Even advanced language learners (L2) face challenges with listening comprehension. Sound changes which occur when words are linked together can present difficulties for the L2 learner (Suenobu, 1990). For example, *first of all* and *you and I stay* may sound like *festival* and *United States* to L2 learners when listening to a native speaker of English. Second language learners often say that they can understand what teachers say in the classroom but have difficulty understanding native speakers in movies or when they listen to songs. It is possible that native English-speaking teachers speak slower than usual in the classroom, whereas native English speakers speak at normal speed with other native speakers. Such a dichotomy may pose obstacles for Japanese L2 learners who aim to improve their listening comprehension. It is also likely that L2 learners are not familiar with hearing English in connected speech. Dalton and Seidlhofer explain that "we do not articulate sounds in isolation, but connect them up in strings" (1994, p. 23).

This paper explores the connected speech phenomena of assimilation, elision, linking, and weakening. These sound changes often occur when native speakers speak their first language (L1) at a natural speed and thus produce challenges for L2 learners in listening comprehension.

The author conducted a listening experiment on intermediate-level Japanese learners of English. The results confirm that the L2 learners had low listening comprehension when the native speaker spoke at normal speed. Explanation of
assimilation, elision, linking, and weakening help to clarify the results of this listening study. The findings and pedagogical implications suggest that Japanese L2 learners could improve their listening comprehension through pronunciation instruction.

**What are Sound Changes?**

When native English speakers speak English at normal speed, L2 learners often hear unfamiliar sounds. These unfamiliar sounds occur because speech is not a group of mutually exclusive words but rather a continuum that does not have clear cut borderlines between individually uttered sounds (Ladefoged, 1993). Dalton and Seidlhofer explain that "our speech is a continuous stream of transitions and approximations in which the ideal positions for the articulation of individual sounds may never be reached" (1994, p. 24).

The continuum of speech sounds is what produces sound changes. Native listeners do not seem to have difficulties understanding connected speech because they integrate an immense amount of support knowledge in order to make sense of the messages they hear (Anderson & Lynch, 1988). Second language learners, on the other hand, tend to expect words to occur in mutually exclusive utterances. Temperly (1987) reports that English as a Foreign Language (EFL) students have a low awareness of linking words together. Thus, as mentioned, *first of all* may sound like *festival* to the untrained ear and will cause difficulties for second language learners (Brown, 1977).

Sound changes can be grouped into three types: assimilation, elision, and linking. Weakening, a related speech
phenomenon which produces sound changes, will also be outlined as an important subcategory.

**Assimilation**

In natural speech, native speakers tend to make adjacent sounds more like each other. Assimilation occurs when new sounds in utterances are created by a) a sound influenced by the previous sound, b) a sound influenced by the proceeding sound, c) a set of two sounds influencing each other.

When we speak at normal speed, individual sound segments follow each other so quickly that the tongue may never reach the 'ideal position' connected with a particular sound. It will only approximate to this position before it moves on to the position necessary for the next segment. The exact position of the tongue and other articulators during a segment therefore depends on where the tongue is coming from and where it is going to: it depends on the neighbouring sounds. (Dalton and Seidlhofer, 1994, p. 28)

Assimilation in English usually occurs in the sounds /t/, /d/, and /h/ when followed by a syllable or consonant /k/, /g/, /m/, or /n/. The past tense in English provides many assimilations of the sounds /t/ and /d/.

**Elision**

Elision is a sound change in which a sound is omitted altogether. Elision is defined as a loss or omission of certain segments or syllables in running speech or colloquial English (Yellop & Clark, 1990). If the articulation of a sound in normal speech is weakened too much, the sound may disappear. Elision is a common speech simplification process and can occur either in single words or in connections between two words; common consonants in English involved in elision are /t/ and /d/. Christmas and must be are two examples where elision occurs. According to Dalton and Seidlhofer, /d/ often elides
when it is preceded by a vowel but followed by a consonant such as in the example there could be (1994).

**Linking**

Linking is a sound change in which a speaker inserts a sound in order to make a smoother transition between utterances. Linking is most common when two vowel sounds meet at a word boundary. This can be exemplified with the phrases *we ought* and *you and me*. If spoken at a natural speed, the former utterance contains a /y/ sound and the latter utterance contains a /w/ sound where the vowels meet at word boundaries. *We + ought* sounds like *weyought*, and *you + and me* sounds like *youwandme*. In both cases, an extra sound occurs.

