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ENGLISH LOANWORDS IN JAPANESE*
**WHY ARE THEY DIFFICULT FOR
ENGLISH-SPEAKING STUDENTS?**

HIROKO C. QUACKENBUSH

INTRODUCTION: Native speakers of Japanese are often unaware of the difficulty English-speaking students experience learning English loanwords in Japanese. The native speakers assume that English loanwords must be easy for the students, simply because these words were borrowed from English. They think that the loanwords must retain most of their original form and meaning, even after they have become a part of the Japanese lexicon. Another reason for this view is that loanwords are written in the Katakana syllabary which employs fewer than fifty symbols, in contrast to the two to three thousand complicated Chinese characters regularly used in writing Japanese other than the loanwords from Western languages. The true picture, of course, is that semantic and grammatical features undergo significant changes and rearrangements, and pronunciation is modified to the extent that the English originals are often difficult to recognize. It is true that the Katakana syllabary itself is not difficult to learn, but that does not help the students very much because the difficulty in learning English loanwords lies somewhere else. The objective of this article is to explore the reasons why English loanwords in Japanese are difficult for English-speaking students.

In SECTION I, I shall consider the nature of the difficulty caused by non-uniformity in the process of borrowing, and in certain cases, of creating loanwords. In SECTION II, I shall explain the difficulty in terms of the complexity of the Japanization rules, which native speakers possess as a part of their linguistic competence, and non-native speakers must acquire as an

important skill. In SECTION III, I shall analyse the difficulty viewed from the aspects of production and recognition of loanwords primarily in written forms. Throughout the paper my primary concern will be the formal changes between the English words and their corresponding Japanese forms. Equally interesting problems involving semantic features of loanwords, such as 'specialization', 'widening', or transformation of various semantic features, will be left aside in this paper.

SECTION I. Non-uniformity in the Japanization Process.

There is a significant number of loanwords in Japanese which cannot be economically described by a set of rules because of the variety of means by which the loanwords have been borrowed. Some of the more significant factors which have determined the Japanization process are listed below:

(a) Reflecting the attitude of the time toward loanwords, different sets of rules were applied to loanwords at different periods. For example, when 'truck' was first borrowed it came into the language as /toroQko/, and later /toraQku/ was adopted. This latter Japanese form reflects the greater present-day effort to imitate English sounds more accurately.

(b) Some words came in primarily through the oral medium: /o:rai/ all right; /papuko:N/ popcorn; while others were introduced through the written medium: /haNma:/ hammer; /rajiø/ radio; /raberu/ label.

(c) Some loanwords have their Japanese forms based on American English rather than British: /saQka:/ soccer; /kakuteru/ cocktail; /naNseNsu/ nonsense.

(d) Some words have been truncated: /depa:to/ *department-store*; /suto/ *strike*; /infure/ *inflation*; /nisu/ *varnish*; /ero dakušoN/ *erotic production*; /masu komi/ *mass communication*.

(e) Abbreviations are common: /jaru/ Japan Air Lines; /o:eru/ office lady.

(f) There are many blends which combine English with native Japanese elements: /toNkatsu/ < /toN/ pig + /katsu/ cutlet; /deNki sutaNdo/ < /deNki/ electricity + /sutaNdo/ stand = floor lamp; /demoru/ /demo/ demonstrate + /ru/ (Japanese verb inflection).

(g) Some words came to have variant forms. In many cases the differences were due to the kinds of loan phonology, one being conservative and the other, innovative: /çi:mu~ti:mu/ team; /iNki~iNku/ ink; /bode:~bodi:/ body.¹

(h) When there are alternative forms, the situation is further complicated by disagreements among the guidelines given to the public. For example, the Japanese Language Council and N.H.K. (Japan Broadcasting Corporation) recommend different forms:

	veil	raincoat	aluminium
Japanese Language Council	<i>be:ru</i>	<i>re:Nko:to</i>	<i>aruminiumu</i>
N.H.K.	<i>ve:ru</i>	<i>reiNko:to</i>	<i>aruminyu:mu</i>

(i) There are some "made-in-Japan" English loanwords, for example, /naita:/ < night + er = night-time baseball game; /bijinesu hoteru/ < business hotel = hotel used by businessmen during their business trips; /romaNsu ka:/ < romance + car = train or bus with double seats.

