On the Syllabification of English Intervocalic Glides[1]

Takeshi YAMAMOTO

1. Introduction— Why *Toy.ota*?

This is not a slogan of a Japanese car company, of course, but was my motive for this study; an astute reader might have noticed that it was, without missing the underlined *y* and the period that indicates a syllable break.[2]   Although an English-speaking person might have felt nothing particular, I, as a native speaker of Japanese, thought it weird when I happened to find the trademark in Wells (1990; henceforth *LPD*) and saw the difference of its syllabification between English and the source language.

(1.1) Toy̲.'ota   ← *Jpn.* To.yota
       [tɔɪ̯.'oɡ̊ɾə]³   [tó.jòtè̜]

The point lies in the fact that the syllable onset glide [j] in Japanese has been changed into part of the English diphthong [ɔɪ̯], and this can be regarded, for the reason explained immediately below, as the problem of the syllabification of intervocalic glides.

The two glides of English, [j] and [w], appear only syllable-initially and, therefore, together with their phonetic similarities, can be considered positional allophones of nonsyllabic /i/ and /u/ respectively.

(1.2) [j, ɪ̯] = /i̯/; [w, ʊ̯] = /u̯/

(1.3) 'yea, 'wow
       ['jeɪ̯] ['wæʊ̯]
       /'i̯ei̯/ /'u̯au̯/

The phonemes /i, u/ are realized as [j, w] at syllable onsets and as [ɪ, ʊ] in syllable rhymes.[4]   This phenomenon is comparable with such well-known alternations as these:[5]

(1.4) ˈpep,   ˈtat,   ˈkick;   ˈlull, ˈrear

[ˈpʰɛʔp̚] [ˈtʰæʔt̚] [ˈkʰɪʔk̚] [ˈlɘɫ] [ˈɹɪɾ]

/ˈpep/ /ˈtat/ /ˈkik/ /ˈləl/ /ˈrir/

Various authors have said various things about English syllabification, but it seems that little has been said on the issue of intervocalic glides.   In what follows, I will argue, giving additional examples, that English intervocalic glides tend to be resyllabified leftward against the widely believed "onset maximality"—the principle which states that segments are syllabified so that the onset may be maximized.   I will also point out that English contrasts remarkably with Japanese and Hungarian in glide insertion and discuss to what differences among languages these glide-related matters might be ascribed.

2.   The syllabification of intervocalic /i̯/

In this chapter, we will look at how intervocalic /i̯/'s behave, by classifying examples into three groups, to each of which one section will be allotted.

2.1. *Maya, lawyer, buoyant*

Let us first look at the following words—they are all loanwords with an orthographic *y* between two vowel letters.

(2.1) kayak, Maya 'Central American people', Toyota

Their pronunciations seem to be usually as follows.

(2.2) ˈkay̲.ˌak,   ˈMay̲.a,   Toy̲. ˈota

[ˈkaɪ̯.ˌæk][6] [ˈmaɪ̯.ə][7] [tɔɪ̯. ˈo̯u̯ɾə][8]

Their counterparts in their source languages, however, have different syllable   breaks.

(2.3) *Yupik* qa.y̲aq, *Spanish* Ma.y̲a, *Jpn.* To.y̲ota

[qɑ.jɑq]   [ˈmɐ.jɐ][9]   [toˑ.joˑtɐ̈]

Some authors mention the last one—the "peculiar" word that led me to write this paper. Kreidler (1989, 126) writes, "Even before a stressed vowel the front glide may be part of the preceding vowel unit, as in *Toyota* /toi'outə/," but does not say any more. Jensen (1993, 37) says:

> [C]onsider the syllabification of such a sequence where C is a glide *w* or *y*, as in *Toyota*. In Japanese, this word is syllabified *to.yo.ta*, following the Onset Principle.[10] But, in English, the syllabification is clearly *toy.o.ta*. We will have to claim either that English violates the Onset Principle in certain cases of intervocalic glides, or that English diphthongs are simple vowels at the time syllabification takes place. In this study we make the latter choice.

Even if we allow him to "make the latter choice," the question still remains why English prefers the diphthong.

For the words in (2.1), some of the references I used give forms nearer to the originals, and some also record pronunciations that seem in-between. They are shown in (2.4) and (2.5) respectively.[11]

(2.4) 'Ma.y̲a,   To.'y̲ota
       ['mɑ:.jə]¹² ᴿᴾ[to:.'jɐ̯tə]¹³

(2.5) 'ka(y̲).ˌy̲ak, 'Ma(y̲).y̲a, To(y̲).'y̲ota
       ['kaɪ̯.ˌjæk]¹⁴ ['maɪ̯.jə]¹⁵ [tɔɪ̯.'joɐ̯ɾə]¹⁶

Comparing the three groups (2.2), (2.4), and (2.5), we can assume that the phonetic forms in (2.2) are derived from those in (2.4),¹⁷ the closest to their models, through the intermediate stage as in (2.5). Since [j] and [ɪ̯] are both allophones of /i/, this derivation can be regarded as a resyllabi-fying process of that nonsyllabic phoneme. The relationship among the three stages is illustrated with *Maya* as below.

(2.6) ⎛ *Sp.* Ma.y̲a → ⎞ *Eng.* 'Ma.y̲a   → 'Ma(y̲).y̲a → 'May̲.a
       ⎝   ['mɐ.je] ⎠   ['mɑ:.jə]   ['maɪ̯.jə]   ['maɪ̯.ə]
                                   /'maə̯.iə/   /'maɪ̯.iə/   /'maɪ̯.ə/

What is happening here is the resyllabification of /i̯/ from the onset of the second syllable into the nucleus of the first, during which exists a stage where the /i̯/ stretches over both syllables.

Now let us think about another group of words, namely derivatives.

(2.7) law/lawyer, buoy/buoyant

Lawyer derives from *law* with an epenthetic *y* inserted to prevent the hiatus. It has two phonetic forms as given below.

(2.8) ˈlaw.yer, ˈlawy.er   ← ˈlaw
　　　　 [ˈlɒː.ji̯] [ˈlɔi̯.ɪ][18]   [ˈlɒː]

Clearly, the first form is the original one, which has produced the second by taking the /i̯/ into its preceding syllable, through a hypothetical inter-mediate stage as shown below in [ ].

(2.9) $\begin{pmatrix} \text{ˈlaw} & \to \\ [\text{ˈlɒː}] \\ /\text{ˈlɒə̯}/ \end{pmatrix} \begin{pmatrix} \text{ˈlaw.yer} & \to \\ [\text{ˈlɒː.ji̯}] \\ /\text{ˈlɒə̯.i̯ər}/ \end{pmatrix} \begin{pmatrix} \text{ˈlaw(y̱).yer} \\ [\text{ˈlɔi̯.ji̯}] \\ /\text{ˈloi̯.i̯ər}/ \end{pmatrix} \to \begin{matrix} \text{ˈlawy.er} \\ [\text{ˈlɔi̯.ɪ}] \\ /\text{ˈloi̯.ər}/ \end{matrix}$

Things are a little different about *buoyant*, which again has (at least) two variants, but whose base form, *buoy*, also does.

(2.10) ˈbuo.yant, ˈbuoy.ant   ← ˈbuo.y, ˈbuoy
　　　　　[ˈbuː.jənt] [ˈbɔi̯.ənt]   [ˈbuː.i] [ˈbɔi̯]

At first sight, the first and the second forms of *buoy* have produced each counterpart of *buoyant*, but, although only the second forms seem to be used in RP, the situation is not so straightforward in GA: [ˈbuː.i] and [ˈbɔi̯.ənt] appear to be predominant there.[19] If we intend to relate these two, the following change must be assumed.