**Weakening**

Another connected speech phenomena which deserves mention here is weakening. Weakening refers to words which have various pronunciations. The word *have*, for example, has three pronunciations: [hæv], [æv], and [v]. In this example, the first pronunciation [hæv] is stressed while the others are not. The pronunciation with the stress is called the strong form whereas the others are weak forms of pronunciation (Watanabe, 1994). Articles, pronouns, relative pronouns, relative adverbs, helping verbs, prepositions, and conjunctions all have weak and strong pronunciation forms. Weakening differs from elision in that the word's pronunciation changes depending on what words precede or follow it. Watanabe (1994) has also pointed out that Japanese learners of English tend to pronounce all words in their strong forms and thus expect other speakers to do the same.
The Study

Subjects

The subjects for the study were students from two of my intermediate level Freshman English classes (N=38). All subjects reported studying English for six years. None of the subjects had lived in a country where English is the native language or had sponsored native English-speaking exchange students in their home.

Method

The subjects were divided into two groups, A and B. With group A (N=16), a native English speaker dictated 10 sentences, and the students wrote what they heard. Group B received an answer sheet with three multiple choices for each of the 10 sentences. These were read aloud by the same native English speaker. The experiments took place in a classroom under regular conditions, and the sentences were presented without context.

Results

Of the 10 sentences, I analyzed *Is there a cat in there?* for the results. In Group A, none of the subjects responded correctly, and in Group B 9% of the subjects responded correctly.

Group A

Four of the subjects wrote no answer at all for the dictated question *Is there a cat in there?* It is possible that these subjects did not completely misunderstand. Rather, it can be explained that many Japanese L2 learners will leave a complete blank in dictation if they do not catch the message as a whole.
Five of the remaining 12 subjects wrote partial responses while seven subjects wrote complete responses containing incorrect words with /l/ or /r/ sounds. These latter seven subjects who wrote complete sentences included words such as calendar, carrying, car, and card. Those subjects responding with car and card probably could not distinguish between [kard] and [kA] because of negative transfer from Japanese. In Japanese, these two sounds have close pronunciations, where card is ka-do, and car is ka-.

Four of the subjects wrote calendar in their responses. Those four subjects who heard calendar rather than cat in there probably recognized the word linking of the native speaker albeit incorrectly (Table 1).

<table>
<thead>
<tr>
<th>Subject</th>
<th>Response</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>*</td>
</tr>
<tr>
<td>2</td>
<td>Is th....there?</td>
</tr>
<tr>
<td>3</td>
<td>They are....there.</td>
</tr>
<tr>
<td>4</td>
<td>Is there a calendar?</td>
</tr>
<tr>
<td>5</td>
<td>Is there a calendar?</td>
</tr>
<tr>
<td>6</td>
<td>*</td>
</tr>
<tr>
<td>7</td>
<td>Is there carring there?</td>
</tr>
<tr>
<td>8</td>
<td>...coming there?</td>
</tr>
<tr>
<td>9</td>
<td>...the calendar?</td>
</tr>
<tr>
<td>10</td>
<td>There card in there?</td>
</tr>
<tr>
<td>11</td>
<td>*</td>
</tr>
<tr>
<td>12</td>
<td>There are carring there?</td>
</tr>
<tr>
<td>13</td>
<td>...the calendar?</td>
</tr>
<tr>
<td>14</td>
<td>There is a car in there?</td>
</tr>
<tr>
<td>15</td>
<td>Is this car in there?</td>
</tr>
<tr>
<td>16</td>
<td></td>
</tr>
</tbody>
</table>

Note: * indicates no answer.

| Group B |

I examined the responses to the same question Is there a cat in there? for the respondents in Group B. Group B chose one response from three choices. The given choices were:
A. Is there a calendar?
B. Is there a caddin there?
C. Is there a cat in there?

As shown in Table 2, 18 subjects chose A, *Is there a calendar?*; two subjects chose choice B, *Is there a caddin there?*; only two subjects correctly chose choice C, *Is there a cat in there?*.