These are, then, examples of various types of loanwords which, because of their non-uniform manner of adaptation to Japanese, cannot be described by productive rules which apply to present-day borrowings. Therefore students must learn these loanwords as individual items just as when they learn native Japanese vocabulary.

SECTION II. Some Japanization Rules.

As shown in Section I, the process of adaptation of English words to Japanese is by no means completely uniform. However, the bulk of the borrowings tend to follow certain general rules. In other words, the majority of educated native speakers of Japanese would produce the same Japanized form of a totally new English word, especially when both its pronunciation and spelling are given. The rules which are discussed in this section are some of the most basic and general rules which are currently productive. The aim of this section is to illustrate that these rules are fairly simple in their basic forms, but must be modified into a more complex set in order to take care of the details. The learning difficulty is increased by the fact that these rules are not stated solely in terms of phonological changes; consideration of spelling and conservative *vs.* innovative phonology must also be taken into account, making the students' task of internalizing these rules a major problem.

1. Syllable Restructuring:

When English words enter Japanese, the most significant thing which takes place is the restructuring of the English words in terms of Japanese syllable structure. Incoming English words are made to conform to the following permissible syllables in Japanese:

- | | |
|--------------------|--------------------------------|
| 1. Short syllables | 2. Long syllables ² |
| a. V | a. V: |
| b. CV | b. CV: |
| c. VN | c. V:N |
| d. CVN | d. CV:N |
| e. VQ (CV) | e. V:Q |
| f. CVQ (CV) | f. CV:Q |

These Japanese syllables in turn consist of the following types of mora which serve as a unit of length

and as the basis for the Katakana orthography.

		Katakana symbols
a.	V consisting of vowel alone	ア イ ウ エ オ
b.	CV consisting of consonant plus vowel	カ キャ etc.
c.	N mora nasal	ン
d.	Q mora obstruent	ッ
e.	: vowel length	—

The syllables ending in the mora obstruent /Q/ must always be followed by a syllable which has an initial consonant. Otherwise all other syllables listed above can occur alone or in any combination to form Japanese words, allowing only two kinds of consonant cluster /NC/ and /QC/.

Examples are given below in order to illustrate how one-syllable English words are made to conform to the basically open syllable structure of Japanese. The spaces are inserted to indicate mora divisions.

Short Syllable Words:

		Japanese	English
CVC →	CVCV	<i>pa su</i>	pass
	CVN	<i>pe N</i>	pen
	CVQC	<i>pe Q to</i>	pet
CCVC →	CVCVCV	<i>su ri ru</i>	thrill
	CVCVN	<i>pu ra N</i>	plan
	CVCVQC	<i>su te Q pu</i>	step
CCCVC →	CVCVCVCV	<i>su to re su</i>	stress
	CVCVCVNCV	<i>su pu ri N gu</i>	spring
	CVCVCVQC	<i>su to ri Q pu</i>	strip

CVCC	→	CVCVCV	<i>te su to</i>	test
		CVNCV	<i>ha N do</i>	hand
		CVQCVCV	<i>mi Q ku su</i>	mix
CVCCC	→	CVCVCVCV	<i>te ki su to</i>	text
CCVCC	→	CVCVCVCV	<i>to ra bu ru</i>	trouble
		CVCVNCV	<i>fu re N do</i>	friend
		CVCVQCVCV	<i>su ra Q ku su</i>	slacks
CCCVCC	→	CVCVCVCVCV	<i>su ku ri pu to</i>	script
		CVCVCVNCV	<i>su pu ri N to</i>	sprint
CCVCCC		CVCVNCVCV	<i>su fi N ku su</i>	sphinx

Long Syllable Words:

		Japanese	English	
$\bar{C}\bar{V}$	→	CV:	<i>ki :</i>	key
$\bar{V}\bar{C}$	→	V:CV	<i>o : ru</i>	all
$\bar{C}\bar{V}\bar{C}$	→	V:CV	<i>u : ru</i>	wool
		CV:N	<i>to : N</i>	tone
$\bar{C}\bar{C}\bar{V}\bar{C}$	→	CVCV:CV	<i>su ke : to</i>	skate
		CVCV:N	<i>ku ri : N</i>	clean
$\bar{C}\bar{C}\bar{C}\bar{V}\bar{C}$	→	CVCVCV:CV	<i>su to ri : to</i>	street
		CVCVCV:N	<i>su ku ri : N</i>	screen
$\bar{C}\bar{V}\bar{C}\bar{C}$	→	CV:CVCV	<i>to : su to</i>	toast
		CV:CVN	<i>ši : zu N</i>	season

In order to account for the process of adaptation to Japanese syllable structure as shown above, we need at

least the following four groups of rules: (1) nasal rules, (2) consonant gemination rules, (3) vowel insertion rules and (4) glide syllabification rules. (The rules are informal and stated in most general forms.)

(1) NASAL RULES:

A. Nasal Rule (preconsonantal):

$$[+ \text{nasal}] \rightarrow N/_C$$

When English words enter Japanese, the preconsonantal nasals /m, n, ŋ/_E are interpreted as allophones of the mora nasal /N/_J.

English	Japanese
lamp	<i>raNpu</i>
tent	<i>teNto</i>
trunk	<i>toraNku</i>
lens	<i>reNzu</i>

B. Nasal Rule (word-final):

$$\begin{bmatrix} n \\ \eta \end{bmatrix} \rightarrow \begin{bmatrix} N \\ Ng \end{bmatrix} \quad /_ \#$$

A somewhat different rule applies in the case of word-final nasals. /m/_E remains as /m/_J while /n/_E is interpreted as /N/_J, and probably owing to the spelling /ŋ/_E becomes /N_g/_J.

English	Japanese
ham	<i>hamu</i>
pen	<i>peN</i>
king	<i>kiNgu</i>

Important exceptions are /piNpoN/_J = ping-pong, /hoNkoN/_J = Hong Kong, etc.

(2) CONSONANT GEMINATION RULES:

VC → VQC

Certain consonants in some English words undergo gemination. This rule together with the vowel insertion rule, which will follow, changes the VC syllable pattern of English words to the VQCV pattern of the Japanese syllables. In the following discussion, gemination rules applicable to one-syllable words are considered.

A. Gemination in one-syllable words with single final consonant.

VC# → VQC#

In the most general form of this rule, the vowel is one of the short vowels /I, ε, æ, ʌ, a, ɔ, u/_E, and the consonant (after the vowel) is an obstruent except the continuents /s, z, θ, ð/.

	English	Japanese
I	bit	biQto
ε	set	seQto
æ	bat	baQto
ʌ	cut	kaQto
a*	hot	hoQto
ɔ	hot	hoQto
u	foot	fuQto
p	tip	ʧiQpu
t	mit	miQto
k	kick	kiQku
b	Bob	boQbu

d	bed	<i>beQdo</i>
g	bag	<i>baQgu</i>
ʃ	rush	<i>raQʃu</i>
č	touch	<i>taQči</i>
ʝ	badge	<i>baQʝi</i>
s	bus	<i>basu</i>
z	Liz	<i>rizu</i>
θ	bath	<i>basu</i>

* American pronunciation of orthographic o

- B. Gemination in one-syllable words with final consonant clusters.

VCC# → VQCC#

In the case of word-final consonant clusters, an obstruent which is followed only by a nasal or a liquid or /s/_E is geminated, but not such sequences as *st* and *sk* as in *test* or *task*.

	English	Japanese
pn	happen	<i>haQpuN</i>
pl	couple	<i>kaQpuru</i>
ps	chips	<i>čiQpusu</i>
tl	little	<i>riQtoru</i>
kl	tackle	<i>taQkuru</i>
ks	box	<i>boQkusu</i>
sn	lesson	<i>reQsuN</i>
sl	hustle	<i>haQsuru</i>

- C. Geminate Devoicing Rule (applies only in conservative phonology).

c → [- voice] /Q_

Voiced geminate consonants are an illegal surface form in native Japanese. Therefore the devoicing rule is applied to the derivation of the consonant gemination rule. Devoicing regularly applied to early loanwords, but in innovative loanword phonology this devoicing rule does not apply. Alternative forms--one with voiced geminates and one with voiceless geminates--are often found as shown below:

	Japanese	
English	Innovative	Conservative
bag	<i>baQgu</i>	<i>baQku</i>
badge	<i>baQʝi</i>	<i>baQči</i>
bulldog	<i>burudoQgu</i>	<i>burudoQku</i>

(3) VOWEL INSERTION RULES:

$$A. \quad \emptyset \rightarrow V/C_ \left\{ \begin{array}{c} \# \\ C \end{array} \right\}$$

In order to conform to the basic CV pattern of Japanese syllable structure, a vowel is added to every consonant except nasals (see Nasal Rule, above) when the consonant is not already followed by a vowel.

The vowel inserted is the high back vowel /u/ in most cases. However, after dentals /t, d/ the vowel is /o/, and after palatal affricates /č, ʝ/ the vowel is /i/. Therefore the basic rule above has to be modified as A(i), A(ii), A(iii) and applied in that order.

$$\begin{array}{l}
 A. \quad (i) \quad \emptyset \rightarrow o / \begin{array}{c} t \\ d \end{array} _ \left\{ \begin{array}{c} \# \\ C \end{array} \right\} \\
 \quad \quad (ii) \quad \emptyset \rightarrow i / \begin{array}{c} \check{c} \\ \check{j} \end{array} _ \left\{ \begin{array}{c} \# \\ C \end{array} \right\} \\
 \quad \quad (iii) \quad \emptyset \rightarrow u / C _ \left\{ \begin{array}{c} \# \\ C \end{array} \right\}
 \end{array}$$

t > to	trick > <i>toriQku</i>	pocket > <i>pokeQto</i>
d > do	dry > <i>dorai</i>	ride > <i>raido</i>
č > č <i>i</i>		bench > <i>beNč<i>i</i></i>
ř > ř <i>i</i>		change > <i>č<i>e</i>Nř<i>i</i></i>

There are a fair number of exceptions to the modified rule: Many words have /tsu/ rather than the expected /to/.

tree	<i>tsuri:</i>	suit	<i>su:tsu</i>
tour	<i>tsua:</i>	bucket	<i>baketsu</i>
two	<i>tsu:</i>	cutlet	<i>katsuretsu</i>

In certain loanwords the vowel /i/ rather than the expected /u/ is added after the velar stops and the palatal sibilants.

	Innovative	Conservative
ink	<i>iNku</i>	<i>iNki</i>
cake		<i>ke:ki</i>
text	<i>tekusuto</i>	<i>tekisuto</i>
squash	<i>sukaQš<i>u</i></i>	<i>sukaQš<i>i</i></i>
brush	<i>braQš<i>u</i></i>	<i>braš<i>i</i></i>

(4) GLIDE SYLLABIFICATION RULES:

Glide → [+ vocalic] /_V

In Japanese the glides have restricted distributions: /w/ occurs only before /a/, and /y/ occurs only before /a, o, u/. Therefore the glides in English words before the vowels, whose Japanese equivalents are other than the ones mentioned above, are either (i) deleted as in the case of /w/ before /u/_J or /y/ before /i/_J, or (ii) syllabified as in the cases of /w/ before /i, e, o/_J and /y/ before /e/_J. The application of these rules follows the vowel transfer rules. (See (5): VOWEL TRANSFER RULES.)

A. Glide Deletion Rule:

$$\begin{bmatrix} w \\ y \end{bmatrix} \rightarrow \phi / _ - \begin{bmatrix} u \\ i \end{bmatrix}$$

B. Glide Vocalization Rule:

- (i) w → u/_ except before /a/
 (ii) y → i/_e

English	Japanese	English	Japanese
watt	waQto	young	yaNgu
wit	uiQto	yeast	i:suto
wood	uQdo	youth	yu:su
wet	ueQto	yellow	iero:
water	uo:ta:	yoke	yo:ku

2. Segment Transfer:

In addition to the four groups of rules which convert English words to the Japanese syllable structure, we need two other groups of rules which make English words conform to Japanese segmental phonology. One group of rules converts English vowels to Japanese vowels, and another group of rules converts English consonants to Japanese consonants.

