A Phonological and Prosodic Analysis of English Pronunciation by Japanese Learners

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Abstract
This study considers the pronunciation of Japanese learners of English. Its first intent is to offer a brief overview of Japanese phonological and prosodic features to highlight anticipated L1 transfer issues in spoken English output. It then explores the segmental and suprasegmental aspects of a short recorded performance by two intermediate Japanese learners of English against a sample of Received Pronunciation [RP]. Through contrastive analysis, the paper reflects on the pedagogical implications raised by the findings and makes suggestions for greater focus on three interrelated areas: prosodic skills development, awareness-raising of L1 and L2 differences, and accommodation strategies to support and enhance intelligibility. It does this from a perspective of English as an International Language [EIL] and the acknowledgment of its growing importance in global communication between non-native speakers.

Introduction
The task of making one's pronunciation patterns intelligible to others when communicating in a second language is an important, and often challenging, one. This paper explores the presence of L1 transfer in the spoken performance of two intermediate Japanese speakers of English. It begins with a brief appraisal of the phonological systems of English and Japanese to determine what segmental and suprasegmental variation is likely to exist in the learners' delivery of a short, scripted dialogue in English, compared to a standard Received Pronunciation (RP) sample. Based on analysis of these features, it makes three specific recommendations to increase learner appreciation of L1/L2 differences, develop more effective use of prosody, and frame functional intelligibility as a more achievable goal through the pursuit of strategic classroom practice and learning.

Differences between Japanese and English Sound Systems
Japanese contrasts with English, not only through its grammar, lexis, and multiple syllabaries, but also its phonology, which is limited in both the number and distribution of its sounds (Thompson, 1987). As Okada (1991) explained, standard Japanese employs fewer consonants, only five basic vowel phonemes, and no diphthongs (see Figure 1).

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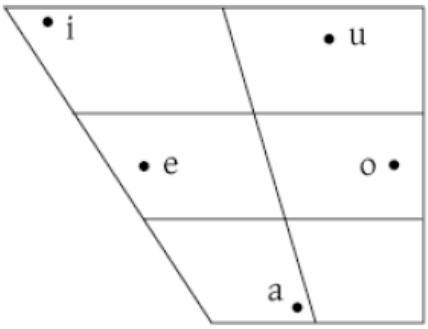


Figure 1. Vowels of standard Japanese (Okada, 1991, p. 94)

Consonants found in English but not in Japanese are notably the dental fricatives /θ/ and /ð/ and lenis labiodental fricative /v/. When speaking English, Japanese learners commonly replace /θ/ and /ð/ with either alveolar fricatives /s/ and /z/ or post-alveolar fricatives /ʃ/ and /dʒ/; while /v/ is frequently articulated as the voiced bilabial plosive /b/. The lateral approximant /l/ and the post-alveolar approximant /r/ are typically conflated and pronounced as just one sound, using the Japanese /ɾ/, which Thompson (1987) called "a flap almost like a short d" (p. 214). Other absences are /si/, /zi/, /zu/, /ti/, /tu/, /di/, and /du/, which accordingly become /ʃi/, /dʒi/, /dzu/, /tʃi/, /tsu/, /dʒi/ and /dzu/ (Shibatani, 1987). Finally, the initial glottal in /hu:/ may be articulated using a voiceless bilabial fricative /ɸ/ so as to produce /ɸu:/ or *foo* instead of *who* (Thompson, 1987). As these examples suggest, there are significant differences.

Tsujimura (1996) offered a succinct summary of the five Japanese vowels, listing them as "high front, high back, mid front, mid back, and low central" (p. 17). The high front vowel /i/ is akin to its English equivalent, although there is reduced lip spreading in Japanese. The mid front /e/ is somewhat higher than in English, while the low central vowel /a/ sits at approximately the same height, if a little further front. The Japanese mid back /o/ is near to the open-mid back rounded vowel /ɔ/, except it is higher and more front. Lastly and perhaps most strikingly, is the high back vowel, which is typically seen as being unrounded and transcribed as /ɯ/, unlike its rounded English counterpart /u/. Notably, Vance (1987) characterized this high back vowel as involving lip compression, in which "the jaws are closed, bringing the lips together vertically so that the side portions are in contact" (p. 11). However, Vance noted that this compression is present in careful speech (see also a recent ultrasound study by Nogita, Yamane, and Bird, 2013), but not in connected speech. Since the present study looks at vowels in context, the symbol /ɯ/ will be used for this Japanese high back/central unrounded vowel. In connected speech, this distinctive Japanese phoneme typically draws attention to the generally minimal jaw and lip movement of its native speakers. Such restricted facial movements may have consequences of reduced intelligibility during English communication (Thompson, 1987), as might the occasional devoicing of Japanese high vowels /i/ and /u/ to /i̥/ and /ɯ̥/ (Shibatani, 1987), as in /mɯʃi̥/ (*insect*) and /kɯ̥suri/ (*medicine*). While Japanese vowels can be of different lengths, English, and indeed Received Pronunciation, has greater variation, with seven short and five long pure vowels (see Figure 2).

