

Contrastive Analysis: Japanese and English

In the following paper, I will give a brief contrastive analysis of selected features of the phonological systems of English and Japanese. This contrastive analysis will serve as the basis for eight sessions of one-on-one pronunciation tutoring with a Japanese student, female, age 51. Due to the nature of this project, I will limit my contrastive analysis to only a few of the phonological aspects of the languages in comparison. Therefore, I will only focus on two consonant groups, fricatives and liquids, followed briefly by a look at vowels, and then offer a few words on stress and prominence. Within each section, I will try to predict difficulties that native speakers of Japanese might have learning English as a second language based on my comparison of English and Japanese phonology.

In performing a contrastive analysis between the phonological systems of English and Japanese, one can begin to predict the difficulties that a Japanese speaker may have in acquiring English pronunciation. My predictions concerning the difficulties that a Japanese learner of English may encounter with English phonemes are based around the idea of L1 transfer to L2. Where there are similarities in consonants and vowels, learners may not be as challenged as where there are dissimilarities. For Japanese learners of English, I will predict that they may have difficulty in pronouncing English phonemes that are nonexistent in the Japanese sound system and replace those non-existent English consonant or vowel sounds with the most similar Japanese sounds.

Consonants

Fricatives. As mentioned previously, I will only focus on a few of the difference in the consonants between English and Japanese. I first want to look at fricatives; English has nine, while Japanese has only six according to Figures 2 and 4, with only four held in common, /s/, /z/, /ʃ/, and /h/. What remains of the English fricatives that are not found in Japanese are /f/, /v/, /θ/, /ð/, and /ʒ/. These remaining phonemes may be a major source of difficulty for Japanese learners of English.

From my experience, the most frequent of these difficulties for Japanese learners of English lies in producing the /θ/ and /ð/ sounds, most likely because the tongue plays a significant part in their production. If we remove the tongue from the equation, the closest sounds in Japanese would be /s/ and /z/, respectively. In natural speech these sounds may be substituted for the unfamiliar ones, for example, the English *thank you* may be pronounced /sankyū/, *the* may be pronounced /za/, and so on.

Another common problem among Japanese speakers is the /v/ sound in English. Again, because this phoneme does not exist in Japanese, Japanese speakers may tend to substitute the phoneme /b/ for the unfamiliar /v/, i.e., /fe**b**arit/ instead of the English *favorite*.

Consonant Clustering. Consonant clusters occur much more frequently in English than in Japanese. Again, from my observations, the general CVCV pattern in Japanese is often transferred to the consonant cluster patterns in English, such that Japanese speakers may either insert vowels to break-up consonant clusters or add vowels after word-final consonants. Additional vowels such as /o/ and /u/ are likely to be inserted after consonants that occur in the final position. Some examples of vowel insertion may include:

/mɒp(u)/ for “map,” /kɑd(o)/ for “card,” and /ɒb(u)/ for “of,” where the /v/ is replaced by /b/ and /u/ is inserted in the word final position.

Liquids. The English language contains two approximants: the lateral /l/ and the retroflex /r/. English relies on the contrast of these two phonemes to distinguish between many minimal pairs in the language. On the other hand, Japanese does not have two distinct approximants. Instead, Japanese has only one, the alveolar flap /ɾ/. This phonemic distinction tends to be a problem for many Japanese speakers who are learning English. Because of this difference, Japanese speakers of English may use the Japanese liquid for both the /l/ and /r/ sounds in English. This means that the words “rice” and “lice” spoken by a Japanese speaker may sound like the same word.

Vowels

Japanese has five short vowels: /a/, /i/, /u/, /e/, and /o/. Although these vowels are somewhat similar to those in English, there are a few differences. The most obvious difference is that English contains several vowel sounds that are not found in Japanese, /ɪ/, /ɛ/, /æ/, /ə/, /ʌ/, and /ʊ/ (see Figures 1 and 3). While I won't begin to guess at how Japanese speakers may substitute these sounds for more familiar Japanese sounds, I will say that I predict /æ/ and /ɪ/ to be the most problematic from my experience with Japanese speakers.

Stress and Prominence

While no information can be gained from the phonetic inventories of English and Japanese on stress and prominence, I would, however, like to comment on a few observed differences between the two languages. For one, English is a stress-time language, while Japanese is a syllable-times language. This difference may cause ESL students trouble in

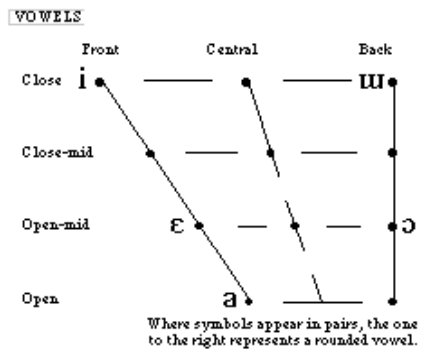
maintaining a regular rhythmic beat in English and lead to other problems with phrasing and intonation.

Figure 1 and 2

Native Phonetic Inventory: Japanese

Source: Maddieson, I. (1984).

1



2

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retrolaryx	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d			k g				
Nasal	m			n			ɲ				
Trill											
Tap or Flap				ɾ							
Fricative	ɸ			s z	ʃ ʒ		ç				h
Affricate				ts tʃ dʒ							
Lateral fricative											
Approximant							j				
Lateral approximant											

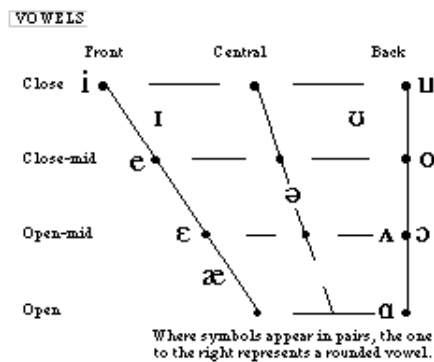
Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

Figure 3 and 4

Native Phonetic Inventory: English

Source: Ladefoged, P. (1993)

3



4

CONSONANTS (PULMONIC)

	Bilabial	Labiodental	Dental	Alveolar	Postalveolar	Retrolaryx	Palatal	Velar	Uvular	Pharyngeal	Glottal
Plosive	p b			t d			k g				
Nasal	m			n			ɲ				
Trill											
Tap or Flap											
Fricative		f v	θ ð	s z	ʃ ʒ						h
Affricate				tʃ dʒ							
Lateral fricative											
Approximant				ɹ			j				
Lateral approximant				l							

Where symbols appear in pairs, the one to the right represents a voiced consonant. Shaded areas denote articulations judged impossible.

References

Maddieson, I. (1984). *Patterns of Sounds*. Cambridge, UK: Cambridge University Press.

Ladefoged, P. (1993): *A course in phonetics*, 3rd ed., Fort Worth TX: Harcourt Brace College Publishers.