(2.11) $\begin{pmatrix} \text{ˈbuo.y} & \to \\ [\text{ˈbuː.i}] \\ /\text{ˈbuu̯.i}/ \end{pmatrix} \begin{matrix} \text{ˈbuo.yant} & \to & \text{ˈbuo(y̱).yant} & \to & \text{ˈbuoy.ant} \\ [\text{ˈbuː.jənt}] & [\text{ˈbɔi̯.jənt}][20] & [\text{ˈbɔi̯.ənt}] \\ /\text{ˈbuu̯.i̯ənt}/ & /\text{ˈboi̯.i̯ənt}/ & /\text{ˈboi̯.ənt}/ \end{matrix}$

Although the origin of the /i̯/ is not epenthesis,[21] we can see a route simi-
lar to the one in (2.9), except that an "in-between" form is attested
and that the first element of the stressed vowel is changed.   These two
points might need some comment; let us begin with the latter.

As can be seen, /oi̯/ appears instead of the expected /ui̯/, for English
normally does not allow this diphthong.[22]   From a different standpoint,
this situation can be regarded as neutralization between /u/ and /o/ in
the environment of __/i̯/.   This kind of neutralization is also seen in the
environment __/ə(r)/ in current RP, which is merging two diphthongs, increas-
ing homophones (Wells 1982, esp. 236-37, 287-88; Gimson and Cruttenden
1994⁵, 134).

(2.12) *RP* p<u>oor</u>   → p<u>oor</u>   → p<u>oor</u>   = p<u>our</u>, p<u>ore</u>, p<u>aw</u>
        s<u>ure</u>   → s<u>ure</u>   → s<u>ure</u>   = sh<u>ore</u>, Sh<u>aw</u>
        [ʊə(ɪ)]   [oə(ɪ)]   [oː(ɪ)]
        /uə(r)/   /oə(r)/

Note also the possibility that it is because of the difference of the
degree of Anglicization that *buoy* is likely to be pronounced with [uː.i]
but *buoyant*, with [ɔɪ]; *prestige* is pronounced *à la française* [pɪɛˈstiːʒ,
pɪɛˈstiːd͡ʒ], but its adjectival counterpart *prestigious* [pɪɛˈstɪd͡ʒəs, pɪɛˈstiːd͡ʒəs]
would not sound so French.

One may argue, looking at the "in-between" form [ˈbɔɪ.jənt] in (2.11),
that this is not an intermediate stage between [ˈbuː.jənt] and [ˈbɔɪ.ənt]
but is derived from [ˈbɔɪ.ənt] by way of the epenthesis of [j] just as in
lawyer.   He or she will, however, have to admit that such words as
giant, *defiant*, and *reliant* would normally never be pronounced with
a [j] epenthesized; the epentheses in *law<u>y</u>er*, *saw<u>y</u>er*, and a few others
are no doubt highly lexicalized.

2.2. *Naive*

Next think about *naive*, or *naïve*, where you find no intervocalic
orthographic *y*, but which nevertheless has more than one pronunciation
as the above examples.

(2.13) na.'ive, na(y).'ive   ← *French* na.ïve
        [nɑː.'iːv] [naɪ.'iːv][23]   [na.'iv]

Taking its French origin into consideration, the first form of (2.13) seems to have produced the second. The process is likely to be as follows.

(2.14) na.'ive → ⎧ na.'(y)ive ⎫ → ⎧ na(y).'(y)ive⎫ → na(y).'ive
        [nɑː.'iːv] ⎪[nɑː.'jiːv]⎪   ⎪[naɪ.'jiːv] ⎪   [naɪ.'iːv]
        /naə.'iɪv/ ⎩/naə.'iɪɪv/⎭   ⎩/naɪ.'iɪɪv/ ⎭   /naɪ.'iɪv/

The trigger of this phonological process seems to have been a [j] epenthesized to break the hiatus,[24] which is represented as "(y)" in the second form of (2.14), the left one in the brackets to show its hypotheticality. This [j] is then resyllabified through an intermediate stage, the right one in brackets, into the preceding syllable, leading to the rightmost, attested form.

Incidentally, Wells (1982, 300) makes an interesting remark: "[W]hy do I say /'kɔɪɪn/ for *coin* when everyone else says /'kɔɪn/?" He says so in the context of "personal idiosyncrasies," but, considering he records this form as a second choice in *LPD* eight years later, he might have found that there are some people, other than himself, who pronounce the word in this way.[25] Anyway, this "idiosyncratic" pronunciation could be interpreted to have undergone the following processes.

(2.15)   *syllable*
            split
    RP 'coin → ⎧ 'co.in ⎫ → ⎧ 'co.(y)in ⎫ → ⎧'co(y).(y)in⎫→ 'co(y).in
        ['kɔɪn] ⎪['koː.ɪn]⎪   ⎪['koː.jɪn]⎪   ⎪['kɔɪ.jɪn]⎪   ['kɔɪ.ɪn]
        /'koɪn/ ⎩/'koə.ɪn/⎭   ⎩/'koə.ɪɪn/⎭   ⎩/'koɪ.ɪɪn/⎭   /'koɪ.ɪn/

The first process is a syllable split, which could be justified by the fact that the final output is disyllabic;[26] the subsequent steps are substantially the same as those of (2.14): the analysis above has made it clear that it is only in its disyllabicity that the "idiosyncrasy" of this pronunciation of Wells' lies.

2.3. *Beyond*

We will now go on to the last group of words in this chapter.

(2.16) beyond, Riyadh, Fujiyama

Each of these words has a pronunciation where the intervocalic orthographic *y* is unpronounced.[27]

(2.17) be.'yond,   be'yond
[bɪ.'jɑːnd] [bi.'ɑːnd][28]

Ri.'yadh,   Ri'yadh   ← *Arabic* Ri.yadh
[ɹiː.'jɑːd] [ɹiː.'ɑːd][29]   [ɾi.'jɑːd][30]

ˌFuji.'yama,   ˌFujiˈyama   *Cf. Jpn.* Fuji,   yama
[ˌfuːd͡ʒi.'jɑːmə] [ˌfuːd͡ʒi.'ɑːmə][31]   [ɸɯ̈d͡ʑi] [j̃ẽmẽ]

It is obvious, in each pair, that the form with a [j] is the fundamental one: the first word consists of the prefix *be-* and the base *yond*, the latter itself and its derivative *yonder* being, or having been, used as independent words with their *y*'s, naturally, pronounced; the Arabic original of Saudi Arabia's capital is as quoted above, and the name of the highest mountain in Japan, though such is not the way Japanese people refer to it, is composed of two Japanese words, *Fuji* and *yama*, as also given there.[32]   How the [j] disappears is illustrated below with *beyond* taken as an example.

(2.18) be.'yond   → be(y).'yond → bey.'ond
[bɪ.'jɑːnd]   [bi.'jɑːnd][33]   [bi.'ɑːnd]
/bi.'i̯aǝnd/   /bii̯.'i̯aǝnd/   /bii̯.'aǝnd/

The /i̯/, originally pronounced [j], "spreads" to the preceding syllable, changing the lax vowel [ɪ] into a tense [i], and disappears from its original syllable.[34]   The fact is not that the orthographic *y* has come unpronounced, but that it has gone to the preceding syllable. Incidentally, the expected syllabifying dots in the forms of (2.17) with

their *y* italicized had been deliberately omitted; had they not been, such notations as "be*y*.'ond" would have been appropriate. Resyllabification of /i̯/ is seen, here again, to play a vital part in producing variation.

3. The syllabification of intervocalic /u̯/

In this chapter, what we have found as to intervocalic /i̯/ will be observed to apply to /u̯/ in the same context.

3.1. *Kawasaki, leeward*

The following are proper nouns from Japanese with an orthographic *w* between two vowel letters.

