).

6. Beliefs of Japanese students about intelligibility

For the second part of this project, an online questionnaire created with www.surveymonkey.com was administered to 53 Japanese first year university students.

In an earlier study, I interviewed five people during which I asked the same questions (Harris, 2012b), but the small number of interviewees brings into question issues of reliability. Therefore to address this, a larger number of respondents was sought.

For the main part of the questionnaire, the 20 words under investigation were listed and students were asked if they thought that these words would be understandable to a non-Japanese speaker if spoken in a standard Japanese accent. They were then asked if these words would be understood in the context of a representative sentence, (also spoken with a Japanese accent). These sentences were the same as those used in the first part of the study.

Also included were some questions related to their feelings and opinions about gairaigo and its use in English language acquisition. As the focus of this paper is on the intelligibility of the 20 gairaigo words in question, the results of these other survey questions are not discussed in this paper. The survey was written in Japanese by the author and then edited and proofread by a native Japanese speaker.

Finally, the results from the two studies were compared to see if there is some consistency between which words are actually intelligible to non-Japanese speakers and those that Japanese speakers feel might cause problems for intelligibility.

Ideally, students should have some knowledge about what areas of pronunciation might create problems, and if the two results proved to be different, this could have ramifications for the teaching of pronunciation in Japan.

Of the 54 students surveyed, 48% had studied Japanese since junior high school and the rest had studied it since elementary school or earlier. Therefore, all had been learning English for at least six years, (although one person stated they had only learned it for three years, so perhaps did not study it at high school). However, it could be argued that this is a long enough time to gain some understanding of what constitutes intelligibility.

While some words seemed to be controversial in that half of students thought them to be unintelligible while half thought they would cause no problems, there was a high level of agreement on some words. The full list of results for both word level and sentence level are included in table 2. According to these students’ answers, the most intelligible words of the 20 were milk, which 85% of students thought would be intelligible at word level, piano (80%), first (77%), guitar (74%), soccer ball (73%), camera (72%) and lemon (71%). While the words piano and guitar were indeed understood even at word level by 100% of the non-Japanese speaking survey respondents, and camera was understood by 81% (and by 100% at word level), many of these words actually proved unintelligible to the listeners, especially at word level. The words milk and soccer ball, for example, were understood by only 8% of listeners, and lemon by only 38% when listening to the word only.

At the other end of the spectrum, the Japanese students

<table>
<thead>
<tr>
<th>Word</th>
<th>Understood at word level as a percentage (actual number out of 26 respondents in brackets)</th>
<th>Understood at sentence level as a percentage (actual number out of 26 respondents in brackets)</th>
<th>Indicated as intelligible to non-Japanese speakers at word level by Japanese students as a rounded percentage (actual number out of 83 respondents in brackets)</th>
<th>Indicated as intelligible to non-Japanese speakers at sentence level by Japanese students as a rounded percentage (actual number out of 83 respondents in brackets)</th>
</tr>
</thead>
<tbody>
<tr>
<td>tomato</td>
<td>100% (26)</td>
<td>47% (25)</td>
<td>68% (36)</td>
<td>68% (36)</td>
</tr>
<tr>
<td>banana</td>
<td>100% (26)</td>
<td>68% (36)</td>
<td>79% (42)</td>
<td>79% (42)</td>
</tr>
<tr>
<td>guitar</td>
<td>100% (26)</td>
<td>74% (39)</td>
<td>74% (39)</td>
<td>74% (39)</td>
</tr>
<tr>
<td>piano</td>
<td>100% (26)</td>
<td>79% (42)</td>
<td>62% (32)</td>
<td>62% (32)</td>
</tr>
<tr>
<td>onion</td>
<td>96% (25)</td>
<td>43% (24)</td>
<td>49% (21)</td>
<td>49% (21)</td>
</tr>
<tr>
<td>basketball</td>
<td>92% (24)</td>
<td>68% (36)</td>
<td>64% (33)</td>
<td>64% (33)</td>
</tr>
<tr>
<td>donut</td>
<td>88% (23)</td>
<td>41% (21)</td>
<td>44% (23)</td>
<td>44% (23)</td>
</tr>
<tr>
<td>calendar</td>
<td>81% (21)</td>
<td>48% (25)</td>
<td>27% (25)</td>
<td>27% (25)</td>
</tr>
<tr>
<td>camera</td>
<td>81% (21)</td>
<td>72% (38)</td>
<td>62% (32)</td>
<td>62% (32)</td>
</tr>
<tr>
<td>kangaroo</td>
<td>77% (20)</td>
<td>34% (18)</td>
<td>48% (25)</td>
<td>48% (25)</td>
</tr>
<tr>
<td>peach</td>
<td>65% (17)</td>
<td>21% (11)</td>
<td>26% (13)</td>
<td>26% (13)</td>
</tr>
<tr>
<td>lemon</td>
<td>38% (10)</td>
<td>71% (36)</td>
<td>65% (34)</td>
<td>65% (34)</td>
</tr>
<tr>
<td>cake</td>
<td>23% (6)</td>
<td>45% (23)</td>
<td>47% (25)</td>
<td>47% (25)</td>
</tr>
<tr>
<td>milk</td>
<td>8% (2)</td>
<td>24% (14)</td>
<td>34% (15)</td>
<td>34% (15)</td>
</tr>
<tr>
<td>tennis</td>
<td>8% (2)</td>
<td>15% (9)</td>
<td>29% (15)</td>
<td>29% (15)</td>
</tr>
<tr>
<td>golf</td>
<td>4% (1)</td>
<td>43% (23)</td>
<td>47% (24)</td>
<td>47% (24)</td>
</tr>
<tr>
<td>word</td>
<td>4% (1)</td>
<td>62% (32)</td>
<td>62% (32)</td>
<td>62% (32)</td>
</tr>
<tr>
<td>first</td>
<td>4% (1)</td>
<td>77% (41)</td>
<td>65% (33)</td>
<td>65% (33)</td>
</tr>
</tbody>
</table>

