Part VI  Varieties of Korean
1 Introduction

Old Korean (OK) is generally defined as the language of the Unified Silla (668–935) state (K. Lee 1961, 1972; Lee and Ramsey 2011). Based on conservative properties of the language recorded in Koryŏ period interpretive kwukyel, Nam (2010b, 2012) proposes a new periodicization which extends the end date of OK to the Mongol invasion in the mid-thirteenth century. We retain the traditional periodicization in this chapter, while acknowledging that much of our knowledge of OK comes from materials dating from the Koryŏ (918–1392) period, usually included in Early Middle Korean (EMK). Some treatments of OK also include materials from the Three Kingdoms period prior to 668. Because many details of the linguistic situation—including the basic question of the relationship between the language or languages spoken in the shifting territory controlled by Koguryŏ, Paekche, and Silla—remain unclear, the discussion here focuses on materials that can be associated with Unified Silla or the earlier Silla kingdom, but in the following section I briefly discuss what can be surmised about the linguistic background of the Three Kingdoms period.

2 The Three Kingdoms Period

The Dongyi “Eastern barbarian” sections of the Wei shu section of the Sanguo zhi (late third century CE) and the Hou Han shu (fifth century CE) identify the so-called Samhan “Three Han” (三韓 Sanhan) peoples in the southern part of the Korean peninsula: Mahan (馬韓) in the west central region, Chinhan (辰韓 Chenhan) in the southeast, and Pyŏnhan (弁韓 Bianhan) in the south. Korean historians identify these groupings as the antecedents of Paekche (百濟), Silla (新羅), and Kaya (加耶) respectively. Mention of Samhan individuals and locales
appears as early as the first century CE in Chinese sources (Sungsi Lee 2013). The inventory of gravekeeper settlements listed on the 414 CE stele memorializing Koguryo king Kwanggaeto (高句麗) lists both Koguryo 高句麗 and Han 韓 villages. This indicates that “Han” had contemporary significance as a general ethnonym, and that Han were distinguished from Koguryo. The Wei shu and Hou Han shu suggest a certain amount of linguistic diversity within the Samhan region around the third century. The Wei shu describes the language of Chinhan as “not the same as Mahan” (其言語不與馬韓同). It describes the Pyŏnhan and Chinhan populations as “living intermingled together” (幷辰與辰韓雜居), and their languages and customs as similar (言語風俗有異). Korean linguists have interpreted these statements differently. Toh (1980, 2008) in particular finds differences between the vocabulary revealed in placenames associated with Mahan/Paekche and Chinhan/Silla.

The Wei shu lists fifty-four Mahan settlement names transcribed with Chinese characters as phonograms. As Toh (2008, 234–235) points out, most are disyllabic: thirty-four are transcribed with two syllables, ten more with the combination of a disyllabic toponym and a suffix. One of the suffixes is identifiable as *-pieliai 卑離, usually related to the Paekche word puri/byulix < 夫里 > ‘town’ recorded in the toponyms collected in the twelfth century Samkwuk saki (三國史記 Record of the Three Kingdoms). This word is often compared to Late Middle Korean –Wul  IConfiguration:  ‘town’ and Silla (Samkwuk saki) -pir < 火 > (vernacular reading), -por < 伐 > ‘town.’ The vowels are unclear, but the data suggest one difference between the languages of Mahan and Chinhan: the latter seems to have already undergone a process of contraction of disyllabic roots with a medial sonorant. This contrast is also shown by LMK kwŏm ‘bear’: kwŏma id. and LMK náyh ‘river’: noro (cf. Silla (Samguk sagi) na 那), in the place name Kwománoro ‘Kongju’ (orig. ‘Bear River’ 熊川) recorded in the 1446 Yongpi echen ka. The Paekche area place name retains the uncontracted disyllables into the fifteenth century (cf. Kim et al. 1998, 43–44).

The Koguryo placenames recorded in the Samkwuk saki have been interpreted to show that there were significant differences between the language of Koguryo and the language(s) of the Samhan region. K. Lee (1961/1972) made the influential proposal that Koreanic languages should be divided into “Puyŏ” and “Han” branches, with the former branch, including Koguryo, closer than the latter to Japanese. Other scholars, such as Beckwith (2007) consider Koguryo to be a variety of Japonic. Both of these views are based on the assumption that the placenames grouped in the Koguryo gazetteer chapters 35 and 37 of the Samkwuk saki all represent the same language. This is comparable to interpreting the Delaware (Lenape), Dutch, English, French, Greek, Iroquoian, and Latin placenames found in New York State in the U.S. as all representing a single original language. The language would be very strange indeed, with unrelated doublets for many words. We find exactly this among the Samkwuk saki placenames. For example Koguryo (Samkwuk saki) 暗, interpreted as mir or mit and Silla 推, interpreted asmir–on the basis of the vernacular reading of this character as mir > mil (LMK mil– ‘push’) are both glossed as ‘three.’ As many scholars have pointed out, the word indicated by these transcriptions is a good fit with proto-Japonic *mi(t) ‘three.’ But the Samkwuk saki also attests the phonograms 懂 sir/sit and 史 si/sriX associated with ‘three.’
other scholars (e.g., Ch’ón 1990, 138) have pointed out, these spellings are a good fit with LMK séyh ‘three.’ They are also a good fit with OK ordinal sayd-ap ‘third’ (3-ordinal) posited by Lee (2010) on the basis of transcriptions from the late seventh or early eighth century on a mokkan (inscribed wooden slip) excavated from the Mirok-sa temple site in Iksan. It seems unlikely that a single language would have two unrelated words for ‘three,’ unless one comes from a foreign source (as is the case with modern Korean sey ‘three’ versus Sino-Korean sam ‘three’). The Samkwuk saki placenames thus appear to include etyma in a direct relationship of ancestry to later Korean, such as the words related to LMK séyh ‘three,’ as well as etyma related to some other language or languages.