(3.1) ₁Ka.wa'saki,   ₁Kaw.a'saki   ← *Jpn.* Ka.wasaki
   [ₗkɑː.wə'sɑːki] [ₗkæɐ̯.ə'sɑːki]³⁵   [kɐ̃.ɰɐ̃sɐ̃ki]

   ₁Oki'na.wa,   ₁Oki'naw.a   ← *Jpn.* Okina.wa
   [ₗoɐ̯kə'nɑː.wə] [ₗoɐ̯kə'næɐ̯.ə]³⁶   [ȯkinɐ̃.ɰɐ̃]

Kawasaki, used for a motorcycle company, for a suburb of Tokyo, or as a family name, is pronounced in its source language with the glide [ɰ] clearly as the onset, and so is *Okinawa*, for the southernmost prefecture consisting of the Ryukyu Islands; therefore, it is reasonable to derive the latter phonetic form, in either case, from the former, just as we did in (2.6) with regard to *Maya*. Below is the derivation of *Kawasaki*.

(3.2) ⎛*Jpn.* Ka.wasaki → ⎞ *Eng.* ₁Ka.wa'saki   → ⎛ ₁Ka(w).wa'saki ⎞ → ₁Kaw.a'saki
   ⎝   [kɐ̃.ɰɐ̃sɐ̃ki]   ⎠   [ₗkɑː.wə'sɑːki]   ⎣ [ₗkæɐ̯.wə'sɑːki] ⎦   [ₗkæɐ̯.ə'sɑːki]
                /ₗkaɐ̯.u̯ə'saɐ̯ki/ /ₗkau̯.u̯ə'saɐ̯ki/   /ₗkau̯.ə'saɐ̯ki/

The intervocalic /u̯/'s are resyllabified, just like /i̯/'s, against the onset maximality.

Next we will look at *leeward*, which has two kinds of pronunciation: ordinary and nautical, alias "uninteresting" and "interesting"

respectively.   The ordinary pronunciation is uninteresting in that it is
simply   composed   of   *lee*   and   *-ward*;   the   "interesting"   pronunciation
cannot   be   so   separated.

(3.3)   ˈlee.ward, ˈleew.ard   ← ˈlee
        [ˈliː.wɪd] [ˈluː.ɪd]³⁷   [ˈliː]

The basic form is, of course, that for ordinary use, the left one above,
and   derives   from   itself   that   for   nautical   use,   the   right   one.   The
derivation   should   be   as   follows.

(3.4)   *prominence*   *yod*
                                                     shift   *dropping*

$$\begin{pmatrix} \text{ˈlee} \\ \text{[ˈliː]} \\ \text{/ˈliᵢ/} \end{pmatrix} \rightarrow \begin{pmatrix} \text{ˈlee.ward} \\ \text{[ˈliː.wɪd]} \\ \text{/ˈliᵢ.wərd/} \end{pmatrix} \rightarrow \begin{pmatrix} \text{ˈlee(w).ward} \\ \text{[ˈlɪʊ.wɪd]} \\ \text{/ˈliʊ.wərd/} \end{pmatrix} \rightarrow \begin{pmatrix} \text{ˈleew.ard} \\ \text{[ˈlɪʊ.ɪd]} \\ \text{/ˈliʊ.ərd/} \end{pmatrix} \rightarrow \begin{pmatrix} \text{ˈleew.ard} \\ \text{[ˈljuː.ɪd]} \\ \text{/ˈliʊᵢ.ərd/} \end{pmatrix} \rightarrow \begin{matrix} \text{ˈleew.ard} \\ \text{[ˈluː.ɪd]} \\ \text{/ˈluᵢ.ərd/} \end{matrix}$$

Three pairs of brackets of the 〔 〕 type are used above, but the forms in
them,   especially   the   last   two,   are   not   completely   hypothetical.
Historically speaking, what I label "prominence shift" is thought to have
occurred gradually from the 16th century to the 18th century through a
process   like   this   (Nakao 1985, 290).

(3.5)   [ɪʊ̯] → [i͡ʊ] → [i̯ʊ] → [jʊ] → [juː]

Wells (1982, 206-07) says that the /iu/ type diphthongs are still found in
certain   conservative   Welsh,   north-of-England,   and   American   (southern   and
New   England)   accents;   *PDAE*   includes   this   type   of   diphthong   in   such
entries as this word.   "Yod dropping," which Wells (1982, 206-08, 247-48)
calls   in   this   way,   takes   place   between   certain   coronal   consonants   and
[uː],   where   the   triggering   coronals   vary   among   dialects;   [ˈljuː.əd]   is
actually found in RP.³⁸   We can conclude that the final output in (3.4)
was generated through the resyllabification of /ʊ/ followed by two additional
phonological   processes.³⁹   This   case   corresponds   to   *lawyer*   and   *buoyant*
in that suffixation is involved, though the motive glide [w] is originally
from   the   suffix.

Pewit, or *peewit*, is a parallel to *leeward*, because it has two
varieties of pronunciation likewise.

(3.6)　'pe(e).₁w̲it, 'pe(e)w̲.it　　　　*Cf.*　'pee.₁v̲it, 'pe(e).₍₁₎w̲ee

　　　　['pi:.₁wɪt] ['pju:.ət, 'pju:.ɪt]⁴⁰　　　　['pi:.₁vɪt] ['pi:.₍₁₎wi:]⁴¹

Its variant *peevit* and a related word *peewee* or *pewee*, though all
the three may not refer to the same bird, allow us to decide that the left
form, having [i:] as its first vowel, is the more basic, even if we have
never heard the birds' cries from which the names are supposed to have
originated echoically. The difference in the degree of stress between the
second syllables of the two phonological forms of *pe(e)wit*, and the
accompanying vowel reduction in the right variant, will enforce our
decision. *OED²* helps us to be more secure about this judgment: "The
original Eng. type is prob. (₁pi:'wi:t), whence by stress shift
('pi:₁wɪt, 'pi:wɪt, 'pju:ɪt)" (under the entry for "pewit, peewit"). The
derivation, then, parallels part of that of *leeward*.

3.2.　*Raul*

　　Let us see a *naive* type word in this section.

(3.7)　Ra.'ul,　　Ra(w̲).'ul ← *Sp.* Ra.úl

　　　　[ɹɑ:.'u:l] [ɹæw̪.'u:l]　　　　[rɐ.'ul]⁴²

According to *LPD*, its Anglicized pronunciation has two variants as
above, the second of which is "recommended" there.⁴³ The relationship
between these two is just the same as that between the two forms of
naive in (2.13), except that the supposed trigger is an epenthesized
[w].⁴⁴

(3.8)　$\begin{pmatrix} Sp. \text{ Ra.úl} \rightarrow \\ \text{[rɐ.'ul]} \end{pmatrix}$ *Eng.* Ra.'ul → $\begin{pmatrix} \text{Ra.'(w̲)ul} \\ \text{[ɹɑ:.'wu:l]} \end{pmatrix}$ → $\begin{pmatrix} \text{Ra(w̲).'(w̲)ul} \\ \text{[ɹæw̪.'wu:l]} \end{pmatrix}$ → Ra(w̲).'ul

　　　　　　　　　　　[ɹɑ:.'u:l]　　　　[ɹɑ:.'wu:l]　　　　[ɹæw̪.'wu:l]　　　　[ɹæw̪.'u:l]

　　　　　　　　　　　/raə.'ṵl/　　　/raə.'u̯ṵl/　　　/rau̯.'u̯ṵl/　　　/rau̯.'ṵl/

3.3. *Luwian*

The last example in this chapter is the name of an Anatolian language, which can be identified, in the sense of the resyllabification here considered, with *beyond*.[45]

(3.9) 'Lu.wian, 'Luwian   *Cf.* 'Lu.vian; *German* lu.visch, Lu.vier
       ['luː.wiən] ['luː.iən][46]   ['luː.viən][47]   ['luː.vɪʃ] ['luː.viɐ][48]

Luwian is pronounced both with and without a [w], but the form with the glide can be looked upon as the more fundamental, taking into consideration its variant *Luvian*, with a [v] in the same place, and German *luvisch* and *Luvier*, with a [v] also included, from which *OED²* says, under the entry for "Luvian," the name of the language comes. The process of [w] deletion works like this.