Table 2. Results of intelligibility of gairaigo words by non-Japanese native and near-native English speakers and beliefs of Japanese first-year university students about the intelligibility of gairaigo.
believed that the most difficult to understand words would be cabbage (only 21% of the students thought that this word would be intelligible at word level), terebi (31%), kangaroo (34%), donut (41%) and glove (43%). Indeed, the words terebi and glove proved very difficult for the non-Japanese listeners to understand (only understood by 8% and 4% of listeners respectively). However, the other words were all understood at word level by over half of the listeners, with donut the most understood (88%), followed by kangaroo (77%) and cabbage (65%).

These results tend to support the idea that Japanese students are not always aware of which areas might cause intelligibility issues and this is something that should perhaps be addressed when teaching pronunciation in Japan.

One interesting point to note is that while the non-Japanese speaking listeners were all aided by the representative sentence in understanding the word, the Japanese students in many cases appeared to believe that the sentence would hinder intelligibility. In the cases of 11 words, the percentages actually went down, indicating students thought that the word would less likely be understood within the sentence.

7. An English as a lingua franca model for pronunciation

There are now growing calls for the teaching of English in contexts such as Japan to look to an international model of English (Honna & Takeshita, 1998). One such model can be found in English as a Lingua Franca (ELF) which views English as a common international language. There are many practical applications to be found in ELF literature such as the Lingua Franca Core (LFC) proposed by Jenkins (2000), a pronunciation standard that was the result of extensive empirical research into areas of misunderstanding due to pronunciation ‘mistakes’ in international communication. Jenkins suggests that many areas traditionally thought to be important for intelligibility are actually less of a concern. For example, with consonant sounds, the LFC allows for substitutions such as /s/ and / z/ for /θ/ and /ð/, or /ı/ for the dark l /ł/. The LFC views vowel addition between consonant clusters, which is common in gairaigo, as unproblematic for successful international communication. The LFC also proposes a general rule that for vowels, quantity is more important than quality, with the exception of the /ıː/ sound.

The advantages for adopting an approach such as the LFC are manifold. Walker (2010) for example, points out a number of benefits that come from an ELF emphasis on pronunciation, some of which include; a lighter workload; increased progress and achievability; support of the speaker’s identity through accent; and the benefits that this would bring non-native speaking teachers.

The results of the surveys outlined in this paper may provide support for the adoption of such a model in Japan because issues such as additional vowel sounds between consonant compounds caused no problems for listeners, while non-use of the /ıː/ sound did.

8. Conclusion

The two surveys described in this paper view gairaigo from two different perspectives, the actual intelligibility of gairaigo among non-Japanese speakers, and the beliefs of Japanese students about which words might be unintelligible. Overall, the majority of the gairaigo presented in Eigo Note 1 as being very different to ‘native’ English were in fact easily understood by non-Japanese listeners, even when just the word was given with no sentence for context. The results also showed discrepancies between the actual intelligibility of these words and the beliefs of Japanese students as to which would be unintelligible to non-Japanese speaking listeners.

These results suggest that a new approach to the teaching of pronunciation could be necessary and also that teachers should perhaps help students to view gairaigo in a more positive light (which has previously been suggested by Daulton, 2011), which would be helpful in arming them with a powerful set of English vocabulary already in their knowledge base.

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learners’ attitudes towards English-based loanwords in Japan. The Language Teacher, 35(6), 7-12.


本稿では、英語由来の日本語(外来語)への明瞭度、理解度を試験的に調査した。異なるが、密接に関わる2つの研究結果を報告する。

まず、小学校で使用されている英語の教科書「英語ノート(文部科学省指定の小学校用テキスト)」に掲載されている外来語は、日本人訛りの英語で単語のみ、または例文の中で発音された時に、不明瞭で理解されないと記録されている。最初の研究では、日本語話者でない英語話者に対して、これらの外来語が、不明瞭で理解できないかどうかを実際に調査したものである。

2つ目の研究は、日本人の大学1年生に同じ単語を示し、日本語話者でない英語話者にとってどの単語が理解できないと思うか、というアンケートを実施した。

調査の結果は2つの事を示唆している。

ひとつは、おそらく理解されないであろうと考えられている多くの外来語への理解は、それほど困難ではないということ。もう一つは、日本人が理解されないと考えている単語とは、実際に理解されない単語との間に矛盾があるという点である。

キーワード: 相互の英語のわかりやすさ、媒介言語として
の英語、発音

2012年11月30日受理

†ハリス ジャスティン*: 日本の英語学習者による外来語の明瞭度に対する認識・感覚と、実際の国際社会での明瞭度・理解度との格差

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