Other than placenames like the preceding, with all of their problems of interpretation, linguistic data on the languages of Koguryŏ and Paekche are vanishingly scarce. The Chinese History of the Southern Dynasties (Nan shi, mid seventh century) states that the language (and clothing) of Paekche was for the most part similar to Koguryŏ (言語服章略與高麗同), and that Paekche interpreters were used to communicate with Sillans (言語侍百濟而後通焉). These observations suggest that at least from a contemporary Chinese standpoint, the languages of the three kingdoms were similar.

3 Sources for Old Korean

Our direct sources for Old Korean are limited to materials written with Chinese characters. Among them a primary distinction must be made between materials written by earlier Chinese and Japanese speakers and materials written by speakers of earlier Korean. The Wei zhi materials cited above fall into the former category, while the Mirok-sa mokkan and other inscriptive materials fall into the latter. Toponymic and other proper name transcriptions attested in the Samkwuk saki and other post-OK texts fall into a difficult third category. These sources record material originating in the OK period (or before), but most often the meaning of the original etymon is unclear. At the very least, though, spellings such as the vernacular or hwun (訓) reading for 推 ‘push’ as mil show that a native Korean reading tradition was at work in the Silla-associated proper name transcriptions in the Samkwuk saki.

Lists of OK sources, beginning from the Three Kingdoms period, are provided by Kim et al. (1998, 49–50) and Nam (2012, 42–47). Inscriptive materials are particularly valuable because they are free from the errors of later copyists. Such materials include inscriptions on stone and metal as well as mokkan typically inscribed with ink. The earliest inscriptive materials are associated with Koguryŏ; among datable texts the King Kwanggaet’o stele (414) contains numerous non-Sinitic placenames transcribed using Chinese characters as phonograms. Previous scholars have claimed to find traces in the text of this monument of the vernacular Korean itwu writing system described below, but Y. Lee (2006) critically reviews this scholarship and concludes that all of the alleged itwu features in the stele text are consistent with contemporary Chinese except possibly for the use of the character 之 as a sentence-final suffix or particle (cf. K. Lee 1981).

Korean scholars refer to Chinese characters used to write Korean by Koreans as chaca 借字 ‘loan characters,’ and divide loan character orthography (chaca phyokipep)
into proper name orthography (koyu myengsaphyokipep 固有名詞表記法), idu 吏讀 (literally, ‘clerk readings’), and hyangchal 郷札 ‘hyangka writing.’ Nam (2012) adds a fourth category: the kwukyel 口訣 vernacular glossing system for Chinese Buddhist texts. While the oldest surviving kwukyel texts in Korea probably date from EMK, we know that kwukyel glossing orginated in the Silla period, based on materials preserved in Japan. Below I describe each of these writing practices.

### 3.1 Proper name orthography

Koyu myengsaphyokipep denotes the systems for spelling Korean place and personal names exemplified by the transcriptions cited from the Samkwuk saki in Section 2. These transcriptions use both Chinese characters deployed as phonograms based on their Sino-Korean sound value, such as 悉 used to spell the syllable sit (Middle Chinese) or sir (Sino-Korean), and as phonograms based on their vernacular or hwun 訓 reading in Korean. We can tell from this spelling practice that Korean, like other languages of premodern East Asia, used two strategies for representing their language with Chinese characters: reading them for their sound value in Sino-Korean, ultimately based on the Chinese pronunciation (um 音 readings), or reading them based on the vernacular equivalent of the Chinese morpheme expressed by the character (hwun 訓 readings).

### 3.2 Itwu 吏讀

Itwu is the longest used and best known loan character writing system. Nam (2012: 42) defines it as any use of loan characters to write Korean prose. As such itwu shows great variation: while the text of the King Kwangae’t’o stele is close enough to contemporary Chinese to make it debatable whether it contains itwu features at all, a Koguryŏ inscription from less than a century later, the Chungwŏn Koguryŏ stele (中原高句麗 495?) shows the defining feature of itwu: it was clearly written to be read in Korean, not Chinese.4

The Chungwŏn stele is a 2.03 x 0.55 meter stone monument located in Chungju-si, Chungcheong buk-do. In 1979 it was determined by a commission of scholars to be associated with Koguryŏ. This text contains a number of itwu-like features, for example the sentence:

(1) 建立 處 用者 賜 之 (side 1, lines 4–5)

build place use-r give this

‘(I) give the place built to the users.’

Superficially this is a left dislocation structure, with the direct object ‘the place built’ resumed by the pronoun 之, which is ultimately utilized in itwu as a sentence final particle, read in LMK as indicative -ta. But as Nam (2009, 182) points out, in (1) both direct and indirect object precede the verb, following Korean rather than Chinese word order.

