Some Remarks on *Hankul* Transcriptions of Middle Japanese

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On the occasion of the founding of the Hwunmin Cengum Society in this most appropriate UNESCO International Year of Languages (2008), I offer the following brief observations to show that King Seycong's alphabet was not only a boon that enriched the lives of the Korean people but also a tool of practical learning that shed light beyond the borders of the peninsula. Since new research has appeared since such scholarly studies as Cho 1970, Hamada 1970, and Lange 1969, 1973, I also take this opportunity to explain the relationship between some current issues in Japanese historical linguistics and the *hankul* materials.

The key Korean texts span a period of more than three centuries. They consist of the following four works:

1492	*Ilopha* = [Kôzi go-nen Tyôsen-ban] Iroha
1501	*Haytong ceykwuk i* = Kaitô syokoku ki (Sin Swukcwu, comp. ?1471)
	including the appendix *Eum pen'yak*
1673	*Chep-hay sin-e* = Syôkai singo
?1700	*Waye* ^{l}*yuhay* = Wago ruikai

The *Ilopha* is of special interest because it not only tells us much about the pronunciation of Japanese at the end of the 15th century but also helps us understand much earlier stages of the language. In particular, it has important implications for the question of how the so-called *kô-otu* distinctions of Old Japanese collapsed (Lange 1969, 1973).

In the *man'yōgana* orthography of 8th-century Japan, it was usual for several different Chinese characters to be used interchangeably to represent the same syllable; however, for certain syllables, the set of characters can be partitioned into

two subsets such that, in texts of similar date and provenance, the words containing the syllable transcribed with members of each subset are different. Isizuka Tatumaro, a student of the famous Motoori Norinaga (1730–1801), was probably the first person to realize that this pattern of complementary distribution implied that, for the writers of those texts, there were two phonemically distinct syllables where later stages of the language had just one. This fact was rediscovered and clarified in the 20th century by Hasimoto Sinkiti (see Yasuda 1980) and has since been a subject of sustained investigation. There are still some disagreements among linguists concerning the features that made the two types of each exceptional pair of OJ syllables different, the dates after which the two types merged for each pair, and the phonetics of the syllables resulting from the mergers. In my opinion, the correct solution to these questions was provided in large part by Roland A. Lange in his 1973 study of Old Japanese phonology.

The critical OJ syllables all end in the vowels *i*, *e*, and *o*. In my interpretation of Lange's results (illustrated in Table 1), the difference between the A and B types of such syllables is best accounted for by the presence or absence of an intrasyllabic glide. Phonemically, syllables for which two types are not indicated by *man'yōgana* usage consisted simply of a consonant plus a vowel. But how were these syllables, and those resulting from the neutralization of the A-B distinctions, realized phonetically? For several reasons having to do with internal reconstruction, I think they contained audible but non-distinctive glides.

A-type (*kô-rui*)	**Neutral**	**B-type (*otu-rui*)**
mi 'three'	*ti* 'thousand'	*mwi* 'body'
mye 'woman'	*te* 'hand'	*me* 'eye'
	= [t^{y}e]	
kwo 'child'	*po* 'ear (of grain)'	*ko* 'this'
	= [p^{w}o]	

Table 1. Examples of Old Japanese syllables

As Lange first noted, the *Ilopha* of 1492 provides direct documentary evidence of an intrasyllabic glide in Late Middle Japanese syllables ending in *e*. In Figure 1, I have spliced together the passages in the original document (now available on-line) showing *hankul* transcriptions of Japanese syllables. In Figure 2, I have rearranged the transcriptions in the Iroha section of the document so that syllables with the same consonants and vowels can be easily compared. Table 2 shows additional words transcribed in the text.

Notice first of all the instances in which the Japanese syllable ends in *e*. In each case, the Japanese vowel is rendered by Korean ㅕ /ye/ or ㅖ /yey/—the author seems to use both interchangeably. The same is the case in the later *Chephay sin-e*. The fact that both vowel signs are used may be taken as evidence that the Middle Korean vowel was front rather than central, as is it today, and may thus shed some light on the idea of a Middle Korean vowel shift. But for Japanese, the important point is the *y* on-glide in the Korean transcription of every *e*-ending syllable. The contrast $y \neq \emptyset$ before *e(y)* was and remains phonemic in Korean, but we know that it ceased to be phonemic in Japanese after the 8th century; hence, the consistent use of the on-glide in the Korean transcriptions must indicate a non-distinctive but invariant phonetic feature of the Middle Japanese vowel /e/.