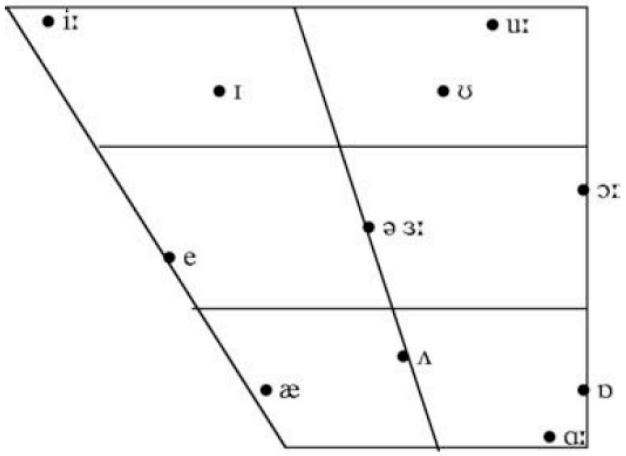


Figure 2. RP Pure Vowels (Roach, 2004, p. 242)

In addition, English utilizes eight diphthongs or gliding, double vowels. Diphthongs are noticeably absent in Japanese and always considered to be two separate sounds of equal length (Nishikiori, 2007). Roach (2009) reported that the first sound in a diphthong is both stronger and longer than the second, and hence, Japanese learners must be aware of the need to weaken diphthong endings.

Given the greater segmental variation in the target language, one might expect problems in pronouncing the full range of English vowels, as many of the required sounds are missing in Japanese (Carruthers, 2006). With their narrower range of phonetic reference, Japanese learners often rely on the vowels they are most familiar with. As Nishikiori (2007) explained, some learners may map their own L1 vowels over those of the L2, owing to an inability to readily discriminate and produce certain sounds. This can lead to comprehension difficulties. The range of a single Japanese vowel can substitute for a surprising number of separate English ones (see Figure 3) and this can hinder the speaker's ability to be understood when vowel boundaries are blurred.

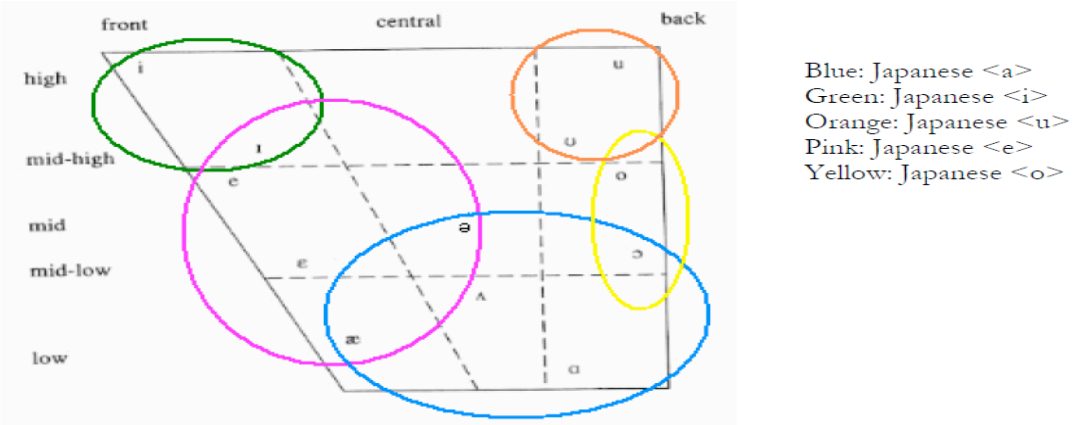


Figure 3. English Vowels with Japanese Vowel Range (Nishikiori, 2007, p. 5)

Thompson (1987) isolated several occasions when L1 transfer interferes with vowel pronunciation, and they include:

- substituting /ɔː/ and /əʊ/ with /oː/ so that *nought* and *note* are indistinguishable
- replacing /æ/ and /ʌ/ with /a/ to merge minimal pairs like *cap* and *cup*

- switching /ɜ:/ for /ɑ:/ turning *lurk* into *lark*
- ignoring schwas in favor of a pronounced /ɑ:/ so that *sister* becomes /sistɑ:/
- changing the diphthongs /eə/, /ɪə/ and /ʊə/ into /eɑ:/, /ɪɑ:/ and /ʊɑ:/ producing the likes of /ðeɑ:foɑ:/ as an approximation of *therefore*.