In OK proper, that is in Silla texts, itwu emerges as a writing system where Chinese characters are arranged in purely Korean word order. This can be seen in the Namsan sinseng pi (南山新城碑, 591) “New Namsan Castle Inscription,” which
inscribes the vow of the builder of this fortress. Below is the first sentence of this inscription:

(2) 辛亥年 二月 廿六日 南山 新城 作 節 如 法 以 作
591 2nd 26th Namsan new castle make time accord rule INST make
‘On the 26th day of the 2nd month of the year 591 when (I) made the new
castle, (I) made it in accordance with the prescribed method.’

Constituent order in this text is head final, following Korean, not Chinese word order. The direct object ‘new castle’ precedes the verb ‘make,’ as does the adjunct PP ‘in accordance with the rules.’ The loan characters 節 ‘when’ and the instrumental 以 represent functional morphemes which have fixed readings in later itwu, LMK tiGwúy ‘time’ and the instrumental particle  úlwó respectively. But these loan characters are chosen on the basis of their meaning (hwun) rather than their sound (um). We do not know for sure whether the readings, which become known to us for certain only in LMK, date back to OK; all we know is that the characters were used to represent Korean, for they follow Korean word order.

The final step in the development of OK itwu is the use of phonogrammatic loan characters to represent Korean functional morphemes by their sound. The Kalhang-sa pagoda inscription (葛項寺石塔銘, 758) in Gimcheon-si, Gyeongsang buk-do shows this usage:

(3) 二塔 天宝 十七年 戊戌 中 立 在 之
2 pagoda Tianbao 17 year 758 LOC erect-PERF-CONC
姉 姉 妹 三人 業 以 成 在之
brother elder sister younger sister 3 CL deed INST make-PERF-CONC
姉 者 零妙寺 言寂法師 在弥
brother TOP Yŏngmyo-sa Ōnjŏk pōpsa be-CONJUNCTIVE
‘The two pagodas were erected in the 17th year of Tianbao, 758. Three
people, a brother and elder and younger sister created (it) as part of their
practice. The brother was Dharma Master Ōnjŏk of Yŏngmyo-sa temple,
and…’

The loan characters representing the functional morphemes, namely locative 中, perfective 在, conclusive 之 and instrumental 以 have hwun readings, selected for their meaning. The loan character 在 ‘be, exist’ represents the copula in line three, and the perfective auxiliary in lines 1 and 2. In the latter function it is read in later itwu as LMK kye-, the root of the Modern Korean honorific existential verb kyesi-, <kyé-si ‘be-hon’; only the honorific function survives in the modern language. The last loan character in the last line, 弥(彌), however, is read for its sound (MC mjieX), and represents the Korean conjunctive suffix -mye. In this text we see itwu in almost its complete form, with native Korean suffixes and particles written with loan characters selected for their sound or meaning. Loan characters used in this way are known as tho (吐).
3.3 Kwukyel 口訣

Kwukyel is a system for glossing Chinese texts to be read in Korean. It appears to have developed in the seventh century with the importation of Hwaem (Huayan 華嚴) and Yusik (Weishi 唯識) or Yogācāra “consciousness-only” Buddhism into Korea. The development of monastery culture in Silla and the need to teach the vast Mahayana scriptural corpus to a large population of nuns and monks lead to the development of kwukyel as a way to make sutras and sutra commentaries in Chinese accessible in Korean. Although glossing might seem to be merely a system of annotation, kwukyel glossing was much more systematic than that: a text fully glossed in kwukyel is a Korean text, completely readable in Korean. Like Japanese kunten (訓点) glossing practice, which was developed under the influence of Korean kwukyel, this form of making Chinese texts accessible in the vernacular impacted the later development of Korean writing, particularly the practice of embedding Sino-Korean nouns, most often two character compounds, in sentences with native Korean inflecting elements.

The two attested early kwukyel systems correspond to the Hwaem and Yukahayng (Yogācāra/Yújiāxing 瑜伽行) textual traditions. Kwukyel glossing adds loan character glosses, called catho (字吐), in the form of abbreviated Chinese characters (yakcheyca 略體字), to the original Chinese text or lemma. Most catho are also found in itwu in the same function, to spell native Korean functional morphemes such as suffixes and particles. In surviving itwu texts the catho are almost always unabbreviated, but this may be simply an accident of transmission, as surviving itwu texts are typically printed, and associated with political, legal, or biographical registers.

Kwukyel glossing also uses symbol glosses, systems of lines and dots, to indicate morphosyntactic information about the Korean reading of the text. Such morphosyntactic glosses include inversion glosses (yektho 逆吐) that indicate the word order in the Korean rendition of the text, and point glosses (cemtho 點吐) that designate Korean functional morphemes without spelling them out by sound or meaning. Overviews of kwukyel glossing can be found in Nam (1999) and Chung (2006), with a concise description in English in Nam (2012, 46–48). The quantity of kwukyel glossed texts in Korea is still small, but the length of the texts makes them our most extensive source for pre-Hangul Korean. Current ongoing research seeks to uncover additional kwukyel glossed texts among the Buddhist scriptural materials brought from Silla to Japan in the eighth century. Nam (2012, 46–47) lists six catho (character glossed) and six cemtho (symbol glossed) texts for OK and EMK. All but two of the symbol glossed texts cited by Nam date from the Koryŏ period and thus strictly speaking represent EMK, but Nam is correct to point out the archaic nature of their syntax. The two potential Silla-period texts are fascicle 20 of the Cin-pon Hwaem-kyeng (晉本華嚴經, Seong’am Museum collection, ninth or tenth century) and the text known as the Sato-pon Hwaem munuy yokye (佐藤本華嚴文義要訣, Japanese Satō-bon Kegon mongi yoketsu, late eighth or early ninth century). The latter survives only as a reproduction in Japan, and may represent an early attempt to adapt kwukyel glossing to Japanese (Whitman 2009, 2011). However the very existence of this and earlier Japanese kunten glossed texts showing features of Korean kwukyel.
indicates that the Korean tradition is older, and dates back to before the importation of Huayan Buddhism from Silla to Nara in Japan in the first half of the eighth century (Kobayashi 2002, 2006).