Table 2

<table>
<thead>
<tr>
<th>Choice</th>
<th>Number of Subjects who Responded</th>
</tr>
</thead>
<tbody>
<tr>
<td>A. Is there a calendar?</td>
<td>18</td>
</tr>
<tr>
<td>B. Is there a caddin there?</td>
<td>2</td>
</tr>
<tr>
<td>C. Is there a cat in there?</td>
<td>2</td>
</tr>
</tbody>
</table>

Even with the limited choices, what would seem the obvious correct response to a native speaker, choice C, was not obvious for the Japanese L2 learners in Group B. Group B's results seem to indicate that the sound changes which occur when a native speaker speaks at normal speed present great challenges in listening comprehension for the Japanese L2 learner. The discussion below outlines some explanations of why *Is there a cat in there?* sounds like a question containing a /r/ or /l/ sound to the Japanese L2 learner.

Discussion

From the results of Group A and Group B, it can be seen that a majority of the respondents thought that there was an /l/ or /r/ sound in the latter part of the question *Is there a cat in there?* Thus, it is possible that assimilation, elision, linking, and weakening played roles in the respondents' perception of the dictated question; hence, *cat in there* was perceived as *calendar, car, carrin*, or an /r/ or /l/ derivation to many of the Japanese L2 learners.

One possible explanation of the /r/ and /l/ sounds in many of the subjects' responses is that a sound change occurs in the
connection of the words cat and in. The /t/ of cat is elided and reappears because the sound which proceeds it is a vowel /i/. The combination of the /t/ sound and the vowel sound produces an /r/ or /l/ sound in the ears of the Japanese L2 learners. Because /r/ and /l/ are homophones in Japanese, Japanese L2 learners often do not distinguish or have great difficulty distinguishing the two sounds because of negative transfer from Japanese to English.

As was noted above, EFL learners have a very low awareness of connected speech phenomena (Temperly, 1987). They expect to hear English the way that it is written, replete with word boundaries. In the case of Japanese L2 learners, many of these learners come from English language-learning backgrounds in which speaking, listening and pronunciation were less emphasized than reading and grammar translation. Wong (1987) points out that many students have "learned English through the eye rather than through the ear, resulting in the false notion that words should be pronounced the way they look on the printed page" (pp. 48-49).

**Pedagogical Implications**

The results of the study suggest that Japanese L2 learners could improve their listening comprehension if they were aware of the sound changes resulting from these connected speech phenomena. The findings also exhibit that our students do not always understand what native-speaking instructors are saying. To remedy this, instructors can a) teach listening and pronunciation strategies, or b) regularly use unconnected speech forms in the classroom. Teaching listening and pronunciation strategies could help learners expect certain sounds and would
provide students with authentic language situations. The former would also be more beneficial for students who plan to take English proficiency tests with listening sections such as the TOEFL or TOEIC. In the case of the latter, learners may have increased listening comprehension if instructors speak very slowly, not using connected speech forms in the classroom. However, this benefit addresses the learners' immediate needs in the classroom only; the use of such stilted speech does not present our students with the way English is authentically communicated.

In teaching pronunciation to students, I do not suggest that all learners should be able to speak with a particular American or British accent. Rather, the teaching of pronunciation should exist to educate students about the relationship between speaking and listening. A serious challenge for L2 learners is the comprehension problems caused by the blurring of word boundaries. If students learn to expect sound changes produced by assimilation, elision, linking, and weakening, they could possibly improve their listening comprehension. As students begin to practice connected speech forms, they begin to realize the importance of assimilation, elision, linking, and weakening for comprehensibility. Jazz chants, songs, and rhythmic pronunciation activities allow students to practice such connected speech. With an increased awareness of connected speech phenomena, learners can build up the right expectations about the kind of sound patterns they will be confronted with in normal native speech.
Conclusion

Assimilation, elision, linking, and weakening alter the sounds of words, making words differ from their pronunciation in isolation. It is likely that many L2 learners who claim that native speakers speak "very fast" or "too fast to understand" lack the phonetic information about words and their boundaries—connected speech phenomena.

This author does not suggest that learners must take on a preferred accent in English. I am suggesting, however, that teaching pronunciation in the EFL classroom will heighten L2 learners' awareness of connected speech forms and thus improve their listening comprehension.

References