These tendencies are exacerbated by *gairaigo*, or words of foreign origin, that increasingly appear in the Japanese lexicon. Loanwords are reformulated using the *katakana* syllabary, a writing system that enforces rigid consonant + vowel (CV) codification for spellings. Aside from the exception of final position /n/, all words in Japanese must *end* in a vowel. This distorts original pronunciations so that consonant clusters, which are not permitted in Japanese, undergo epenthesis, and are split up by extraneous vowels to facilitate easier pronunciation, as in /mɑkɯdonɑrɯdo/ for the famous burger restaurant chain of the same name. The same is true of final position consonants, which are extended, oftentimes unintentionally (Carruthers, 2006), with insertions of /ɯ/ and /o/. This attempts to maintain standard Japanese moraic CV structure (Shibatani, 1987), and for example, would turn the pronunciation of *map* or *end* into /mapɯ/ and /endo/. Pei (1966) referred to this phenomenon as "vowel paragoge" (p. 193) while Thompson (1987) named it simply "a rounding-off vowel" (p. 214). Kaneko (2006) explained that such katakana adaptations are "based on phonetic approximation rather than a preservation of the phonological categories of the source language" (p. 58). This has ramifications for English syllable structure, as learners can find it hard to adjust their L1 inclinations (Brown, 2008).

English is a stress-timed language, in which the number of stressed syllables dictates the utterance length. By contrast, Japanese is syllable-timed, or more precisely, mora-timed, so that utterance length is determined by the number of syllables, or morae. Tomita, Yamada, and Takatsuka (2010) marked the mora as "a minimal unit of metrical time equivalent to a short syllable" (p. 376). Shibatani (1987) made the useful distinction of a syllable requiring a vowel phoneme, while a mora does not. Using the Japanese word for 'newspaper', *sinbun* (/ʃinbun/) he demonstrated the significance (p. 868). In English, *sinbun* would comprise two syllables /ʃin/ and /bun/, whereas in Japanese it is subdivided into four morae /ʃi/, /n/, /bu/, and /n/. This affects rhythm. Learner English can hence appear over-enunciated, as speakers conform to consistent Japanese patterns of moraic division (Cross, 2002).

In other suprasegmental areas, Japanese does not apply stress at a word or sentence level, and despite certain permissible contractions, does not utilize reduced forms like English does. With its mix of strong and weak forms, connected speech is therefore troublesome for Japanese learners. In situations when English speakers signal new, shared or otherwise significant information or attitudes, they use varying tonic stress and/or intonation. Japanese speakers do not. Instead, Japanese typically employs adverbials and particles (Thompson, 1987). However, Japanese does contain intonation, and like English it can indicate new topics with raised pitch levels or signify their end by lowering them. It also employs a rising tone for questions and a falling tone for statements, but beyond these general similarities, the languages do not share much common ground, prompting Thompson (1987) to warn that English suprasegmentals need to be "consciously learnt and practiced" (p. 215).

Research Questions

With an awareness of key differences between the phonological and prosodic features of Japanese and English, this paper aims to examine what elements of L1 transfer Japanese learners exhibit in comparison with a standard RP sample.

Method

Participants

The learners in this study were two Japanese females in their early 20s, who at the time of recording had both achieved IELTS Band 6, a score identifying them as "competent users" in the 2014 IELTS test takers information. At this level of proficiency, public band descriptors for the IELTS speaking test indicate that a learner who achieves Band 6:

- uses a range of pronunciation features with mixed control
- shows some effective use of features but this is not sustained
- can generally be understood throughout, though mispronunciation of individual words or sounds reduces clarity at times

(IELTS, 2014)

The RP sample was provided by two female native English speakers from the south-east of England, both in their mid-30s.

Procedure

The native English speakers were paired together to create an RP sample of an 8-line dialogue, while the Japanese learners were paired together for a separate delivery of the same dialogue in another separate reading. On each occasion, all lines for speaker A were read by one of the two participants, and all lines for speaker B were read by the other. The 8-line dialogue was as follows:

A: Did you have a good journey yesterday?
B: Not too bad, just one short delay waiting in Manchester.
A: Good. Would you like something to drink? Tea, coffee …..?
B: Tea would be lovely. Thank you.
A: It's great that we could meet today.
B: It's a real pleasure and it's not out of my way at all.
A: Oh, let me put the kettle on.
B: Yes, then we can catch up on what's been happening since last time.