(5) VOWEL TRANSFER RULES:

A. /V/_E → /V/_J

Since Japanese has a five-vowel system, and vowel length is phonemic, English vowels are interpreted as one of the short vowels /i, e, a, o, u/ or the long vowels /i:, e:, a:, o:, u:/ or sequences of these vowels.

Short Vowels

	English	Japanese
I > i	gin	ʃiN
ɛ > e	pet	peQto
æ } > a	pat	paQto
ʌ }	lunch	raNʃi
a } > o	hot	hoQto
ɔ }	hot	hoQto
u > u	foot	fuQto

Long Vowels

i > i:	green	guri:N
e > e:	mate	me:to
ə } > a:	circus	sa:kasu
ar }	bar	ba:
ɔr }	fork	fo:ku
ɔ: } > o:	ball	bo:ru
o }	boat	bo:to
u > u:	boots	bu:tsu

Diphthongs

aI > ai	ice	aisu
aU > au	now	nau
ɔI > oi	oil	oiru

B. Palatalization of Velars:

The important feature about /æ/ɛ is that it palatalizes the preceding velar stops /k, g/ before it is interpreted as /a/ɟ. Most English words having the /-kæ C-/ sequence become /-kyaC-/ in Japanese. On the other hand there

are a fair number of words to which this rule does not apply.

English	Japanese	
catalogue	<i>katarogu</i>	
calendar	<i>kareNda:</i>	
catholic	<i>kasoriQku</i>	<i>kyasoriQku</i>
camera	<i>kamera</i>	<i>kyamera</i>
canvas	<i>kaNbasu</i>	<i>kyaNbasu</i>
catch		<i>kyaQči</i>
gang		<i>gyaNgu</i>
gap		<i>gyaQpu</i>
gasoline	<i>gasoriN</i>	
gas	<i>gasu</i>	
gallon	<i>garoN</i>	

C. English Unstressed Vowels:

While most English vowels are substituted by the "closest Japanese sound", in the case of the unstressed vowels it is the spelling rather than the sound which is the primary determinant for the substitution. As shown in the following examples, orthographic *i*, *e*, *o* are replaced by Japanese /i, e, o/ respectively.

	English	Japanese
i	tennis	<i>tenisu</i>
	alibi	<i>aribai</i>
	gossip	<i>gošiqpu</i>
e	television	<i>terebi</i>
	camera	<i>kamera</i>
	Allen	<i>areN</i>

o	gasoline	<i>gasoriN</i>
	nation	<i>ne:šoN</i>
	Nixon	<i>nikusoN</i>
	mascot	<i>masukoQto</i>

(6) CONSONANT TRANSFER RULES:

A. Some of the English consonants "merge" and are replaced by a single Japanese consonant.

/s, θ/	>	/s/	slow	throw
/z, ð/	>	/z/	buzzer	gather
/l, r/	>	/r/	lice	rice
/j, ž/	>	/j/	page	beige

B. Some English consonants are replaced by Japanese sounds in distributions which are limited to loanwords. English /f/_E is replaced by Japanese /f/_J which is phonetically a bilabial fricative [ɸ]. In native Japanese this sound [ɸ] occurs as an allophone of /h/ only before /u/.³

English	Japanese
fan	<i>faN</i>
feet	<i>fi:to</i>
fool	<i>fu:ru</i>
felt	<i>feruto</i>
four	<i>foa</i>

C. English //v/_E is usually replaced by Japanese /b/_J [b] in conservative phonology, while Japanese /v/_J [b] is more frequent in innovative phonology. Therefore the application of this rule is an optional rule in loanword phonology as a whole.⁴

/v/_E → /b/_J

	Innovative	Conservative
Venus	<i>vi:nasu</i>	<i>bi:nasu</i>
viola	<i>viora</i>	<i>biora</i>
video	<i>video</i>	<i>bideo</i>
curve	<i>ka:vu</i>	<i>ka:bu</i>
serve	<i>sa:vu</i>	<i>sa:bu</i>

D. The native phonotactic rules apply to some CV sequences which are illegal in the native system. These rules, however, are often waived in the phonology of more innovative speech.