(3.10) 'Lu.wian   = 'Lu(w).wian → 'Luw.ian
        ['luː.wiən] ['luː.wiən]   ['luː.iən]
        /'luu̯.u̯iən/ /'luu̯.u̯iən/   /'luu̯.iən/

The /u̯/ at the onset, hence realized as a [w], is resyllabified and disappears just like the [j] of *beyond* that we saw in (2.18), the difference being that the preceding vowel here is by nature tense, with the result that the second stage in (3.10), where the /u̯/ seems to spread over both syllables, is identical with the input.

4. Discussion

We have seen in the previous two chapters that both of the English intervocalic glides [j, w] tend to be resyllabified from the onset into the rhyme of the preceding syllable, resulting in changing themselves into the latter halves of diphthongs and long vowels; and it was also pointed out in the introductory chapter that this leftward resyllabification contravenes the widely accepted "onset maximality."

As for resyllabification, Borowsky (1986, ch. 4) discusses the validity of stress-sensitive resyllabification, which she claims explains such alternations as below (259).[49]

(4.1) a. a.'[t]omic⁵⁰/'a[ɾ].om

       b. ve.'[h]icular/'ve[ ].icle⁵¹

       c. a.'nn[ ]uity/'ann.[j]ual; vo.'l[ ]uminous/'vol.[j]ume

       d. 'consti.ₗ[t]ute⁵²/con'sti[t͡ʃ].utive⁵³; 'resi.ₗ[d]ue/re'si[d͡ʒ].ual

What she says is to the effect that the /t/ in *atom* is pronounced [ɾ] because the phoneme is within a foot and has been resyllabified from the onset of the *unstressed* second syllable to the coda of the *stressed* first syllable.⁵⁴ Of the examples that I have given—readers might have been curious about why they also included stress marks—'*May.a*, '*lawy.er*, '*buoy.ant*, '*co(y).in*, ₗ*Kaw.a*'*saki*, ₗ*Oki*'*naw.a*, '*leew.ard*, '*pe(e)w.it*, and '*Luw.ian* could be explained in the same way; but '*kay.ₗak* would be a dubious case,⁵⁵ and *Toy.*'*ota*, which was my motive for this study,⁵⁶ *na(y).*'*ive*, *bey.*'*ond*, *Riy.*'*adh*,⁵⁷ ₗ*Fujiy.*'*ama*, and *Ra(w).*'*ul* certainly could not.

    Then what accounts for the phenomena seen above? Some people might say, in seeing the above samples such as '*May.a* and ₗ*Kaw.a*'*saki*, that they must be spelling pronunciations; but they must also be reminded that, if those pronunciations really were, the underlined parts would be sounded as [eɪ] and [ɒ:] respectively,⁵⁸ and that, more importantly, why they are so syllabified would still be unexplained; *na(y).*'*ive* and *Ra(w).*'*ul*, and such intermediate cases as *To(y).*'*yota*, would also be highly problematic to them.

    The crucial point seems to be the *directionality* of the resyllabifcation of /i̯/ and /u̯/, and the direction is obviously *leftward*. In none of our cases have we witnessed the opposite—every one of them has been a loan, a derivative, or a variant, whose character has determined which of its forms is the basic one. Even though '*Ma.ya* ['ma:.jə] becomes '*May.a* ['maɪ.ə] and ₗ*Ka.wa*'*saki* [ₗka:.wə'sa:ki] becomes ₗ*Kaw.a*'*saki* [ₗkæṇ.ə'sa:ki], '*di.amond* ['daɪ.əmənd] would not become *['da:.jəmənd], nor would *pow.er* ['pæṇ.ɹ] become *['pa:.wɪ]. The proportion of the '*May.a* type of syllabification to the '*Ma.ya* one is unimportant—it is likely that the former type will be more popular, the more familiar the word is; it is the direction that counts.

    As for the directionality, Japanese contrasts strikingly with English. When an English word including a diphthong such as [eɪ, aɪ, ɔɪ,

æ] followed by [ə] or [ɪ] is adopted into Japanese, an intervocalic glide is often seen in the borrowing.

(4.2) *Eng.* ꞌdi.amond → *Jpn.* dai.yamondo
      [ꞌdaɪ.əmənd]   [déí.jémóñdò]

   Eng. ꞌpow.er → *Jpn.* pa.wâ
      [ꞌpæ.ɪ]   [pé.ɥèè]

The following are their likely processes.[59]

(4.3) $\left(\begin{array}{l} Eng. \quad ꞌdi.amond \rightarrow \\ \qquad [ꞌdaɪ.əmənd] \end{array}\right)$ *Jpn.* $\left(\begin{array}{l} dai.amondo \\ {[déí.émóñdò]} \\ /deí.emóⁿdo/ \end{array}\right) \rightarrow \begin{array}{l} dai.yamondo \\ {[déí.jémóñdò]} \\ /deí.iemóⁿdo/ \end{array}$

(4.4) $\left(\begin{array}{l} Eng. \quad ꞌpow.er \rightarrow \\ \qquad [ꞌpæ.ɪ] \end{array}\right)$ *Jpn.* $\left(\begin{array}{l} pau.â \\ {[péɥ.èè]} \\ /péɥ.ee/ \end{array}\right) \rightarrow \left(\begin{array}{l} pau.wâ \\ {[péɥ.ɥèè]} \\ /péɥ.ɥee/ \end{array}\right) \rightarrow \begin{array}{l} pa.wâ \\ {[pé.ɥèè]} \\ /pé.ɥee/ \end{array}$

Compare these derivations with those of *naive* and *Raul*.

(4.5) (= (2.14)) na.ꞌive → $\left(\begin{array}{l} na.ꞌ(y)ive \\ {[nɑ:.ꞌji:v]} \\ /naə.ꞌiiv/ \end{array}\right) \rightarrow \left(\begin{array}{l} na(y).ꞌ(y)ive \\ {[naɪ.ꞌji:v]} \\ /nai.ꞌiiv/ \end{array}\right) \rightarrow \begin{array}{l} na(y).ꞌive \\ {[naɪ.ꞌi:v]} \\ /nai.ꞌiiv/ \end{array}$
      [nɑ:.ꞌi:v]
      /naə.ꞌiiv/

(4.6) (=(3.8)) $\left(\begin{array}{l} Sp. \text{ Ra.úl} \rightarrow \\ \qquad [ra.ꞌul] \end{array}\right)$ *Eng.* Ra.ꞌul → $\left(\begin{array}{l} Ra.ꞌ(w)ul \\ {[ɪɑ:.ꞌwu:l]} \\ /raə.ꞌuul/ \end{array}\right) \rightarrow \left(\begin{array}{l} Ra(w)ꞌ(w)ul \\ {[ɪæ.ꞌwu:l]} \\ /rau.ꞌuul/ \end{array}\right) \rightarrow \begin{array}{l} Ra(w)ꞌul \\ {[ɪæ.ꞌu:l]} \\ /rau.ꞌuul/ \end{array}$
      [ɪɑ:.ꞌu:l]
      /raə.ꞌuul/

In the borrowings in Japanese, the /i/ and /u/, the second elements of diphthongs in the source language, are resyllabified *rightward* into the onset glides of the following syllables,[60] whereas, in those in English, the glides at onsets are resyllabified *leftward* into the second elements of diphthongs of the preceding syllables. Evidently related to this is the fact that the nature of glides epenthesized to avoid hiatuses is itself completely opposite between the two languages: they are homorganic

with their *preceding*, heterosyllabic vocal elements in Japanese, but with their *following*, tautosyllabic ones in English—remember I pointed out, in the context of the "in-between" form ['bɔɪ.jənt] in (2.11), that words such as *giant*, *defiant*, and *reliant* would normally never be pronounced with a [j] epenthesized.