The dialogue was constructed with the potential to highlight aspects of L1/L2 variation. This was anticipated in the segmental articulation of vowels (/u:/, /ʌ/, /ɒ/, and /ə/); diphthongs (/eɪ/, /aɪ/, /iə/, /aʊ/, and /əʊ/); consonants (/θ/, /ð/, and /v/); and consonant clusters (/drɪnk/, /greɪt/, and /pleʒə/). In terms of prosody, the following aspects of connected speech were also regarded as probable points of contrast: elision (of /t/ in /ˈnɒ ˈtu: bæd/, /ˈwʌn ʃɔ: ˈdɪleɪ/, and /ˈlɑ:s taɪm/); coalescent assimilation (of /ju:/ in /dɪ dʒu:/ and /wu dʒu:/); progressive assimilation of manner (on word-initial /ð/ of /ðət/ in /ˈgreɪt tət/; and of /ðə/ in /ˈput tə ˈketˌ ɒn/); and linking (of syllable-final position /r/ in /ˈpleʒə rənd/; and syllable-final position /t/ in /ə ˈtɔ:l/). Potential differences were also foreseen in: intonation (rising tones for interrogatives, falling for declaratives); pitch (high and low to indicate paralinguistic elements like emotion); and stress-timed rhythm (as opposed to syllable or mora-timed), notably in the application of tonic stress.

The learners previewed the dialogue in advance of recording to familiarize themselves with its content. A number of practice readings allowed the participants to rehearse lines, minimize hesitation or nerves, and achieve a smooth final delivery that would benefit the subsequent analysis. Their recorded performance was transcribed for comparison with the RP sample of the same dialogue.

Results

Phonetic transcriptions of the RP sample and the learners' performance are presented before examining segmental and suprasegmental features in greater detail.

British English Speakers' Performance

The following transcript provides a sample of the Received Pronunciation by the native English speakers in broad phonetic script. It includes representations of connected speech, weak and strong forms, and primary and secondary stress.

A: Did you have a good journey yesterday?
dɪ dʒu: hæv ə gʊd ˈdʒɜ:ni: jestədeɪ ||

B: Not too bad, just one short delay waiting in Manchester.
ˈnɒ ˈtu: bæd|dʒʌst ˈwʌn ʃɔ:t ˈdɪleɪ weɪtɪŋ ɪn ˈmæn˛tʃestə ||

A: Good. Would you like something to drink? Tea, coffee …..?
ˈgud || wu dʒu: ˈlaɪk sʌmθɪŋ tə ˈdrɪnk || ˈti: |ˈkɒfi: ||

B: Tea would be lovely. Thank you.
ˈti: wud bi ˈlʌvli: || ˈθæŋ kju: ||

A: It's great that we could meet today.
ɪts ˈgreɪt ðət wi kud ˈmi:t tədeɪ ||

B: It's a real pleasure and it's not out of my way at all.
ɪts ə ˈriəl ˈpleʒə rənd its ˈnɒt ˈaʊt əv maɪ ˈweɪ ə ˈtɔ:l ||

A: Oh, let me put the kettle on.
əʊ| let mi ˈput ðə ˈketļ ɒn ||

B: Yes, then we can catch up on what's been happening since last time.
jes| ˈðen wi kən ˈkætʃ ʌp ɒn ˈwɒts bin ˈhæpṇɪŋ sɪns ˈlɑ:s taɪm ||

Japanese Learners' Performance

This transcript is also in broad phonetic script and similarly details connected speech, weak and strong forms, and primary and secondary stress. Contrasts with target L2 forms and additional points of interest referred to in the analysis are highlighted.

A: Did you have a good journey yesterday?
dɪd jɯ hæv ə ˈgud ˈ**dʒɔ:rni:** ˈ**jɔ:r**stədeɪ ||

B: Not too bad, just one short delay waiting in Manchester.
nɒ ˈ**tɯ:** ˈbæd|**dʒast**ˈ**wan** ʃɔ:**r**t ˈdileɪ we**ɪdɪn** ɪn ˈmæn˛tʃestə**r** ||

A: Good. Would you like something to drink? Tea, coffee …..?
ˈgud || **wɯ dʒɯ** ˈlaɪk sʌm**sɪŋ tʊ dərɪŋk** || ˈ tiː |ˈkɒfiː ||

B: Tea would be lovely. Thank you.
ˈtiː wud bi ˈlʌvliː || ˈθeŋ **kjɯ** ||

A: It's great that we could meet today.
ɪts ˈ**gret** ˈðə ˈwi ˈkud ˈ**mit** təˈdeɪ ||

B: It's a real pleasure and it's not out of my way at all.
ɪts ə ˈ**ril** ˈpleʒ**ɜːr ænd** its nɒt ˈ**aʊd** əv maɪ ˈweɪ æ ˈ**ɔːl** ||