Silla and early Koryŏ period kwukyel is of the subtype referred to by Korean scholars as sektokkwukyel 釋讀口訣, interpretive or translation kwukyel. Sektokkwukyel glosses the text so that it can be read entirely in Korean with most of the nominal vocabulary left in Sino-Korean. Such texts are similar—and were probably a direct influence on—the mixed Hangul/Sino-Korean Buddhist texts of the fifteenth century. In later EMK, from the thirteenth century on, sektokkwukyel is replaced by swuntok 順讀 ‘consecutive’ kwukyel. In swuntok kwukyel, a sentence or clause is directly read in Sino-Korean. These units of untranslated Chinese are connected by Korean functional items such as the copula or ho- ‘do/say.’ This way of reading would be similar to reading the Bible in Latin connected by English ‘be’ and ‘do.’ For example, the first two sentences of Genesis would read, “In principio did creavit Deus cælum, et terram. Terra autem was erat inanis et vacua.”

Lee et al. (2005–2009) have published an exhaustively reproduced and annotated edition of the earliest symbol glossed texts, both copies of the Hwaem-kyeng (Avatamsaka-sūtra). They are xylographs, among the oldest in the world, with drypoint (stylus-inscribed) symbol glosses. We can get a feeling for how the symbol glossing system worked with the following example from the first line of fascicle 20 of the Chin-bon Hwaem-kyeng (ninth to tenth century):

(4) 仏子[42(•)][34(•)] 何等[41(•)?]為菩薩摩訶薩

Buddhists-nom what-acc be Bodhisattva Mahāsattva

第八如相 廻向 [11(•), 31(••), 14(•)]

# 8 suchness sign transference be-INF say-ADN-be-ADN when-TOP

‘when Buddhists ask what is the eighth transference (of the marks of suchness) of Bodhisattvas and Mahasattvas.’

The interpretation here is based on Lee et al. (2009, Vol. 4, 61). The annotations after the characters in the lemma have been devised by kwukyel scholars to indicate the position of the symbol gloss. For example, [42(•)] indicates a single dot in the lower lefthand corner of the preceding character, as shown in (5):

(5) a. 仏子

A dot in this position is interpreted as -i (corresponding to the EMK cathoor kwukyel character ﾗ), probably signifying the nominative particle -i (although some scholars have interpreted this gloss in context as marking the vocative particle). The next symbol gloss [41(•)] indicates a single dot in the lower lefthand corner of the character, farther to the left:

b. 何・等

This signifies the accusative particle (corresponding to the kwukyelca乙). It is sometimes difficult to be certain about the placement of the symbol glosses. Lee et al. (2009, Vol. 4, 61) translate the phrase into modern Korean as in (6):
3.4 Hyangchal

_Hyangchal_ refers to the orthography used to write the twenty-five _hyangka_ songs recorded in the _Kyunye cen_ (均如傳, 1075) and the _Samkwuk yusa_ (三國遺事, late thirteenth century). The former is the biography of the poet monk Kyunyŏ (923–973) and contains eleven poems by him from the very beginning of the Koryŏ period. The fourteen songs collected in the _Samkwuk yusa_ date from the seventh to the ninth century.

A salient feature of _hyangchal_ orthography found also in proper noun transcriptions is the practice of writing words and morphemes with two characters, the first used as logograph (hwun) to represent the meaning and the second as a phonogram (um) to represent the final consonant of the morpheme. Numerous examples of this practice can be found in the song _Henhwaka_ 献花歌 collected in the _Samkwuk yusa_ and associated with the reign of King Sŏngdŏk (702–732). The interpretation here follows Nam (2010a).

The combination of _hwun_ and _um_ can be seen in the spelling of _tolpwoy_ (ancestor of -tallay in modern cintallay ‘azalea’), _pahwoy_ ‘crag, rock’ (modern _pawuy_), and _cap-om_ ‘holding.’ In the last example _執_ ‘hold’ represents the meaning of the verb, while 音 (u/o)m represents the verbal nominalizing suffix. In other cases suffixes must be inferred from the syntactic context. For example, in line 2 the phonogram _乎_ spells the verb _ho_ ‘do’ plus the modulator suffix –_wu/o_. This phonogram is used in exactly the same way in _kwukyel_. In this context, _h-wo_ must be taken as modifying _swon_ ‘hand.’ In a _kwukyel_ glossed text, the adnominal ending –_u/on would be spelled out with the appropriate _catho_ (_kwukyelca_ gloss) or _cemtho_ (point gloss), but in the _hyangka_ song the ending is left for the reader to supply. This
reflects an obvious difference in genre: kwukyel glosses abstruse religious texts in a foreign language (Chinese), while hyangchal spells a native Korean text that in many cases was probably familiar to the reader.