This automatic palatalization of *e* is by no means the only important feature of Middle Japanese phonology revealed by the *Ilopha*. Notice also the exceptional way that the Japanese syllables *se* and *zu* are transcribed. This is because they both occur in the word *sezu* 'not do' in the Iroha poem, with a so-called *dakuon* obstruent in medial position. The Korean transcription not only uses ㅿ /z/ for the initial of Japanese *zu* but also a closed syllable, *syen*, for the preceding Japanese *se*, thus corroborating the well-known hypothesis that all *dakuon* obstruents were prenasalized. In fact, this prenasalization, which can be deduced independently on the basis of internal reconstruction and dialect comparisons, is indicated in every place in the *Ilopha* where Japanese has a *dakuon* obstruent. Like *sezu*, the words *hodo* and *mede* in the supplementary section are written with initial syllables closed with Korean *n*. Furthermore, for *haha* 'mother' (written in the text as two conjoined *katakana* ノヽ), we find Korean *han* for the first syllable. The medial *h* of the modern word *haha* has long been recognized as unusual because *h* regularly becomes *w* before *a* in word-medial position. It is therefore most significant that, according to the *Ilopha*, this word was pronounced *hanpa* or *hanba* in Late Middle Japanese.
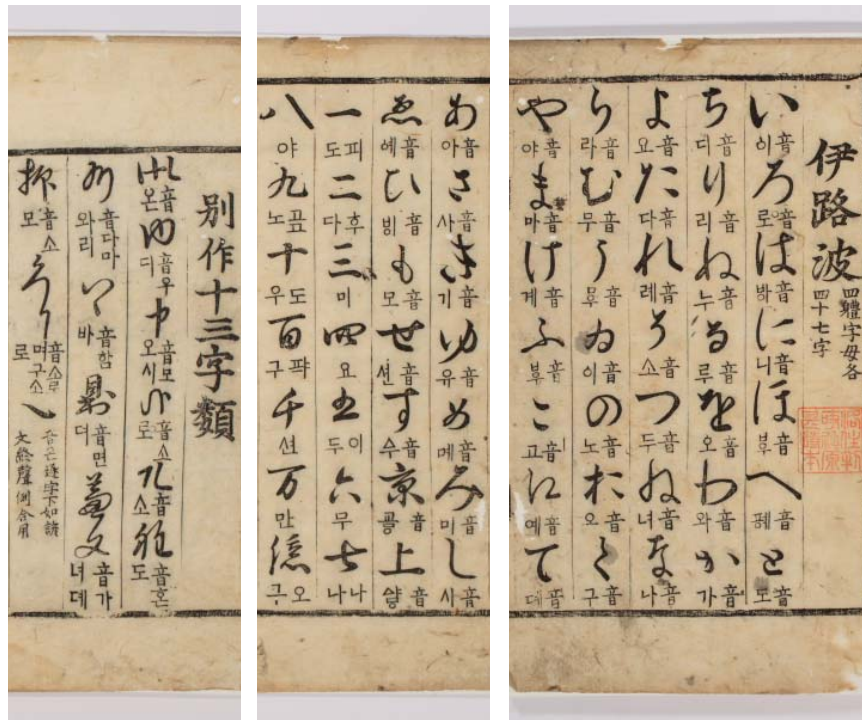
Figure 1. *Ilopha* **transcriptions of 1492**

w-	r-	y-	m-	h-	n-	t-	s-	k-	Ø-	
わ와	ら라	や야	ま마	は	な나	た다	さ사	か가	あ아	-a
ゐ위	り리	—	み미	ひ	に니	ち디	し시	き기	い이	-i
—	る루	ゆ유	む무	ふ	ぬ누	つ두	す	く구	う	-u
ゑ예	れ례	—	め몌	へ꼐	ね녀	て뎨	せ션	け계	え예	-e
を오	ろ로	よ요	も모	ほ	の노	と도	そ소	こ고	お오	-o