A: Oh, let me put the kettle on.
ɒw|ˈle mi put ˈ**ðəː** |ˈketļ ˈ**ɑːn** ||

B: Yes, then we can catch up on what's been happening since last time.
jes|ˈðen wi kən kætʃ ˈ**ʌp**|ɒn ˈ**wæts** bin ˈhæpn̩ɪŋ sɪns læs ˈ**taɪm** ||

Segmental Features

The deviation from the RP sample is relatively minor for consonants. Learner A's /sʌmsɪŋ/ in *Would you like something to drink?* reflects the absence of /θ/ in Japanese. A's inability to close the gap between /d/ and /r/ in the consonant cluster *drink*, said instead as /dərɪŋk/, was also anticipated by earlier contrastive analysis. One curious example of interference occurs in A's opening articulation of *yesterday*, beginning with a distortion of /j/ into something resembling the approximant /ɾ/, although it is hard to determine exactly what sound it is. The subsequent front vowel /e/, which would be present in RP /jestədeɪ/ is said closer to /ɔːr/, and may have adversely influenced /j/, through regressive assimilation. In both /dʒɔːrniː/ and /jɔːrstədeɪ/ the evidence of rhotic /ɾ/ perhaps indicates the impact of General American (GA) on English pronunciation taught within the Japanese secondary education system.

Generally speaking, rhotic /ɾ/ features more obviously in Learner B's delivery than A's, with /ʃɔːrt/, /ˈmænˌtʃestər/ and /pleʒɜːr/. From a pedagogical or comprehensibility perspective there is of course no reason to correct this. Another typical GA contrast is the substitution of RP's slightly open, mid back vowel /ɒ/ in words such as /dɒg/ and /kɒfiː/ for the longer vowels /ɑː/ or /ɔː/, producing /dɑːg/ or /dɔːg/ and /kɑːfiː/ or /kɔːfiː/ in GA (Roach, 2009, p. 164). Learner A's articulation of *coffee* however, here resembles RP more than GA. Other instances of GA are apparent in B's pronunciation of /t/ in *waiting*, which is spoken as /weɪdɪn/. Roach (2009) noted the American flapped /ɾ/ in instances where RP uses a slightly aspirated, plosive /t/. This recalls Thompson's (1987) description of Japanese /ɾ/ being flapped like a short /d/ and is audible in B's pronunciation of *out* in /aʊd əv maɪ ˈweɪ æ ˈɔːl/. The /æ/ vowel in /æ ˈɔːl/ is noteworthy for not being a schwa. In RP it would be uttered /ə ˈtɔːl/ (and in GA as /ə ˈdɔːl/). The strong /æ/ is acceptable if the speaker wants to add stress or a contrast, but B's delivery does not suggest this. Furthermore, the elision of /t/ might be common to London or Estuary English accents, but not RP.

Studies indicate sounds closest to the L1 inventory can cause differentiation issues because "category formation is blocked by equivalence classification" (Bohn and Flege, 1992 as cited in Ellis, 1994, p. 332). In contrast, the absence of an L1 equivalent will allow the learner to "discern the difference between the L1 and L2 sounds and show measurable

progress in production and/or perception" (Aoyama, Flege, Guion, Akahane-Yamada, & Yamada, 2004, p. 235). There is some evidence in the learners' performance to support these claims, (/θ/ excluded). As was established in the initial contrastive analysis, English vowels pose problems, and accordingly, a number of them stand out in the recording. The unrounded Japanese high back vowel /ɯ/ makes several appearances, as a long form in /nɒ ˈtɯː ˈbæd/, as well as a short form in /wɯ dʒɯ ˈlaɪk/ and /ˈθeŋ kjɯ/. The pronunciation of *thank* is marginally off as well. Perhaps it is the general Japanese feature of restricted lip and face movement that makes vowel transcription of either /e/ or /ɪ/ seem plausible for this utterance. Other vowels subject to L1 influence are detectable in /dʒast ˈwan/; the reduction of diphthong /iə/ in *real* to /rɪl/; the reduction of diphthong /eɪ/ in *great* to short vowel /e/; and the substitution of long vowel /iː/ in *meet* for short vowel /ɪ/. It is arguable whether these differences impinge comprehension. I would suggest they do not, but in extreme form, could cause problems, especially for those unaccustomed to Japanese speaking patterns.