As Nam observes, this and other hyangka songs contain grammatical features not found in LMK but attested in kwukyel texts. For example, the sequence cap-om h-wo in line 2 involves the –(u/o)m nominalized form of the verb cap- ‘grab, hold’ followed by the verb ho- ‘do.’ Nam (2010, 21) points out that the pattern V-(u/o)m ho- is attested in kwukyel glosses. Negative 不喩 anti in line 3 is used in kwukyel texts to negate nominal predicate sentences. According to Nam (2010, 24–27) its use here indicates that negation takes scope over the whole adnominal clause: “if it is not the case that you find me shameful.” Finally, Nam’s reading of the predicate in the last line, V-‐m(s)-ta, is a pattern signifying deontic or epistemic necessity widely attested in kwukyel texts, but found only once in fifteenth century Hangul materials (2010, 29–31).

Phonogrammatic spellings in hyangchal and kwukyel have in common the property that, unlike the Hangul orthography of the fifteenth century, they do not represent vowel harmony. Thus the spelling 折叱可 kesk-e in line 4 of the Henhwaka represents the verb kesk- ‘bend, pluck’ plus the infinitive suffix –e/a. In LMK we would expect the allomorph –e after this stem, but OK texts do not distinguish the two vowels. Fifteenth-century spelling is phonemic, but hyangchal and kwukyel are morphophonemic orthographies.

4 Phonology

OK had a vowel system largely similar to LMK, with seven—or as we argue below, eight—vowels, most likely taking part in a tongue root harmony system. The consonant inventory was simpler than LMK and simpler still than Modern Korean. Indirect evidence shows that OK had a pitch accent system similar to LMK or modern Gyeongsang and Hamgyeong varieties.

4.1 Vowels

Older treatments of the OK vowel inventory (e.g. K. Lee 1972; Kim et al. 1998, 73) posit a system built around a [±back] harmonic opposition. Since LMK vowel harmony does not involve such an opposition, this view must claim that Korean underwent one (or more) “vowel shifts” between OK and LMK. More recent work has undermined the philological, historical, and areal bases for the vowel shift hypothesis. Hattori (1975), Vovin (2000), and Ko (2013) reject K. Lee’s (1964) arguments for a vowel shift based on Mongolian loanwords in EMK. Kang’s (1980) reconstruction of the EMK vowel system as represented in the Jitlin lëishi (Kyeylim yusa 鶴林類事, 1103) further calls into question the vowel shift hypothesis. Most important, the interpretation of LMK vowel harmony as a tongue root system (Kim 1993) makes it unnecessary to posit a shift from an earlier [±back] or palatal harmony system. The view that Korean vowel harmony has always involved tongue root harmony fits the areal picture in Northeast Asia (Ko 2012; Ko et al. to appear).

Itō (2007, 267) works back from her analysis of Sino-Korean to propose the vowel system in (8) for the language of Silla at the period when Sino-Korean was established, usually assumed to be the eighth to ninth century.
(8) OK (Silla) Vowel System with LMK equivalents, based on Sino-Korean (Itō 2007, 267)

<table>
<thead>
<tr>
<th>OK</th>
<th>LMK</th>
</tr>
</thead>
<tbody>
<tr>
<td>*i &gt; i [i]</td>
<td>*i &gt; u [i]</td>
</tr>
<tr>
<td>*e &gt; LMK e [ə]</td>
<td>*e &gt; LMK o [ʌ]</td>
</tr>
<tr>
<td>*a &gt; LMK a [a]</td>
<td>*u &gt; wu [u]</td>
</tr>
<tr>
<td>*o &gt; wo [o]</td>
<td></td>
</tr>
</tbody>
</table>

This system is not compatible with a palatal harmony system, as Itō points out. For example, *i would have to alternate with *ə, and *u with *o, but these vowels have the same value for [±back]. They do contrast in height, however, and in languages with tongue root harmony, such as the Tungusic and Mongolic languages spoken adjacent to the historical range of Korean, they or similar vowels contrast for the feature [±retracted tongue root]. Rearranged as an R(etracted) T(ongue) R(oot) system, the inventory in (8) looks like (9):

(9) 

<table>
<thead>
<tr>
<th>+back</th>
</tr>
</thead>
<tbody>
<tr>
<td>*i [+round]</td>
</tr>
<tr>
<td>*e</td>
</tr>
<tr>
<td>*a</td>
</tr>
</tbody>
</table>

The difficulty with this system is that *a must be analyzed as [-back]. A way out of this difficulty is to posit an eighth vowel for OK, *e, corresponding to LMK /ye/. The revised system is given in (10):

(10) 

<table>
<thead>
<tr>
<th>+coronal</th>
<th>+back</th>
</tr>
</thead>
<tbody>
<tr>
<td>*i &gt; LMK i [i]</td>
<td>*i &gt; LMK u [i]</td>
</tr>
<tr>
<td>*e &gt; LMK ye [ja]</td>
<td>*e &gt; LMK o [ʌ]</td>
</tr>
<tr>
<td>*a &gt; LMK a [a]</td>
<td>*u &gt; LMK wu [u]</td>
</tr>
<tr>
<td>*o &gt; LMK wo [o]</td>
<td></td>
</tr>
</tbody>
</table>