Now, to what differences between the two languages is this ascribed? One big difference between them lies in the syllable types which they often utilize: open syllables in Japanese and closed syllables in English;[61] but this difference seems to have little to do with the matter. According to Waseda (1994, 12), in Hungarian, a glide [j] can be inserted between an [i] and the following back vowels.[62]

(4.7) *Hung.* diák 'student', fiu 'boy', tokiói 'of Tokyo'
           ['di.ja:k]   ['fi.ju]   ['to:ki.jo:i]

These instances appear to show that Hungarian is of the Japanese type, but this language is clearly categorized as a closed-syllable type.

What we could safely say for the present is that languages would have their own inherent directionalities as to the "spreading" of high vowels— by "spreading" I mean that autosegmental spreading: leftward in English, and rightward in Japanese and Hungarian. The representations below will make the point clear.[63]

(4.8)

na.ˈive	na.ˈ(y)ive	na(y).ˈ(y)ive	na(y).ˈive
[n ɑ :! i : v]	[n ɑ :!j i : v]	[n a ɪ!j i : v]	[n a ɪ! i : v]

(4.9) *Jpn.*   dai.amondo   dai.yamondo
       [d ɐ ɪ. ɐ.m ó ɴ.d ò]   [d ɐ ɪ.j ɐ.m ó ɴ.d ò]

(4.10) *Hung.*   di.ák   di.[j]ák

        ['d i. a ː k]   ['d i.j a ː k]

        ⋮ ⋮ ⋮ ⋮ ⋮ → ⋮ ⋮ ⋮ ⋮ ⋮ ⋮

        O N.O N n C   O N.O N n C

        | ⊤ |╱ | | ⊤╱ |╱ |

        /d i   a k/   /d i   a k/

Note, however, that this directionality alone does not account for the whole issue, for it is still to be explained why English *na(y).'(y)ive* finally loses the [j] at its onset, this being shown in (4.8) as the dissociation of the line in the rightmost representation, and becomes *na(y).'ive.*

It seems that languages also vary as to how much they require onsets, albeit it is generally believed that onsetless syllables are marked and, therefore, the "onset maximality" principle is usually employed in syllabification.   In English, this demand is relatively weak at least for glides, and onset glides are sometimes lost if they are also associated with the preceding slot as a result of their leftward spreading, which looks as if they had been syllabified against the onset principle. Syllables which have a coda are said, besides onsetless syllables, to be universally marked, but the new syllables thus generated are no more marked than the old ones, since the /i/ of *'May.a* /'maɪ.ə/, for example, is not at the coda but in the nucleus (cf. Yamamoto 1997, 254-55).[64] Notice also that only this concept of the degree of onset demand does not suffice again: without the notion of the leftward directionality of spreading, it would be inexplicable why *'Ma.ya* ['mɑː.jə] becomes *'May.(y)a* ['maɪ.jə] despite the fact that both have an onset in their second syllable, and why epenthesized glides are homorganic with their *following,* tautosyllabic vocal elements.   The leftward directionality of the spreading of high vowels and the relatively weak requirement of onsets are both traits of the English language.[65]

Last but not least, I dare to mention, in answer to a possible question as to whether the two characteristics of English are synchronic or diachronic, or a possible suspicion that synchronic and diachronic issues have been confused, that a diachronic process is obtained, as it were, as the integral of a synchronic one, and a synchronic process, as

the differential of a diachronic one, just as velocity is obtained as the integral of acceleration, and acceleration, as the differential of velocity. If it were not for the synchronic process of the resyllabification of glides, neither would the same process be seen diachronically: zeros, however many times added up, make zero.

5. Conclusion—Why *Toy.ota*?

With *Toy.ota* as our starting point, we have looked at and discussed various cases where intervocalic glides in English tend to be resyllabified, against the widely accepted "onset maximality," from the onset into the rhyme of the preceding syllable. We can now conclude that what has produced this pronunciation of *Toy.ota* are the two phonological characteristics of English, namely its leftward directionality of the spreading of high vowels and its relatively weak requirement of onsets.

It has also been mentioned that Japanese and Hungarian exhibit a striking contrast with English in glide insertion, which implies that the former two have a rightward directionality in the spreading and a stronger requirement of onsets than the latter one. Further research will be needed by all means to clarify whether the two phonological tendencies are mutually related and how the matters are in other languages.

Notes

[1] This paper is based, and is an advance, upon sections 2.2, 2.3, and 2.5 of my unpublished MA thesis (Yamamoto 1996a); Yamamoto (1996b) could be read as a Japanese summary of those sections.

[2] Syllable breaks are indicated only where relevant.

[3] Unless otherwise indicated, phonetic forms of English words are those of what is, or was, called General American (henceforth, GA), quoted from the references below. When Received Pronunciation (henceforth, RP) forms are cited, they are so labeled. GA "is a term that has been applied to the two-thirds of the American population who do not have a recognizably local accent . . ." (Wells 1982, 118); RP "is generally taken as a standard throughout southern Britain (i.e. in England and perhaps Wales, but not in Scotland)" (Wells 1982, 117). All phonetic forms, except those in direct quotations, are normalized in the IPA.

References for GA only:

NDAEP = *NTC's Dictionary of American English Pronunciation* (= Silverstein 1994);

PDAE = *A Pronouncing Dictionary of American English* (= Kenyon and Knott 1953);

WNCD[9] = *Webster's Ninth New Collegiate Dictionary* (1990[9]);

WNCD[10] = *Merriam-Webster's Collegiate Dictionary*, 10th ed. (1996[10]);

WNID[3] = *Webster's Third New International Dictionary* (1993[3]) (pronunciation ed. Edward Artin).

References for RP only:

EPD[4] = *An English Pronouncing Dictionary*, 4th ed. (= Jones 1937[4]);

EPD[13] = *Everyman's English Pronouncing Dictionary*, 13th ed. (= Jones 1967[13]);

EPD[14] = *English Pronouncing Dictionary*, 14th ed. (eds. A. C. Gimson and Susan Ramsaran) (= Jones 1988[14]);

OED[2] = *The Oxford English Dictionary*, 2nd ed. (1989[2]).

References for both:

CIDE = *Cambridge International Dictionary of English* (1995) (American pronunciation ed. James Hartman, British pronunciation ed. Peter Roach);

CPDBAE = *A Concise Pronouncing Dictionary of British and American*

English　(= Lewis　1972);

EPD[15] = *English Pronouncing Dictionary*, 15th ed. (eds. Peter Roach and James Hartman) (= Jones 1997[15]);

LDCE[2] = *Longman Dictionary of Contemporary English*, 2nd ed. (1987[2]) (pronunciation ed. Dinah Jackson, pronunciation adviser J. C. Wells);

LDCE[3] = *Longman Dictionary of Contemporary English*, 3rd ed. (1995[3]); (pronunciation ed. Dinah Jackson);

LPD = *Longman Pronunciation Dictionary* (= Wells 1990).

[4] In syllable rhymes, they are realized as independent short vowels or the first or second elements of diphthongs; furthermore, the long vowels [i:] and [u:] are interpreted as /ii̯/ and /uu̯/ respectively.

[5] Consonants are narrowly transcribed here only.

[6] All the references except *NDAEP*, which does not include this entry, record this type of pronunciation (minor differences ignored; hereafter also) as the only or the first choice.

[7] In *WNCD*[9,10] (as their sole choice), *WNID*[3] (as one of the main pronunciations), *OED*[2] (as an alternative pronunciation), *EPD*[15] (as the main pronunciation for RP and an alternative for GA), and *LPD* (as the main pronunciation).

[8] In *WNCD*[10] (sole, but as the name of a city), *EPD*[15] (main for RP, alternative for GA), and *LPD* (sole).