Suprasegmental Features

Connected speech is present in the recording but not as much as the RP sample. Speaker A's opening *Did you…?* is realized as two fully enunciated words without the expected assimilation of /dɪ dʒuː/:

dɪ dʒuː hæv ə gʊd dʒɜːniː jestədeɪ || (RP)
dɪd jɯ hæv ə gud dʒɔːrniː jɔːrstədeɪ || (Learner)

However, the later offer of a drink *is* subject to appropriate assimilation with /wu dʒuː/ albeit with an unrounded high back vowel /ɯ/:

…**wu dʒuː** laɪk sʌmθɪŋ tə drɪnk || tiː | kɒfiː || (RP)
… **wɯ dʒɯ** laɪk sʌmsɪŋ tʊ dərɪŋk || tiː| kɒfiː || (L)

Weak forms of the indefinite article *a* and the complementizer *that* are both evident in:

dɪ dʒuː hæv **ə** gʊd dʒɜːniː jestədeɪ || (RP)
dɪd jɯ hæv **ə** gud dʒɔːrniː jɔːrstədeɪ || (L)

ɪts greɪt **tət** wi kud miːt tədeɪ || (RP)
ɪts gret **ðə** wi kud mit tədeɪ || (L)

Other weak forms of the indefinite article and the preposition *of* are used by Learner B, but not consistently. Whereas the conjunction *and* as well as the preposition *at* are utilized as weak forms in the RP sample, the learner opted for strong forms of both—neither of which is incorrect, but the differences are nevertheless noticeable:

ɪts **ə** riəl pleʒə r**ənd** its nɒt aʊt **əv** maɪ weɪ **ə t**ɔːl || (RP)
ɪts **ə** ril pleʒɜːr | **ænd** its nɒt aʊd **əv** maɪ weɪ **æ** ɔːl || (L)

When a further weak form is required for the infinitive in *something to drink*, the strong form is erroneously selected, which has the effect of laboring rhythm:

…wu dʒu: laɪk sʌmθɪŋ **<u>tə</u>** drɪnk || ti: | kɒfi: || (RP)
…wɯ dʒɯ laɪk sʌmsɪŋ **<u>tʊ</u>** dərɪŋk || ti:| kɒfi: || (L)

The definite article in *Let me put the kettle on* is unusually expressed as a kind of elongated, weak form:

əʊ | let mi put **<u>tə</u>** ketl ɒn || (RP)
ɒw | le mi put **<u>ðə:</u>** | ketl ɑ:n || (L)

The learner's decision to place tonic stress (here onwards indicated on all underlined syllables) is equally conspicuous for appearing on *time* in the final line of the dialogue rather than *last*:

…wɒts bin hæpnɪŋ sɪns **<u>lɑ:s</u>** taɪm || (RP)
…wæts bin hæpnɪŋ sɪns læs **<u>taɪm</u>** || (L)

Another unduly stressed word is *Manchester*, which appears to mark the location of the delay as the reason why B's journey wasn't *too bad*, rather than the low number of delays en route or even the minimal duration of the wait, which would perhaps seem more obvious:

nɒ tu: bæd | dʒʌst **<u>wʌn</u>** ʃɔ:t dɪleɪ weɪtɪŋ ɪn mæntʃestə || (RP)
nɒ tɯ: bæd | dʒast wan ʃɔ:rt dileɪ weɪdɪn ɪn **<u>mæntʃestər</u>** || (L)

Similarly, the stress on *up* in *we can catch up* is noticeably misplaced:

jes | ðen wi kən **<u>kætʃ</u>** ʌp ɒn wɒts bin hæpnɪŋ…|| (RP)
jes | ðen wi kən kætʃ **<u>ʌp</u>** | ɒn wæts bin hæpnɪŋ…|| (L)

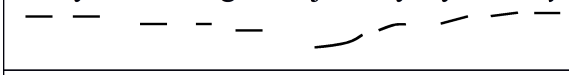
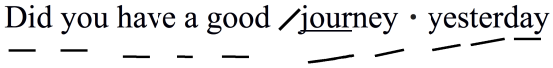
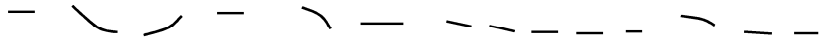
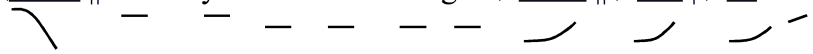
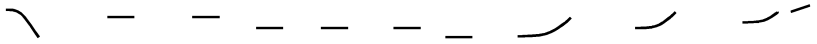
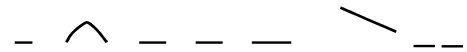
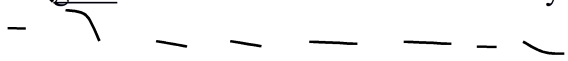
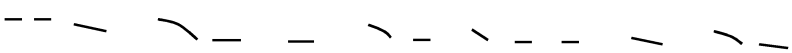
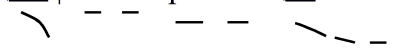
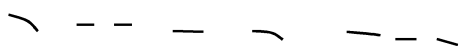
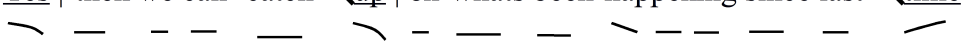
The emphasis on almost every word in this line is clearly unwarranted and makes it hard to identify the intended tonic stress in what is perhaps the least appropriately stress-timed utterance of the performance:

ɪts **<u>greɪt</u>** ðət wi kud **<u>mi:t</u>** tədeɪ || (RP)
ɪts **<u>gret</u>** **<u>ðə</u>** **<u>wi</u>** **<u>kud</u>** **<u>mit</u>** tə**<u>deɪ</u>** || (L)

Despite these differences from the native speakers' pronunciation, stress at the syllable level in the learner performance is generally acceptable, and certainly intelligible, even if tonic stress is at times wide of the mark.

Intonation is mostly appropriate, as in the definite rise for questions, and (aside from the curiosity of the very last line) a falling tone for statements. However, on the whole, the pitch of the learners' delivery is somewhat understated and lacks the range displayed in the model. Hence, the spark of genuine enthusiasm, emphasis or emotions one might expect between two people expressing delight at catching up isn't really apparent.

What follows is a representation of the tone and pitch syllables in the RP sample (RP) and learner performance (L). The transcription adopts the same symbols and indicators as used by Roach (2009). Underlined syllables are marked for carrying rise (/), fall (\ ), fall-rise (v) and rise-fall (Λ) tones; and where applicable, extra pitch height is shown by ↑ (a vertical upward arrow); while stress in the tail of tone units following on from tonic stress is marked by ˙ (a raised dot).

Did you have a good /journey · yesterday || (RP) 
Did you have a good /journey · yesterday || (L) 
ˈNot vtoo · bad | just \one short · delay waiting in · Manchester || (RP) 
Not vtoo · bad | just \one short · delay waiting in \Manchester || (L) 
↑\Good || Would you ˈlike something to /drink || /Tea | /coffee || (RP 
↑\Good || Would you ˈlike something to /drink || /Tea | /coffee || (L) 
ˈTea would be ↑\lovely || \Thank you || (RP) 
ˈTea would be ↑\lovely || \Thank you || (L) 
Its ∧great that we could · meet today || (RP) 
Its\great · that · we · could · meet to · day || (L) 
Its a ˈreal \pleasure and its \not out of my · way a\t all || (RP) 
Its a ˈreal \pleasure | and \its not · out of my · way \at · all || (L) 
\Oh | let me ˈput the \kettle on || (RP) 
\Oh | ˈlet me ˈput \the | · kettle · on || (L) 
\Yes |ˈthen we can \catch up on · whats beenˈhappening since \last time || (RP) 
Yes |ˈthen we can ˈcatch \up | onˈwhats beenˈhappening since last \time || (L) 

This is, of course, just a script reading by students rather than an actual encounter; nevertheless, non-native pronunciation is perhaps most telling through analysis of suprasegmentals. While incorrect segmentals certainly do have an impact, what is conveyed at the sentence level by inappropriate prosody seems to have the greater bearing on how (un)natural the dialogue sounds. For this reason, we may isolate those aspects as especially deserving of classroom attention. The next section looks briefly at some recommendations and teaching techniques.

Discussion and Conclusion

This paper considered the phonological and prosodic background of Japanese and its impact on L2 pronunciation in English. It has identified evidence of both segmental and suprasegmental transfer in the performance of two Japanese learners of English, and on the basis of contrastive analysis, proposed the need for greater pedagogical attention on prosody, and awareness of L1 and L2 pronunciation differences.

However, the investigation is not without its limitations. As a study with just a single pair of learners, it is difficult to make generalizations about the results beyond the immediate parties involved. Clearly, it would benefit future studies to undertake research on a larger scale with a greater number of participants. Moreover, the use of a prepared dialogue, rather than sourcing data from free-flowing, open conversation will also have influenced the quality of the segmental and suprasegmental information collected. Under the conditions of the present study, the native English speakers were far better placed to perform at a level closer to their natural sound production when reading the prescribed content of the dialogue than the Japanese participants. Given that the reading of any script is inevitably shaped by a reader's ability to deliver it naturally and meaningfully, it would be valuable to make fresh comparisons of language retrieved from natural conversation settings.