A similar proposal is made for proto-Korean by Itō (2013), who reconstructs an eighth vowel *ï which surfaces as LMK ye [ja]. As Itō points out, LMK /ye/ has a much higher frequency than other rising diphthongs, and she also adduces phonotactic evidence support for the idea that LMK /ye/ can have a monophthongal source. Itō hypothesizes that *ï was the vowel harmonic counterpart of *i, but this would require assuming a palatal harmony system, which as we have seen is problematic; furthermore LMK /i/ and /ye/ show no traces of vowel harmonic alternation. A simpler hypothesis is that the eighth vowel in question was just *e, the [+low] counterpart of *i, and that both of these vowels were neutral with respect to vowel harmony. The resultant system is shown in (11):

(11) 

<table>
<thead>
<tr>
<th>+coronal</th>
<th>+back</th>
</tr>
</thead>
<tbody>
<tr>
<td>*i</td>
<td>*e</td>
</tr>
<tr>
<td>*ə *i *u [-RTR]</td>
<td></td>
</tr>
<tr>
<td>*a *ʌ *o [+RTR] [+low]</td>
<td></td>
</tr>
</tbody>
</table>
On this analysis both *i and *e are [+coronal] and trigger palatalization of the preceding consonant. The justification for reconstructing *e for OK rather than proto-Korean is that the strongest evidence for a front value of the vowel corresponding to LMK /e/ in Sino-Korean comes from etyma with /ye/; in nuclei consisting of LMK /e/, without the glide, the Sino-Korean evidence for front *e or *e is weak. The system in (11) also explains the oft-observed fact (e.g. Martin 2000) that LMK /ye/ seems not to obey vowel harmony: in this respect it is the same as /i/.

Lee and Ramsey (2011, 67) make a number of observations about loan character transcriptions for OK vowels that are consistent with a system like (11). For example, they point out that the OK vowels corresponding to LMK /wu/ [u] and /wo/ [o] are transcribed as 于 and 烏. On the vowel shift hypothesis, these vowels should be OK /ü/ and /u/ respectively. But there is no evidence from loan character transcriptions that the contrast between these two vowels involves backness. 于 is reconstructed as MC /hju/ (Baxter and Sagart 2011), and EMC /wuἄ/, LMC /yā/ (Pulleyblank 1991). 烏 is reconstructed as /ʔu/ (Baxter and Sagart 2011), and EMC ظ (Pulleyblank 1991).

On the analysis in (11), the main change between the OK and LMK vowel system was the merger of *e and *ə. OK *e left its trace in the form of palatalization of the preceding consonant, phonologized as Cye [Cjə].

4.2 Consonants

Scholars believe that OK had not developed the voiced spirant series W[β], G [γ], /z/ of LMK, although exactly when these consonants developed is not clear (Lee and Ramsey 2011, 64). The reinforced obstruents of Modern Korean did not come into existence as a phonemically distinct series until after LMK (Lee and Ramsey 2011, 128). All scholars agree that OK had the counterparts of the LMK plain stops and affricate /p/ /t/ /k/ /c/, but controversy exists about whether or not OK had a distinct aspirated series corresponding to LMK /ph/ /th/ /kh/ /ch/.

Lee and Ramsey (2011, 64–65) argue that it did. They acknowledge that some LMK aspirates are secondary, arising from sequences of ‘hVC after syncope of the vowel. K. Lee (1991, 18) shows that stems such as khu- ‘big’ and tho- ‘ride’ were still disyllabic huku- and hoto- in EMK. But Lee and Ramsey argue that the existence of aspirates in Sino-Korean indicates that the aspirated series already existed in OK. As they point out (2011, 65), this evidence is not equally strong for all places of articulation: Sino-Korean /kh/ is very rare, /ph/ less so but often mismatched with Middle Chinese. MC aspirated alveolars and palatals are usually reflected in Sino-Korean as aspirated, but even in these series there are instances of mismatches. Sino-Korean aspirates where MC has plain consonants are common in both the labial and alveolar series. The following table based on T. Lee (1985, 2003) shows the matches and mismatches with respect to aspiration between the Sino-Korean readings in the Hwunmong cahoy (1527) and the Guangyun 廣韻 rime dictionary (1008).
The 3,360 characters collected in the *Hwunmong cahoy* include no instances of /kh/. MC /p'/ is mostly LMK /ph/, but a third of the Chinese aspirates are mismatched. Even among the alveolars, there are numerous mismatches. As many scholars have observed, some of these mismatches were based on graphic analogy with the phonetic element of the character. For example, characters including the phonetic element 皮 (MC bje) have aspirated /ph/ in Sino-Korean, apparently because 皮 itself was borrowed as aspirated phi. This initial borrowing was based on a complete mismatch: the MC initial is voiced, not aspirated. Such graphic analogies are conditioned by the context of the borrowing. Thus 波 ‘wave’ (MC pa) has the Sino-Korean reading pha (e.g. in the *Hwunmong cahoy*), but when this character is borrowed from Chinese as a transcription character for Sanskrit, it retains the original unaspirated reading, for example, 波羅蜜多 paramilta, Skt. paramita (Itō 2007, 50). The reason is that words like paramilta were borrowed as a unit. Individual Sino-Korean character readings, in contrast, developed through an extended process of adaptation, analogy, extension, and instruction that continued beyond the OK period.