[9] From *DAW*[2] (= Mangold 1974[2]).

[10] The same as the onset maximality introduced in chapter 1.

[11] Letters within ( ) are nonexistent in the spelling.

[12] In *PDAE* (sole), *WNID*[3] (labeled "*sometimes*," whose meaning is, according to the "Explanatory Notes," "infrequent" (p. 14a)), *OED*[2] (main), *EPD*[15] (main for GA), and *LPD* (alternative).

[13] *EPD*[14,15]'s alternative pronunciation for RP. GA's counterpart would be [tɒ:.ˈjoʊɹə], but is not attested in the dictionaries used; [toʊ.ˈjoʊɹə] might be possible.

[14] In *WNID*[3] (labeled "*also*," whose meaning is, according to the "Explanatory Notes," "appreciably less frequent [than the main pronunciation(s)]" (p. 14a)).

[15] In *WNID*[3] (one of the main pronunciations) and *OED*[2] (alternative). See n58 below for its further variation.

[16] In *EPD*[14] (main) and *EPD*[15] (main for GA).

[17] The form of *kayak* to be included in (2.4) is ´ka.ˌy̲ak ['kɑːˌjæk], but unattested. As for *Toyota*, see n13. For vowels in loans in general, see Lindsey (1990).

[18] All the references except two record the [ɒːˌj] type of pronunciation as the only or the first choice for either dialect, the exceptions being *CIDE* and *EPD*[15]: the former gives the [ɔɪ] and [ɒːˌj] types as the sole pronunciation for RP and GA respectively, and the latter adds, to each dialectal form that is the same as *EPD*[15]'s, the other variant as a second form. *NDAEP* (which always gives a single form, according to the "Notes on the Dictionary" (p. ix)), *PDAE*, *WNCD*[10], and *LDCE*[2,3] do not record the [ɔɪ] type. The rest, namely *WNID*[3], *WNCD*[9], *EPD*[4,13,14], *OED*[2], *CPDBAE*, and *LPD* include it with a subordinate status given.

[19] For RP, the references record only the [ɔɪ] form for both words. As for GA, *WNCD*[9,10], *LDCE*[2,3], and *LPD* adopt both forms for both words, showing the predominance mentioned in the text; *WNID*[3], including other variants in addition (see nn20, 22), is along the same line and says that ['bɔɪ] is usual in the sense of 'life buoy'; *NDAEP* selects a single form for each word in agreement with this predominance, and so does *CIDE*; *PDAE*, *CPDBAE*, and *EPD*[15] include both forms for both words, but giving predominance to the [ɔɪ] form in either case. *OED*[2], giving ['bwɔɪ] and ['bwɔɪ.ənt] as a variant of *buoy* and *buoyant* respectively, says, under the entry for "buoy, *sb.*": "The pronunciation (bwɔɪ) . . . is recognized by all orthoepists British and American; but (bɔɪ) is universal among sailors, and now prevalent in England. . . . Some orthoepists give (buɪ)."

[20] In *WNID*[3] (as an alternative).

[21] The underlying representation for ´buo.y̲ ['buːˌi] seems to be monosyllabic ['buu̲i] with an /i/ at the coda. See Yamamoto (1997, 255) for the syllable structure of each form of *buoy* and *buoyant*.

[22] *WNID*[3]'s second choice for *buoy* is "\'bu̇i\," which should be interpreted as ['bʊɪ], but does not register "\u̇i\" as a diphthong in the "Guide to Pronunciation" (pp. 31a–44a); the dictionary seems to consider this sequence a variant of [uːˌɪ] (under the heading of "\u̇\ [= [uː]] plus unstressed vowel" (p. 44a) in the "Guide to Pronunciation"). See also *LPD*'s note on "compression" (152–53).

²³ The references solely for GA record the [ɑ:] form only, with an exception of *WNID³*, which also records the other form as an alternative. Those solely for RP record both, but with their judgments about the predominance varying: *OED²* gives precedence to the [ɑ:] form of this word, but things are complicated about *EPD*s. *EPD⁴* gives to "naïve" not merely the [aɪ] and [ɑ:] forms, with the first as the main pronunciation, but also ['naɪ.ɪv] and ['neɪ.ɪv] as variants. Besides, there is another entry, "naive," with only ['neɪv] given. *EPD¹³* records only [nɑ:.'i:v] and [naɪ.'i:v] for "naïve," with the first as the main form, and nothing is changed for "naive." *EPD¹⁴* records, for "naïve," the same things as in the previous edition, but with the frequency judgment reversed. There is no entry of "naive." Concerning the references dealing with both dialects, *CPDBAE* and *LPD* include both the [aɪ] and [ɑ:] forms of this word, giving predominance to the former; *LDCE²* has the [aɪ] and [ɑ:] forms as those for RP and GA respectively, but *CIDE* and *LDCE³* have only the former; *EPD¹⁵* records both variants for both dialects, but giving priority as the RP and GA forms to the [aɪ] and [ɑ:] types respectively. Note also *OED²*'s following remark, more exactly, that of its original, *A New English Dictionary on Historical Principles*, cited in *OED²* under the entry for "naïve (naive)": "'The word being only imperfectly naturalized, the pronunciation is somewhat unsettled: the chief variations given in the leading Dicts. are (nɑ:'i:v), ('nɑ:i:v), and (neɪ'i:v)' (*N.E.D.*, 1906)."

²⁴ It was mentioned in the preceding section that the [j] in *buo(y).yant* ['bɔɪ.jənt] could not be epenthetic and that such words as *giant*, *defiant*, and *reliant* would normally never be pronounced with a [j] epenthesized, but it will be made clear in chapter 4 that this does not contradict what is stated here about *naive*.

²⁵ However, no other dictionaries used record this variety.

²⁶ In (2.15), the *stressed vowel of the form immediately after the syllable split*, namely 'co.in, is assumed to be [o:] phonemicized as /oə/, whose GA counterpart is [ɒ:]; but it would also be possible that it is [əʊ], which could be phonemicized as /oʊ/ in the same manner as its GA counterpart [oʊ] is. Even if thus modified, (2.15) still holds true save that the third stage must be altered likewise.

²⁷ *Y*'s in italic type show that they are not sounded.

[28] *WNCD*[9,10] and *CIDE* record the [j] form only, and *OED*[2], *CPDBAE*, and *LDCE*[2,3], the non-[j] form only. *NDAEP*, also, records only the [j] form, but see n33 below. *PDAE* and *EPD*[4,13,14] adopt both forms, with preference given to the [j] variant, and so does *WNID*[3], labeling [j] forms (again, see n33) as "*also*." The other two, *EPD*[15] and *LPD*, disagree with each other: the non-[j] type is provided by them with the exclusive position for RP and GA respectively; the former reference accepts both types as GA pronunciations, while the latter, as RP, giving preference to the glide form.

[29] This word is included in *WNID*[3], *WNCD*[9,10], *EPD*[15], and *LPD*. As for GA, *WNCD*[10], *EPD*[15], and *LPD* record only the [j] form, and *WNID*[3] and *WNCD*[9] indicate the possibility of the omission of the glide. As for RP, both *EPD*[15] and *LPD* select ['ɹiː.æd] as the main pronunciation, but they give as alternatives ['ɹiː.ɑːd, ɹiː.'ɑːd] and [ɹɪ.'jɑːd, ɹɪ.'jæd] respectively.

[30] From *LPD*.

[31] This word is included in *PDAE*, *WNCD*[9,10], and *EPD*[15], of which *WNCD*[9] alone indicates that the [j] can be omitted.

[32] The mountain is called *Fujisan* [ɸɯdʑisã͡ɴ] in Japanese. *Yama* is a native Japanese word for 'mountain,' and *san* is a Sino-Japanese morpheme with the same meaning.