Despite these limitations, this study's advantage is its in-depth analysis of two learners' interlanguages, which reveal in detail the subtle influences of the L1. As such, the findings bear valuable implications for teaching. To coincide with the proposal to refocus pedagogical attention on prosodic skills development, final considerations arising from this study give recognition to three important and interrelated issues: firstly, the growing relevance of EIL; secondly, the value of learning pronunciation skills alongside accommodation strategies, and finally, the possibility of a future de-emphasizing of established models like RP and GA. New pronunciation standards in the future might allow for greater variation, but importantly they should not demand a near-native accent, which has been rightly challenged as an improbable, unnecessary goal (Ealing & Wong, 1983; Morley, 1991). Instead, it should place functional intelligibility at the top of its list of priorities, and accordingly, modify classroom practice to help make this a more achievable reality for Japanese learners of English.

In her study of key pronunciation components, Morley (1991) outlined four learning goals of "functional intelligibility"; "functional communicability"; "increased self-confidence"; and "speech monitoring abilities and speech modification strategies for use beyond the classroom" (p. 500). Guiding learners towards these is a wise teaching objective, and accordingly, others hit upon similar suggestions to broaden the learning scope of prosodic classroom focus. Jones (1997) is one such writer, who urged teachers to move beyond repeated phonemic drills or minimal pair contrasts alone, with greater emphasis on the communicative function of suprasegmentals in spoken discourse. Collaborative discussion of pronunciation, grounded in realistic contexts, aids the learning process by

showing how prosody operates in real-time interaction, rather than mere segmental isolation (Jones and Evans, 1995).

Along the same lines, Wennerstrom (1994) targeted intonation, noting the benefit of its introduction in the early stages of L2 development. Identifying intonational cues is viewed as crucial for negotiating turn-taking, awareness of shared information, topic management and boundary marking, and therefore, early "exposure and practice can fine tune the ear and enhance acquisition" (p. 401). These sentiments are far from new, having been expressed many years earlier by Watanabe (1977), who criticized the over-emphasis on entrance exam preparation in Japanese state education, at the expense of developing other aspects of learners' skill sets.

A similar approach was suggested by Hirschberg (2002), who recognized the value of 'chunking' language, or dividing utterances into more comprehensible units, and thereby affecting more natural speech. To raise awareness of stress and mora-timed differences, Greer and Yamauchi (2007) suggested dictation practice to encourage reflection on weak and strong forms. Doran (2009) explained the value of vowel-specific activities, in which students are tasked with identifying the number of vowels in simple phrases, with the aim of spotting unstressed forms, such as the schwa in /haʊ ə ju:/. Brown (2007, 2008) espoused the merits of haiku writing to reduce katakana influences, while Venema (2007) and Makarova (2006) praised limericks and poetry respectively, for improving awareness of connected speech and consonant clusters. Drawing attention to weak forms, unstressed vowels, and stress placement can be a novel but effective strategy.

Makarova (1997) made the interesting suggestion of "Home Discovery," or challenging students to find their own materials for class analysis that illustrate specific emotional/unemotional speech content. This could be used to raise the emotional aspect missing in the recording of the Japanese learners' performance considered here. If conducted in a supportive, non-threatening environment (Acton, 1997), the audio or video recording of student pronunciation may be particularly beneficial (Morley, 1991). Through a process of contrast and comparison against authentic material (Cross, 2002), teachers can then home in on essential prosodic features (or the absences of) and develop the self-monitoring and modification skills Morley identifies.

Finally, Jenkins (2002, 2004) called for accommodation skills to become part of the taught syllabus of pronunciation. Her focus was primarily on English as an International Language (EIL) between non-native speakers from different L1 backgrounds. Realizing how their first language influences their ability to be understood by others, (non-native or otherwise), and knowing how to modify one's speech to improve intelligibility is surely a vital skill for all foreign language learners, especially those using English as a lingua franca. In light of the growing importance of EIL, this may require a reevaluation of what constitutes a pronunciation error, and what is simply a form of acceptable variation. It may also mean the position of RP and GA models become decentralized, as new international standards reappraise core and non-core aspects of spoken English. Change within language is inevitable over time, and this must surely be accepted and accommodated by the global teaching community.

The suggestions outlined above represent a wealth of creative ideas for teaching pronunciation through meaningful and exploratory practice. Together they seem well-placed to help generate more appropriate, strategic and analytical learning. By raising awareness of phonological and prosodic differences between Japanese and English, teachers can guide learners towards a deeper and richer understanding of the target language, and may achieve

stronger learning outcomes with more intelligible output as a result. If teachers engage the full "spectrum of imitative, rehearsed, and extemporaneous speaking practice" (Morley, 1991, p. 511), they may feel rightly confident of affecting positive change, by minimizing L1 influence while maximizing more effective prosody in spoken communication (Jenkins, 1998, 2002), if their goal is to approximate native English speakers' pronunciation.

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