	Innovative	Conservative	
ti	<i>ti:mu</i>	<i>či:mu</i>	team
tu	<i>tu:</i>	<i>tsu:</i>	two
si	<i>si:</i>	<i>ši:</i>	sea
še	<i>še:ku</i>	<i>se:ki</i>	(milk) shake
di	<i>di:zeru</i>	<i>ji:zeru</i>	diesel
	<i>bodi:</i>	<i>bode:</i>	body
du	<i>du:</i>	<i>dzu:</i>	do
zi	<i>ziQpa:</i>	<i>jiQpa:</i>	zipper
je	<i>jeQto</i>	<i>zeQto</i>	jet

E. The rest of the English consonants after the applications of the above rules, are replaced by their Japanese equivalents on a one-to-one correspondence basis.

/ p t k b d g m n s z h / _E
↓
/ p t k b d g m n s z h / _J

SECTION III. Production and Recognition.

Sequences of Katakana symbols and sequences of Japanese sounds are essentially isomorphic in their relationship to each other; each of the Katakana symbols and a few combinations of them stand for certain moras. Therefore neither the operation of assigning Katakana symbols to moras, nor the operation of rewriting Katakana symbols back into moras causes much trouble.

ri : da : ċi : ku ba Q ku

リ - タ - チ - ク バ ッ ク

However, between the production and recognition of loanwords there is a considerable difference in the nature and also in the degree of difficulty in each of the operations.

If the process of the production of loanwords is regarded as the application of Japanization rules to English words, then the process of loanword recognition can be regarded as the reversal of the production process, i.e., the application of Japanization rules in reverse. What is involved in each operation is explained and the difficulty in each operation is examined in the following discussion.

1. Production of Japanized Forms:

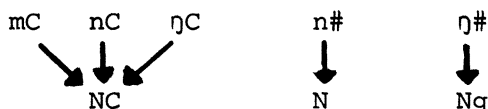
For the production of English loanwords from English originals, the student must be able to reproduce the Japanized forms from memory, especially if the words are irregular ones as shown in Section I. If he does not know the loanwords, he must apply the Japanization rules to the English originals. He will succeed in producing correct forms only when particular English words follow the currently productive rules. As shown in Section II, the rules themselves are complicated, especially because of modifications which were made on the basic rules in order to take care of small, but nevertheless important, groups of words. The application of the rules is difficult sometimes because of the optionality of certain rules which results in creating doublets and alternative forms, some of which are not in actual use.⁵

2. Recognition of English Originals:

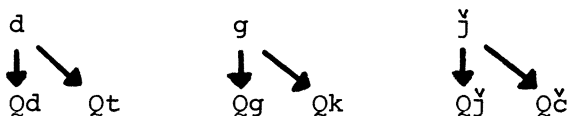
Recovery of English originals is much more complicated and difficult than the production process. This is because of the following reason: most of the Japanization rules in Section II are in the direction of convergence. For example, the phonemic distinction between the liquids /l/_E and /r/_E is neutralized, and both become /r/_J in Japanese. Given the Japanese /r/_J the recovery process is divergent in nature. English phonemes cannot be uniquely recoverable from the Japanese /r/_J.

More specifically, the rules in Section II produce the following Japanese segments, or sequences of segments: The arrow indicates the direction of changes brought about by the rules.

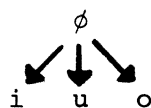
(1) Nasal Rules:



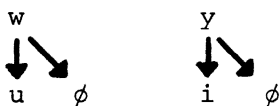
(2) Gemination Rules:



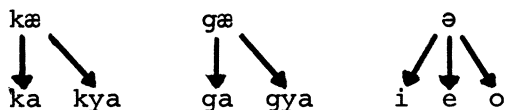
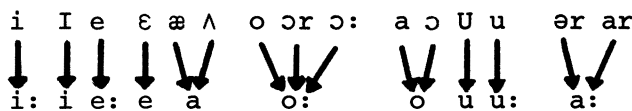
(3) Vowel Insertion Rules:



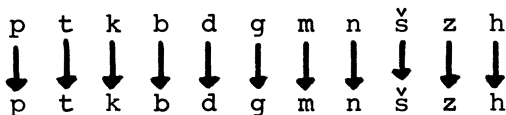
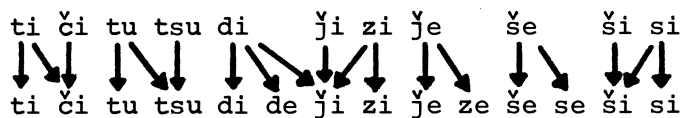
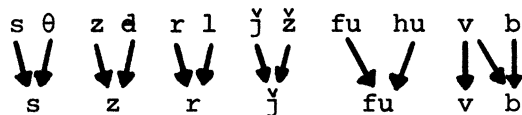
(4) Glide Syllabification Rules:



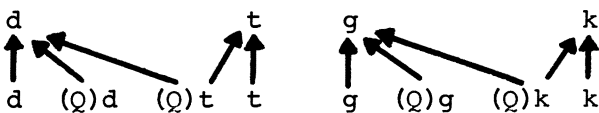
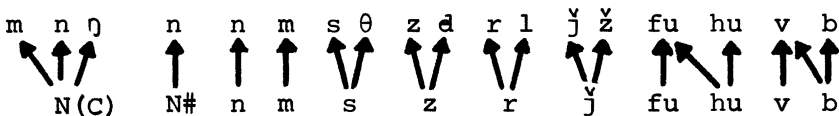
(5) Vowel Transfer Rules:

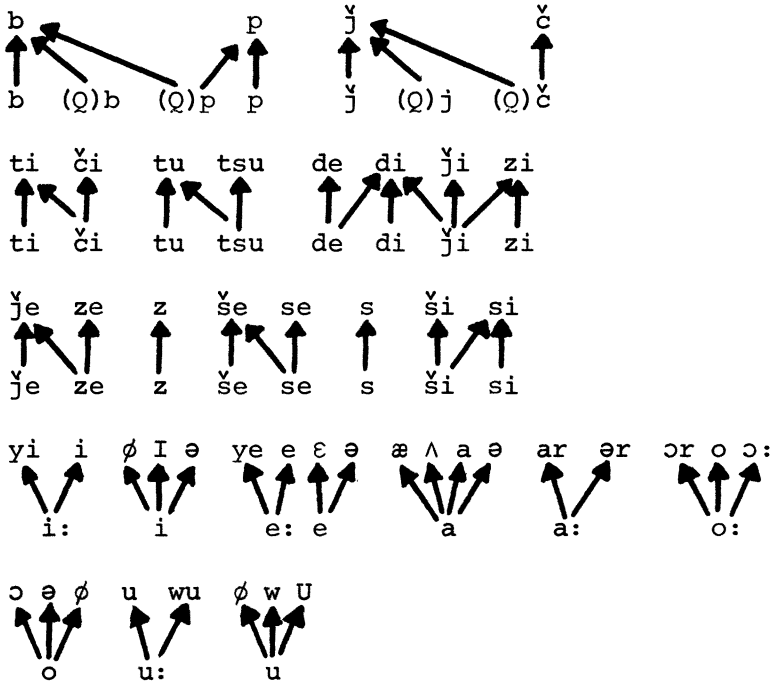


(6) Consonant Transfer Rules:



When the student wants to derive English segments or sequences of segments from Japanese he will face the following alternatives: Notice that this is a much more complicated operation than applying rules to English to derive Japanese forms.



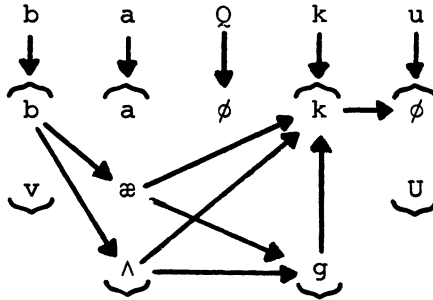


Given the English words *bag*, *bug*, *back* and *buck*, they all become /baQku/J. The student could produce the correct Japanese form if he applied the Japanization rules correctly.

	bag	back	bug	buck	
	/b æ g	bæ k	bΛ g	bΛ k/	English
	Q	Q	Q	Q	gemination
	k	k	k	k	devoicing
	u	u	u	u	V. insertion
	a	a	a	a	V. Transfer
	b	b	b	b	C. Transfer
	/baQku	baQku	baQku	baQku/	Japanese

However, given the Japanese form /baQku/, theoretically 32 different sequences of segments are possible, although ultimately reverse derivations will lead to

only a few alternatives. Among them are *bag*, *bug*, *back* and *buck*. Since the rules do not help dissolve the ambiguities, the student must decide, using other criteria, which one of the four possibilities the Japanese loanword came from.