[33] *NDAEP*'s sole selection is actually this form, and it is, in addition, an "*also*"-labeled alternative of *WNID*[3]'s, together with, and placed ahead of, [bɪ.'jɑːnd] or [bə.'jɑːnd]. It is true that, in the notations of these two dictionaries, [i] is not distinguished from [iː], and, therefore, there may be a possibility that the form they give is not the intermediate stage [bi.'jɑːnd], but [biː.'jɑːnd] with its prefix pronounced rather independently; however, in such words as *bewilder* and *behind*, *NDAEP* provides the prefix with [bɪ-], and *WNID*[3], though recording [bi(ː)-] as well as [bɪ-] or [bə-], puts the [bi(ː)-] form in the second place in spite of the fact that the order is reversed in *beyond*—*beyond* is definitely "special." Taking the above into consideration, we can conclude that this form is indeed in the course of the phonological process as in (2.18). Incidentally, *LPD* records [biː-] under all of the above-mentioned words with the prefix, but only as their non-RP forms of British English.

[34] Thus, the resultant *bey.'ond* [bi.'ɑːnd] is justifiably phonemicized as /biː.'aɛnd/ as in (2.18); if this phonological process were not taken into consideration, its phonemicization might as well be /bi.'aɛnd/, for a vowel, even if lax, will be tensed immediately before another.

[35] This word is included in *WNCD*[9,10], *EPD*[15], and *LPD*. *WNCD*[9,10] record only the [ɑː.w] type. So does *EPD*[15], as far as GA is concerned, but, as for RP, it treats this type of pronunciation as a second form, giving priority to the diphthong type. *LPD* gives the diphthong and [ɑː.w] types as the main and subordinate pronunciations respectively regardless of dialectal difference.

[36] This word is included in *WNCD*[9,10], *EPD*[13,14,15], and *LPD*, and its adjectival form *Okinawan*, in *WNID*[3] and *OED*[2]. As for RP, the references, namely *OED*[2], *EPD*[13,14,15], and *LPD*, record only the [ɑː.w] type. As for GA, the references, namely *WNCD*[9,10], *WNID*[3], and *LPD*, record both sorts, with precedence given to the [ɑː.w] type, the only exception being *EPD*[15], where the diphthong type is not comprised at all.

[37] The references generally record both types of pronunciation, placing after the [iː.w] type the [uː] type labeled as technical (by *LDCE*[2]), as usually nautical (by *WNID*[3]), or as nautical (by many others), or without such a label (*EPD*[4], *OED*[2], *LDCE*[3]). The exceptions are *CIDE*, in which only the [iː.w] type is given, and *NDAEP*, in which this word itself is not included. Also see n38 below.

[38] The [uː] type of alternative pronunciation that *OED*[2] gives is actually this form, which is also recorded by *EPD*[4,13,14,15] and *LPD* as an alternative.

[39] I do not claim that (3.4) is a synchronic process. See the last paragraph of chapter 4.

[40] This word is included in all of the references but *NDAEP* and *CIDE*; the situation is, however, a little complex. The American dictionaries, namely *PDAE*, *WNCD*[9,10], and *WNID*[3], record both types of pronunciation, placing the [iː.w] type first; *PDAE* adds the /iu/ type as it does under *leeward*. As regards its spelling, *WNCD*[9,10] and *WNID*[3] give "pewit" and "peewit" with preference shown to the former, and *PDAE* gives only this form. Of the British dictionaries, *EPD*[4,13,14], *CPDBAE*, and *LDCE*[2] record only the [iː.w] type of pronunciation, under

the entries of "pewit" and "peewit," and so does *LDCE*[3], except that it has no entry of "pewit." *OED*[2] adopts the phonetic and orthographic forms in the same manner as *WNCD*[9,10] and *WNID*[3]. The other references, namely *EPD*[15] and *LPD*, interestingly agree that, although they give the [iː.w] type of pronunciation as the sole RP and main GA forms of this word, they record the [ˌjuː] type as a GA alternative only under "pewit," but not under "peewit." This discrepancy may be due to spelling pronunciation, or it may be that "peewit" is a spelling used exclusively for the [iː.w] type of pronunciation.

[41] The entry "peevit" is recorded by *WNID*[3] as a variant of "pewit." *WNCD*[9,10] and *WNID*[3] record "peewee" and "pewee"; *PDAE*, "pewee" only; *EPD*[15] and *LPD*, "peewee" only. *CIDE* gives "peewee," not for a bird, but as an informal American word for "someone or something very small." *OED*[2] adopts as headwords "peewee," or "pee-wee," and "pewee," the last of which is labeled "*U.S.* and *Canada*." No other references used include such entries.

[42] From *DAW*[2].

[43] No other references include this name. *LPD*'s main pronunciations are, according to "A Quick Guide to the Dictionary," those "recommended as models for learners of English" (p. viii).

[44] See n24 above.

[45] A *w* in italic type shows that it is not sounded.

[46] This word is included in *WNCD*[9,10], *WNID*[3], and *OED*[2]. *WNID*[3] records only the [w] form, *WNCD*[9] indicates the possibility of the omission of the glide, and *WNCD*[10] gives the non-[w] form only. *OED*[2] records "Luwian" and "Luian" as variants of "Luvian," but gives the variants no pronunciations.

[47] This is a headword in *OED*[2] and a variant of "Luwian" in *WNID*[3]. The latter dictionary gives "Luian" [ˈluː.jən] as another variant.

[48] From *DAW*[2].

[49] Clearly, she deals with such dialects as GA.

[50] More exactly, [tʰ].

[51] Although Borowsky does not mention it, *ve*[h]*icle* also actually exists (see the references), which might be interpreted as ˈ*ve*.ˌ[h]*icle*, with the [h] at the onset of a secondarily stressed

syllable.

⁵² More exactly, [tʰ].

⁵³ ꞌConsti.ₗ[tʰ]utive is another form (see the references).

⁵⁴ Likewise, the /h/ becomes silent in (b). As respects (c), the /i/'s made unpronounced by the yod dropping mentioned in section 3.1 revive thanks to the resyllabification of the preceding coronal consonants. In the cases of (d), heterosyllabic sequences /t.i/ and /d.i/ produced in the same way as in (c) have changed further into [t͡ʃ] and [d͡ʒ] respectively.

⁵⁵ The second syllable of this word is usually not completely unstressed, which is known by its full, not reduced, vowel (OED² being the only exception) whether the secondary stress mark is shown, as in the American dictionaries, or not, as in the British ones. This will indicate that the word contains two feet, with the consequence that Borowsky's condition would not be met.

⁵⁶ Remember that Kreidler, as quoted in section 2.1, writes "[e]ven before a stressed vowel."

⁵⁷ The variants with their first syllables primarily stressed which were mentioned in n29 are classified as "dubious" cases like ꞌkay̲.ₗak (see n55 above).

⁵⁸ In fact, WNID³ records [ꞌmeɪ.(j)ə] as a "sometimes"-labeled vari- ant of Maya; [ꞌmeɪ.ə] can be regarded as a spelling pronunciation with the underlined part of ꞌMay̲.a sounded literally with the diphthong [eɪ], and [ꞌmeɪ.jə], as one with the underlined part of ꞌMa̲.ya sounded in the same manner— the difference being, here again, that of syllabification. OED², also, records [ꞌmeɪ.ə] as the last alternative, but not [ꞌmeɪ.jə], in spite of the fact that it gives [ꞌmaɪ.(j)ə], or, to put it differently, it accepts both glide and non-glide forms for the [aɪ] type of pronunciation—which would imply that the [aɪ] type is generated in a different way, as represented in (2.6), from the [eɪ] type based on its spelling; as a spelling pronuncia- tion, Maya might be more naturally sounded as [ꞌmeɪ.ə] than as [ꞌmeɪ.jə]. The variants [ꞌneɪ.ɪv] and [ꞌneɪv] that EPD⁴·¹³ record for "naïve" and "naive" (see n23 above) are clearly owing to their spellings.