Lee and Ramsey (2011, 65) provide a stronger argument for the existence of OK aspirated alveolar fricative /c'/ [ts’] from loan character transcriptions. They point out that in Silla placenames the character 荒 ‘rough, fallow’ is matched with the phonograms 居柒, which they compare with MK kechul-‘fallow, uncultivated.’ 柒 indubitably has an aspirated onset in MC and Sino-Korean. However, Kim et al. (1996, 68) dispute this argument; they point instead to the reduplicated adjective kesul kesul ha- ‘rough’ as a correspondent for the etymon in the Silla placename. Kim et al. conclude that OK had still not developed an aspirated obstruent series. With such sparse data, it is difficult to draw a conclusion, but whatever the start point for the process, Lee and Ramsey’s generalization that the aspirated series emerged first with the alveolar stop and affricate /th/ and /ch/ [ts’], next with labial /ph/, and last with velar /kh/ seems unassailable.

### 4.3 Suprasegmentals

We have no direct evidence for pitch accent in OK, but indirect evidence is provided by the partial correspondences between LMK Sino-Korean and MC tone. Kim (1973, 25–26) summarizes these correspondences:
(13) a. MC level tone (平聲) corresponds to LMK low tone (平聲, unmarked in LMK).
   b. MC rising (上聲) and departing (去聲) tone both correspond primarily to LMK rising tone (上聲, marked with two dots in LMK).
   c. MC entering tone (入聲; oral stop-checked syllables) corresponds to LMK high tone (去聲, marked with one dot in LMK).

Kim suggests that (13b) the correspondence of both MC rising and departing tones to LMK Sino-Korean rising tone reflects the relative perceptual similarity of the two MC tones. MC entering tone (oral stop-checked) syllables were suprasegmentally distinctive enough so that they were assigned their own tonal category in LMK.

The correspondences in (13) have been used by Kim and others to confirm the pitch values marked in LMK Hankul materials. From the standpoint of OK, the correspondences tell us that Korean distinguished these prosodic categories at the time that Sino-Korean was established. Although they do not tell us how the categories might have functioned in an overall suprasegmental system, they are consistent with the view that OK already had a lexical pitch accent system like the one found on LMK and modern dialects such as Gyeongsang and Hamgyeong.

5 Morphosyntax

We saw examples of morphosyntactic differences between OK and LMK in our hyangka example in section 3.4. Among these differences was the existence of distinct negative forms for verbal and nominal predicates. What we know about OK morphology and syntax is described in detail in Nam (2012, 64–70), with tables comparing forms in itwu, kwukyel, and hyangchal. Here I focus on a few salient features distinguishing OK from later stages of the language.

5.1 Nominalization

In many languages of Northeast Asia, the noun modifying or adnominal forms of verbs are themselves nominalized. Recent research on kwukyel texts shows this to have been the case for the ancestors of LMK -(u/o)l and -(u/o)n, the prospective and realis adnominal endings respectively. These suffixes appear in a wide variety of nominalizing functions in addition to their function as noun modifiers. Properly speaking, the noun modification function can be seen as a subcase of nominalization. One example of nominalization in -(o/u)n can be seen in the clause below from the the Nakcang-pon Kwusek Inwang-kyeng 落張本舊釋仁王經 (Humane King Sutra) in (14) The discovery of this EMK kwukyel glossed fragment in 1973 from within the belly of a bronze and gilt image of Amitābha in a temple in Chungcheong nam-do can be said to have spurred the current interest in kwukyel research. The fragment consisted of only five pages of the original xylograph. It is presumed to have been written in the thirteenth century, but the kwukyel text preserves many features of OK syntax. In the excerpt from the first two lines in (14) I have supplied the kwukyelca in their unabbreviated form, but with underlined sound glosses, following Nam (1976/1999, 104):
Here -(u/o)n in ho-n ’do-adnominal’ marks a clausal nominalization (as in (7) our hyangka example), the complement of the nominal predicate negator anti. In contrast the nominalizer -(u/o)m derives an action nominalization from ryang h-wo ’do-modulator,’ meaning ’measuring, to measure.’ The disappearance of -(u/o)l and -(u/o)n nominalizations in all but a few fossilized forms in LMK can be seen in part as the result of the expansion of (u/o)m from action to clausal nominalization, displacing the adnominal suffixes in the latter function.

5.2 Genitives

Itwu, kwukyel, and hyangchal all attest the genitives found in LMK, [human] -(u/o)y and [nonhuman] but also [honorific] -s. In addition, the character 尸 is sometimes used to write a genitive particle in kwukyel. Since the same character is used to write the prospective adnominal form in kwukyel, this genitive has generally been interpreted as –l. Hwang et al. (2009) interpret it in both its adnominal and genitive functions as –lq [rʔ], the form of the prospective modifier in LMK. This in turn suggests an explanation for the apparent genitive usage. In kwukyel texts 尸 is also used to write the noun modifying form of the numerals twulh ‘two’ and yelh ‘ten,’ for example, 十 尸十 生 ‘ten lives.’ A reasonable interpretation of these spellings is that they derive from twul-s ‘two-gen’ and yel-s ‘ten-gen.’ Postnominally, 尸 spells the honorific genitive after a small number of names for Buddhist deities. The most frequent of these is 菩薩 pwosal ‘bodhisattva,’ which also ends in a liquid. We might then hypothesize that 尸 spelled –l+ genitive –s, however this cluster was pronounced in OK. In adnominal clauses the –l is the clausal nominalizing (adnominal) suffix, but in the numerals and ‘bodhisattva’ it is the final consonant of the uninflecting stem. This spelling convention was extended to the honorific genitive for other Buddhist deities on analogy with ‘bodhisattva.’