Figure 2. Rearrangement of Iroha syllables

京	kyou		上	zyau	
一	hito	피도	二	huta	다
三	mi	미	四	yo	요
五	itu	이두	六	mu	무
七	nana	나나	八	ya	야
九	kokono	고고노	十	towo	도우
百	hyaku	혀구	千	sen	셴

万	man	만	億	oku	오구
御	on	온	内	uti	우디
申	moosi	모오시	候	soorou	소로
そ	so	소	程	hodo	혼도
給	tamawari	다마와리	はは	?hanpa,?haba	함바
目出	mede	면뎌	兼而	kanete	가녜뎨
仰	somo	소모	候へく候	sooroubeku soorou	소로며구소로
ん	音은遂字下如諺文終声例合用	은			

Table 2. Supplemental vocabulary

The *Ilopha* also provides indirect evidence of an intrasyllabic glide in Middle Japanese syllables ending in *o*. The author did not explicitly indicate a *w*-glide in *hankul*, and it would indeed have been difficult to do so. But the distinction between *o* ㅗ /wo/ and *alay a* ㆍ /o/ was still active in Korean around 1492, so the fact that he chose /wo/ and not /o/ may be significant, indicating that he heard [ʷo] with an onset for Japanese /o/ more often than not. This hypothesis is supported by the observation that, in the Iroha section of the text, we find 오 for BOTH を and お even though we know independently that both syllables were pronounced [wo] at this time. Note too that the word *moosi* 'humbly say' is transcribed /mwo.wosi/ though it comes from *mausi* and was *mɔɔsi* at the time of the Portuguese transcriptions a century later. Since LMJ ɔ must have been quite close phonetically to *alay a*, the fact that the author never uses *alay a* suggests that he thought it important to use the same *hankul* vowel signs for Japanese syllables in the same rows of Figure 2.

It is important to observe that, in the Iroha section of the text, each syllable is treated as a separate word. In actual speech of the time, the phrase いろは would have been pronounced *iro wa*, not *iro ha*, as it was transcribed; にほへと would have been pronounced approximately *niwoyẽdo*, not *nihoheto*; and so on. In this part of the text, the Iroha is merely the prescribed order for reciting syllables, not a meaningful poem. In the supplemental section, on the other hand, whole words are transcribed as they actually sounded. For instance, no attempt is made to transcribe the initials of both the *ho* of *hodo* and *wa* of *tamawari* with *hankul* ᅙ /W/ even though both the *kana* used to write these syllables, ほ and は, lie in the same column of Figure 2.

This difference in the two parts of the document is important for understanding why, in the supplementary list, *towo* 'ten' is transcribed /two.wu/ instead of *two.wo. For this word, the author needed a way to indicate a medial *w*. (This was not necessary for *moosi*, in which *oo* had arisen from *au*, not *owo*, so no medial *w* was heard.) By writing /two.wu/, he cleverly got around a difficulty in *hankul* by using the natural TRANSITION from mid /wo/ to high /wu/ to simulate the Japanese glide. The author also used MK /wu/ for LMJ /o/ when transcribing the syllable *ho* in the Iroha section, but this was probably for a different reason: he may have wanted to avoid /Wwo/ because of the ongoing sound change (described in Martin 1992:54) MK /Wwo/ > /Gwo/.[1]

Returning for a moment to the A-B distinctions of Old Japanese, the B-type *e*- and *i*-ending syllables both had low frequencies of occurrence and were concentrated in word-final position, especially in inflected forms of verbs and adjectives. Consequently, it has long been suspected that all such syllables arose from earlier vowel sequences:

Ce < *Cai
Cwi < *Cui *or* < *Coi

But internal reconstruction suggests that B-type *o*-ending syllables plus *i* were the source of some B-type syllables ending in *e* as well as in *i*. What conditioned these two developments? Frellesvig and Whitman (2004) have hypothesized that B-type *o*-ending syllables themselves had two distinct origins in proto-Japanese:

Ce < *Cai *or* < *Cəi
Cwi < *Cui *or* < *Cɨi

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[1] For four reasons, I disagree with Martin (1987:45) when he concludes the different ways the *Ilopha* author wrote Japanese /oo/ were based on the Japanese convention of writing *ou* for /oo/ regardless of its source (*ou*, *au*, *oho*, *owo*, and so on). It is true that the contrast of /ou/ and /oo/ was being lost (both sounding like [oo]); that was no doubt why the *Ilopha* author felt it was all right to transcribe *towo* as /two.wu/. But, first, it is clear that the author tried to render the actual pronunciations of whole words in the supplementary list (unlike words in the Iroha section). Second, the "*ou* for /oo/" explanation does not cover the transcription of *ho* as /Wwu/ in the Iroha section. Third, the spelling /mwo.wosi/ violates the Japanese convention no matter which stage of *moosi* one believes is being transcribed. Finally, the author transcribed *soorou* < *sɔɔrɔɔ* < *saurau* 'serve' with just /wo/, ignoring the long vowels altogether.

Although this theory solves the conditioning problem at a stroke, it also has drawbacks. In particular, there are at least half a dozen cases in which B-type syllables ending BOTH in *e* and *i* occur for the same morpheme.

1. *ke* 'tree' ~ *kwi* id. : *ko-dati* 'stand of trees'
2. *mwi-* 'turn' ~ *me-gur-* 'turn, revolve' : *mo-topo-r-* 'turn around'
3. *nobwi-* 'extend, lengthen (intrans.)' ~ *nobe-* 'extend (trans.); state' : *nobo-r-* 'climb'
4. *komwi-* 'put in (a container)' ~ *kome-* id. : *komo-r-* 'surround, hide away'
5. *ke-* 'melt away, vanish' ~ *kwi-ri* 'fog, mist' : *ko-s-ame* 'drizzle'
6. *se* 'back' ~ *si-ri* 'buttocks' : *so-muk-* 'turn away from'

To handle these cases, the Frellesvig-Whitman theory requires two historically separated reductions of vowel sequences: one before reconstructed pJ *ɨ lowered to *ə, and one after. The Old Japanese evidence can then be interpreted as the result of dialect mixture.

But if dialect mixture of some kind must be admitted, there is another way to explain the data for which reconstructing an extra pJ vowel is unnecessary:

$$\text{OJ } Cwi < \text{*Cui } or < \text{*Cwe} < \text{*Coi}$$
$$\text{OJ } Ce < \text{*Cai } or \leftarrow \text{*Cwe} < \text{*Coi}$$

On this view, the reduction of B-type *o*-ending syllables plus *i* was regular but resulted in an intermediate stage with the vocalic nucleus *we*. In some dialects, this underwent raising to *wi*; in others, it lost the glide and became *e*. Later, forms from one kind of dialect were occasionally borrowed into dialects of the other kind.

This solution was proposed in Unger 1977 [1993], where I pointed out that the Okinawan reflexes of OJ B-type *kwi* have either a velar or palatal stop according to whether the independently deduced pre-OJ reconstruction has *koi or *kui. The Okinawan reflexes of pre-OJ *koi behave like those of *kai and unlike those of pre-OJ *kui or simple *ki.

Main-island Japanese	Old Japanese	pre-Old Japanese	Okinawan
oki- 'arise'	*okwi-*	*oko-i-	*uki-*
uke- 'receive'	*uke-*	*uka-i-	*uki-*
tuki 'moon'	*tukwi*	*tuku-i	*çici*
tuki- 'arrive'	*tuki-*	*tuk(Ø-)i-	*çici-*

Historically, this means that the palatalization of velars adjacent to high vowels in

Okinawan occurred while the reflexes of pre-OJ *koi did not yet have high vowels. In fact, Okinawan words transcribed in *hankul* in the *Eumpen'yak* of 1501 show that OJ *e* had raised to [ɨ] by that time but had not merged with /i/, and that palatalization of /ki/ had not yet occurred (Hagers 1997). A Korean source thus lends strong support to the version of the sound change I proposed. Although the *Eumpen'yak* only records contemporary Okinawan, the information it preserves has important implications for much more ancient stages of the Japanese language.