Many examples of this type are easy to find.

- /paQto/ *pat, pot, pad, pod, putt*
- /raNpu/ *lamp, lump, ramp, rump*
- /basu/ *bath, bus, bass*

Let us take another example. This time the English original is a compound - "volley ball". First let us examine how the expression became /bāre: bo:ru/_J.

Since the game of volley ball was introduced to Japan as an American sport, the American pronunciation for the vowel for the first syllable was adopted as the source and the Japanese /a/_J was provided as the substitute. (This practice contrasts with the British vowel /ɔ/ which is the basis for the pronunciation of 'volley' as used in the game of tennis where the Japanized form is /bore:/.) The Japanese assigned /re:/_J rather than /ri:/_J for the sound of the second syllable. This is presumably the spelling pronunciation given to such words as honey = /hane:/_J, money = /mane:/_J and Stanley = /sutaNre:/_J.

The /ɔ/ in ball was interpreted as the long vowel /o:/, the vowel /u/_J was inserted by the vowel insertion rule. /l/_E in both volley and ball became /r/_J. The pitch accent replaced the stress accent of English. This

the paragodic /u/_J, the native phonotactic rule eliminates the possibility of the word-final /U/_E, since there is no word-final /U/ in English.

After searching for possible sound combinations, one can get several different possibilities. For the first word /bare:/_J an English source might be any one of *ballet*, *valley*, *volley*, or even *Barry* or *barley*, if one relaxed the Japonization rules. The possible English sources for the second word /bo:ru/_J are *ball*, *bowl* and *vole*. See below:

/b a l e/	ballet	/b ɔ: l/	ball
/v æ l I/	valley	/b o l/	bowl
/v a l I/	volley	/v o l/	vole
	Barry		
	barley		

Again, contextual constraints of English help decide the right combination as *volley ball*. Nevertheless, even with the contextual clues, mistakes can occur and the procedure is time-consuming.

CONCLUSION: By examining

- (a) the nature of the borrowing of English words by Japanese,
- (b) a few of the internalized rules which native speakers use to adapt English words, and
- (c) the problems inherent in trying to deduce the English original from the Japanese borrowing,

I have pointed out some of the problems faced by native speakers of English in learning Japanese words which were originally part of their language.

My concluding remark is, then, that since English loanwords are difficult and complicated for English-speaking students, those who teach Japanese should

consider devising more systematic methods of presenting loanwords to students. Some basic understanding of the nature of borrowing should be given to students. Exercises in rewriting English words in Japanized forms or in identifying the English source should perhaps be more carefully planned in order to reduce the students' major burden in learning English loanwords.

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NOTES:

* This is an expanded version of a paper originally presented at the Eighth Congress of the Linguistic Society of Australia, 26th - 28th August, 1976, held at the University of Adelaide. In this paper I have used the following notations:

/X/_E ... X is an English segment in a broad phonetic notation.

/X/_J ... X is a Japanese segment which is ready to be rewritten by Katakana syllabary.

The subscripts E and J are omitted when redundant.

1. I have used these terms rather loosely: innovative phonology tends to adopt many of the features which do not exist in the phonology of the native vocabulary, while conservative phonology adheres more closely to the restrictions of the phonology of the native vocabulary.

2. The syllable patterns V:Q and CV:Q are rare; they occur mainly in onomatopoeic (*gisei*) and impressionistic (*gitai*) words, e.g., /hi:Qto/ a scream, /so:Qto/ quietly.

3. e.g., [puku] for /huku/ to blow, but [haku] for /haku/ to wear.

4. Although in the innovative phonology the distinction is made between /b/ and /v/, and these are represented by different Katakana symbols, the actual pronunciation is not necessarily clearly differentiated by Japanese people.

5. e.g., /beQdo ~ beQto/ *bed*, but /heQdo ~ *heQto/ *head*.

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