⁵⁹ The acute accent in the phonemic representation of Japanese shows the location of the "accent nucleus."

⁶⁰ The ways the two glides behave apear different: the process of (4.4) is seen to go one step further than that of (4.3); there seems to

be, in Japanese, a difference of status as a diphthong between /ɐi̯/ and /ɐu̯/—/u̯/ seems to be more independent than /i̯/.

[61] In Japanese, closed syllables are restricted to two cases: the closing consonant is a nasal, or the first part of intervocalic geminates.

[62] The last example in (4.7) is not from the work, but from Waseda (1989, 27). This language has no other glides.

[63] The last row of each representation is that of "melodies," associated with subsyllabic constituents in the third row—"O" for the onset, "N" and "n" for the first and second morae of the nucleus, and "C" for the coda, with syllable breaks also added—which are, for convenience, then connected by broken lines with the segments in the second row. The long vowel [ɑ:], which has been phonemicized as /aə̯/, is represented in (4.8) as bimoraic /a/; it seems to be, however, of no significance.

[64] I express my thanks to Mr. Kensuke Nanjo (Konan University) for pointing out the markedness-related matter to me.

[65] However, it is not yet clear whether the two traits are correlated or not.

Works   Cited

Borowsky, Toni. J.   1986.   *Topics in the Lexical Phonology in English.*
    Diss.   U of Mass.   UMI, 1990.   8701140.

CIDE.   1995.   *Cambridge   International   Dictionary   of   English.*
    Cambridge: Cambridge UP.

CPDBAE.   = Lewis 1972.

DAW².   = Mangold 1974².

EPD⁴.   = Jones 1937⁴.

—— ¹³.   = Jones 1967¹³.

—— ¹⁴.   = Jones 1988¹⁴.

—— ¹⁵.   = Jones 1997¹⁵.

Gimson, A. C. and A. Cruttenden.   1994.   *Gimson's   Pronunciation   of*
    English.   5th ed.   London: Arnold.

Jensen, John T.   1993.   *English Phonology.*   Amsterdam: Benjamins.

Jones, Daniel.   1937.   *An English Pronouncing Dictionary.*   4th ed.
    Tokyo: Maruzen.

——.   1967.   *Everyman's English Pronouncing Dictionary.*   13th ed.   Ed.
    A. C. Gimson.   London: Dent & Sons; New York: Dutton.

——.   1988.   *English Pronouncing Dictionary.*   14th ed.   Ed. A. C.
    Gimson.   Rev. and supp. Susan Ramsaran.   Cambridge: Cambridge UP.

——.   1997.   *English Pronouncing Dictionary.*   15th ed.   Eds. Peter
    Roach and James Hartman.   Cambridge: Cambridge UP.

Kenyon, John Samuel and Thomas Albert Knott.   1953.   *A Pronouncing*
    Dictionary of American English.   Springfield: Merriam-Webster.

Kreidler, Charles W.   1989.   *The Pronunciation of English: A Course Book*
    in Phonology.   Oxford: Blackwell.

LDCE².   1987.   *Longman Dictionary of Contemporary English.*   2nd ed.
    Harlow: Longman.

—— ³.   1995.   *Longman Dictionary of Contemporary English.*   3rd ed.
    Harlow: Longman.

Lewis, Jack Windsor.   1972.   *A Concise Pronouncing Dictionary of British*
    and American English.   London: Oxford UP.

Lindsey, Geoff.   1990.   "Quantity and Quality in British and American
    Vowel Systems."   *Studies in the Pronunciation of English: A*
    Commemorative Volume in Honour of A. C. Gimson.   Ed. Susan Ramsaran.
    London: Routledge.   106-18.

LPD. = Wells 1990.

Mangold, Max, et al., eds. 1974. *Duden-Ausspracheworterbuch: Worterbuch der deutschen Standardaussprache.* 2. Aufl. Der große Duden: Bd. 6. Mannheim: Bibliographisches Inst.

Nakao, Toshio. 1985. *On'inshi [Phonological History].* Eigogaku Taikei 11. Tokyo: Taishukan.

NDAEP. = Silverstein 1994.

OED². 1989. *The Oxford English Dictionary.* 2nd ed. London: Oxford UP.

PDAE. = Kenyon and Knott 1953.

Silverstein. 1994. *NTC's Dictionary of American English Pronunciation.* Chicago: National Textbook Company.

Waseda, Mika. 1989. *Ekusupuresu Hangariigo [Express Hungarian].* Tokyo: Hakusuisha.

——. 1994. *Hangariigo no On'in to Keitai Nyûmon [An Introduction to Hungarian Phonology and Morphology].* Osaka: Osaka U of Foreign Studies.

Wells, J. C. 1982. *Accents of English.* 3 vols. Cambridge: Cambridge UP.

——. 1990. *Longman Pronunciation Dictionary.* Harlow: Longman.

WNCD⁹. 1990. *Webster's Ninth New Collegiate Dictionary.* Springfield: Merriam-Webster.

——¹⁰. 1996. *Merriam-Webster's Collegiate Dictionary.* 10th ed. Springfield: Merriam-Webster.

WNID³. 1993. *Webster's Third New International Dictionary.* Springfield: Merriam-Webster.

Yamamoto, Takeshi. 1996a. "A Study on English Syllabification." Unpublished MA thesis. Kyoto U, Kyoto.

——. 1996b. "Eigo no Watarion ni Kansuru Ichi-Kôsatsu [An Inquiry Concerning the Syllabification of Glides in English]." *On'in Kenkyû: Riron to Jissen.* Ed. On'inron Kenkyûkai. Tokyo: Kaitakusha. 129-32.

——. 1997. "Eigo ni Okeru Shiin Renzoku to Onsetsu Kôzô [Consonant Clusters and Syllable Structure in English]." *Dai-115-kai Nihon Gengo-Gakkai Taikai Yokôshû.* Kyoto: Ling. Soc. of Jpn. 252-57.

（山本 武史、京都大学大学院博士後期課程）

On the Syllabification of English Intervocalic Glides

Takeshi YAMAMOTO

Summary

In this paper, we discuss such phonological processes as follows, which seem to be caused by the resyllabification of intervocalic glides:

(1) a. ˈMa.ya → ˈMay.a; ˈlaw.yer → ˈlawy.er; ˈbuo.yant → ˈbuoy.ant
         [ˈmɑː.jə]   [ˈmaɪ.ə] [ˈlɒː.jɪ]   [ˈlɔɪ.ɪ] [ˈbuː.jənt]   [ˈbɔɪ.ənt]

     b. ˌKa.wa'saki → ˌKaw.a'saki; ˈlee.ward → ˈleew.ard
         [ˌkɑː.wəˈsɑːki] [ˌkæ̯.əˈsɑːki] [ˈliː.wɪd]   [ˈluː.ɪd]

(2) a. na.ˈive → na(y).ˈive   b. Ra.ˈul → Ra(w).ˈul
         [nɑː.ˈiːv]   [naɪ̯.ˈiːv]   [ɹɑː.ˈuːl]   [ɹæ̯.ˈuːl]

(3) a. be.ˈyond → beˈyond   b. ˈLu.wian → ˈLuwian
         [bɪ.ˈjɑːnd] [bi.ˈɑːnd]   [ˈluː.wiən] [ˈluː.iən]

The intervocalic glide, in each case, is resyllabified from the onset into the rhyme of the preceding syllable, against the widely accepted "onset maximality."

What constitutes this resyllabification, it is concluded, are the two phonological characteristics of English, namely its leftward directionality of the spreading of high vowels and its relatively weak requirement of onsets.

It is also mentioned that Japanese and Hungarian exhibit a striking contrast with English in glide insertion, which implies that the former two have a rightward directionality in the spreading and a stronger requirement of onsets than the latter one.