Resuming the discussion of the *Ilopha*, notice next that all the Japanese syllables in the *u* row of Figure 2 are written with Korean [u] ㅜ, not [ɨ] ㅡ. The high back vowel in most Japanese dialects is noticeably unrounded, and Lange (1973:117) reconstructs OJ /u/ simply as a "high back vowel" even though the Middle Chinese vowel that corresponds to OJ /u/ in the *man'yōgana* is typically rounded. Recently, Miyake (2003:211) has argued less cautiously that OJ /u/ was distinctively rounded and that /u/ became unrounded only during the transition from Late Middle to Early Modern Japanese. I doubt this is what happened because it is hard to believe that such a late historical change could have affected so many widely scattered dialects. Superficially, the *Ilopha* transcriptions and those in the *Chep-hay sin-e* seem to lend support to Miyake's claim, but a closer examination of the data leads, I think, to a different interpretation.

The principal allophones of Japanese /u/ in most dialects today are [ɨ] after [s, z, n, y] and [ɯ] elsewhere. Both allophones are unrounded, though [ɯ] may be accompanied by "lip compression in careful speech" (Vance 1987:10–11). Martin (1987:7) thinks that pJ *u must originally have been rounded because he is uncomfortable with the idea of a language that has only an unrounded high back vowel; he also thinks (1987:18) that differences between *Chep-hay sin-e* (1673) and *Waye ˡyuhay* (?1700) show that Japanese /u/ became unrounded after sibilants and affricates between their years of composition. But can we be sure that the Korean authors of the *Ilopha* and *Chep-hay sin-e* intended their use of ㅜ rather than ㅡ to mean that the Japanese vowel was phonetically round? Koreans today regularly render J [ɯ], which they hear as farther back than K /u/ = [ɨ], as K /wu/ = [u], saving K /u/ just for the J [ɨ] allophone. For example, the name of the 20th-century Japanese author Akutagawa Ryûnosuke is commonly written in *hankul* as 아쿠타가와류우노스케, with /wu/ except after /s/. Since Koreans today feel it is natural to transcribe Japanese in this way, why should we suppose that Koreans of earlier centuries felt differently?

Another example of how Koreans interpret the allophones of Japanese /u/ is

seen by comparing how they adopt the English word *flash*, which becomes K /phullaysi/, and the Japanese version of the same word, which yields K /hwulasi/ (Iverson & Lee 2006:71). There is no vowel between /f/ and /l/ in the English word, and both Japanese and Koreans insert a vowel to break up this cluster; but when Koreans borrow the Japanese form, that vowel is heard as Korean /wu/, not /u/. Of course, the phonemic difference between /wu/ and /u/ is neutralized in modern Korean after labials, but what is significant here is that that the Japanese vowel is written as if it were distinctively rounded, which it most certainly is not from a strict phonetic standpoint. It may be added that *Waye ʲyuhay* uses /wu/ for Japanese /u/ ONLY when it follows sibilants and affricates, not when it follows /n/ or /y/, where the [ɨ] allophone is also heard.

From all these considerations, I think the correct conclusion is that, as we saw before, the author of the *Ilopha* wanted to use the SAME *hankul* letter consisently for each Japanese vowel to the greatest extent possible.[2] His preference for /wu/ for Japanese /u/ was probably due to the same phonetic considerations that persuade modern Korean writers to choose it today. His choice may also have been swayed by the difficulty he would have had transcribing Japanese /yu/ in *hankul* if he chose MK /u/ rather than /wu/ as his standard transcription of J /u/.

Much more can be said about *hankul* transcriptions of Middle Japanese, but even this brief discussion shows that their proper study is by no means a simple matter. It requires careful consideration of Korean phonology and its historical development as well as the graphic relationships between Korean and Japanese syllables and words. Nevertheless, such effort is richly rewarded: *hankul* materials provide a window on the history of the Japanese language unequalled in scope until the the Portuguese documents of the 16th and early 17th centuries.

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[2] Sometimes he could not: when transcribing Japanese /N/ ん, he used /u/, which we know was phonetically more realistic for this particular Japanese syllable. Clearly, the author felt free to make use of the Korean distinction /wu/ ≠ /u/, but only when necessary.

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