5.3 Independence of bare roots

Martin (1997) points out that LMK (and Pre-modern Korean) attest a substantial number of bare root compounds, where V₂ is attached to the uninflected root of V₁. Examples include tuwuy-ic- ‘get overturned/upset’ <tuwuy-‘overturn it, upset it’ + ic- ‘wane, get chipped,’ and kul-talh- ‘boil and decoct it, boil it down’ <kulh- ‘boil it’ + talh- ‘get worn down.’ Martin observes that this is an ‘un-Altaic’ feature of Korean: neighboring Northeast Asian languages (including Tungusic, Mongolic, and Turkic) generally make V-V compounds from an inflected form of V₁, such as a converb or infinitive form.
Nam (2012, 65) points out that this is a byproduct of a more general property of OK. In LMK and modern Korean inflecting stems are bound: they cannot appear uninflected. This appears not to have been true in OK. In addition to compounds, we may note patterns like 

\(i\text{-no-s ‘be-pres-gen’ in (14), where the bare stem of the present auxiliary no- is attached to the following noun by the genitive particle –s.}

Nam cites supporting EMK examples from the Ji\lín lêishi (Kyeylim yusa), for example, where ‘reading’ is glossed as \(kul\ [kir\ pwo- ‘text read,’ with an uninflected verb.

### 6 Summary

While the evidence for Old Korean is in most cases scantier than we would like and in many cases still under active investigation, facts like those discussed in the previous section show us that OK was in many ways a typologically different language from modern Korean or even the language of the fifteenth-century Hankul texts. It had a more modest consonant but perhaps a slightly richer vowel inventory. It used clausal nominalizations in functions similar to its Northeast Asian neighbors, but differed from them significantly with respect to the independence of inflecting roots.

### NOTES

1. The author’s research for this chapter was supported by a lab grant from the Academy of Korean Studies, (MEST) (AKS-2011-AAA-2103).

2. Transcription of Late Middle Korean in this chapter uses the modified Yale Romanization system in Martin (1992) and Lee and Ramsey (2011). This system corresponds to the transcription in Chapter 25 as follows:

<table>
<thead>
<tr>
<th>LMK transcription in Chapter 25</th>
<th>Modified Yale Romanization</th>
</tr>
</thead>
<tbody>
<tr>
<td>a. Vowels</td>
<td>a. Vowels</td>
</tr>
<tr>
<td>Front</td>
<td>Front</td>
</tr>
<tr>
<td>/e/</td>
<td>/e/</td>
</tr>
<tr>
<td>/a/</td>
<td>/a/</td>
</tr>
</tbody>
</table>

b. Semivowels: /j/ /w/  b. Semivowels: /j/ /w/


4. These spellings are associated with the placename Samcheok-si on the border of Gangwon and Gyeongsang-bukdo. The region was Sillan before passing under Koguryŏ control in the fifth century. The modern name 三陟 was fixed in the eighth century by Silla king Kyŏngdŏk. Examples like this show that in at least some cases, Koguryŏ used phonogrammatic spellings for toponyms associated with the Three Kingdoms period Silla language.
5 Nam (2009: 167) refers to the text in the King Kwangaet’o) stele as pyengchay hannun 变體漢文 or sok hannun 俗漢 ‘vulgar Chinese writing.’ In a broader East Asian context, the latter generally refers to Chinese written by Chinese native speakers in a colloquialized style, while the former has tended to refer to substandard Chinese written by Koreans or Japanese. Aldridge (2000) argues that the Japanese namesake, hentai kanbun, as used in the early eighth century Kojiki 古事記 was written to be read as Japanese. It is thus a counterpart of itwu.


7 Some scholars (e.g. Lee Seungjae 2001) argue that kye- functioned as an honorific suffix in itwu. But Nam (2004) argues convincingly that this morpheme was an aspectual auxiliary. The common grammaticalization pattern existential verb > perfective auxiliary supports Nam’s view. Modern honorific kyesi- is simply the result of grammaticalization of this older existential verb with the honorific suffix -si.

8 The latter system is attested in the glosses for the Yukasacilon (瑜伽師地論Yogācārabhūmi-śāstra); see Chang (2007).

9 For a unified system of terminology for both the Korean and Japanese glossing traditions, see Whitman et al. (2010).

10 The term ‘consecutive kwukyel’ for swuntok kwukyel 順讀口訣 is due to King (2007).

11 Ko (2010, 2012) handles the LMK vowel system with the four features in (9) plus the feature [coronal] for /i/. In LMK the problem in (9) does not arise, because the [-RTR] counterpart of /a/, /e/ [ə] is not a front vowel. I have drawn heavily on Ko’s insights, but the proposed OK system in (11) is original here.

12 I owe the idea of reconstructing deriving at least some cases of LMK /ye/ from a primary vowel /e/ to Marc Miyake (personal communication).

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Whitman, John. 2009. “Koketsu shiryō to kunten shiryō no setten – Satō-bon Kegon mongi yōketsu no okototen/toten o chūshin ni (Points of contact between kwukyel and kunten glossed materials – with a focus on the morphosyntactic glosses in the Kegon mongi yōketsu).” Paper given at the 100th Meeting of the Kuntengo gakkai, Kyoto University, Kyoto, Japan, May 2009.
