The origin of *man'yōgana*[1]

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1. *Introduction*[2]

The origin of *man'yōgana*, the phonetic writing system used by the Japanese who originally had no script, is shrouded in mystery and myth. There is even a tradition that prior to the importation of Chinese script, the Japanese had a native script of their own, known as *jindai moji* (神代文字, age of the gods script). Christopher Seeley (1991: 3) suggests that by the late thirteenth century, *Shoku nihongi*, a compilation of various earlier commentaries on *Nihon shoki* (Japan's first official historical record, 720 A.D.), circulated the idea that Yamato[3] had written script from the age of the gods, a mythical period when the deity Susanoo was believed by the Japanese court to have composed Japan's first poem, and the Sun goddess declared her son would rule the land below.

I must take issue with Seeley's statement, because *Shiki*—the private minutes later compiled together to form *Shaku nihongi*—actually contains the following exchange:

> Councillor Yoshimitsu Ason Yokotemu said: In what era would you place the origin of *kana* (仮名)?
>
> The professor answered: no documents have been handed down to us before the era of Empress Jingū, so there is nothing to search for. By the reign of Emperor Ōjin, ambassadors were sent to Silla, and a man of letters was invited to court [and he] taught a few graphs (Kuroita 1932: 192).

Rather than suggesting that Yamato had script in the age of the gods (a mythical period), the above statement suggests that *if any records existed before Empress Jingū*, nothing remained in 936, when this question was entertained. Thus, extant documents originated from the era of Emperor Ōjin, who is credited in the histories as the first ruler to request that a learned man be sent to court. If the ancient court was already literate, why ask a country on the Korean peninsula for a scholar to teach them?

Kogo shūi, compiled by Imibe Hironari (dates unclear) in 808, has this to say about the literacy of ancient Japan (Iida, 1986: 1): 'To begin with, I have heard that in ancient times, when [our country] had no writing, everyone, noble and base, old and young, performed every duty by word of mouth.'

There is very little evidence to suggest that Yamato had script prior to the introduction of Chinese script. Thus, as Hironari states, in ancient times Japan was illiterate, and everything was committed to memory, and then transmitted

[1] The author would like to thank an anonymous reader for helpful information as well as Marc H. Miyake, who offered valuable advice on arranging the Chinese graphic data. Any errors that remain are my own.

[2] The following abbreviations have been used: CTP: Chinese Transcription Pool; EH: Eastern Han; EMC: Early Middle Chinese; LOC: Late Old Chinese; OC: Old Chinese; SEC: Suiko-era Corpus.

[3] From here on I will refer to Japan as Yamato when discussing it in the context of ancient history. China anciently referred to Japan as Wa 倭, and the kingdoms on the Korean peninsula followed suit. Alexander Vovin has shown that when viewed from Late Old Chinese phonology, Yamatai (邪摩台)—as the place name is pronounced in the present—was really ɣ(h)a-maa-dhə, which is phonetically very close to *yamatə*, the historical spelling for Yamato (quoted in Miyake 1999: 13, n22). It thus seems clear that even in the third century the residents of the Japanese archipelago called it Yamato.

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orally. But what is of greater interest is the answer to Yoshimitsu insinuating that Silla had taught the ancient court of Yamato Chinese. Japan's two histories, *Kojiki* (712) and *Nihon shoki*, both record that Paekche, archenemy of Silla, had presented Chinese texts to the court, and dispatched a tutor to teach the language and its script to the Yamato court. There appear to have been various versions of the story about how Japan was educated in the use of Chinese. The story has tantalizing hints in it, but to date our question has yet to be answered adequately: where did *man'yōgana* come from?

2. *Previous scholarship*

The idea that Japan's orthography came from the Korean peninsula is as old as the source material later compiled into *Kojiki* and *Nihon shoki*. Both records relay the same sort of information, though each has varying numbers of anachronisms and embellishments. Following are the common points in the two versions of the narrative regarding writing imported into Japan:

1) Someone from Paekche comes to the court of Japan, and the emperor (Ōjin) hears about the advanced culture of this foreign state.
2) The Emperor commands Paekche to send someone to the court.
3) Paekche obliges by sending someone named Wani (*Kojiki* spells this name 和邇吉師 [Wani Kyisi], and *Nihon shoki* spells it 王仁 [Wani]).
4) Another man from Paekche, named Atikisi,[4] was somehow involved in this cultural stimulus.

From these two accounts, we can make the preliminary conclusion that the kingdom of Paekche introduced Chinese writing to ancient Yamato, and sent scribes (or scholars) over to educate the court regarding this new script. While there have been many attempts to outline the history of the importation of written script into Japan, below I have only given what I consider to be a representative overview of previous scholarship.

Before the Pacific War, Tsuda Sōkichi drew the following conclusion after considering the same evidence presented above: 'If … the time of the opening of diplomatic relations with Paekche and the Yamato Court occurred at some point in the latter half of the fourth century, then the introduction of writing *by the people of Paekche* must also be placed in that time frame' (1946.1: 27, my italics). Tsuda accepts the account recorded in the ancient histories which states that Paekche had in fact introduced the Yamato court to Chinese script.

In 1964, Kinoshita Reijin examined the orthography of various Paekche records quoted in *Nihon shoki*, and argued that these records were authentic material from the peninsula, but the material had been slightly altered when included in the later compilation entitled *Nihon shoki*. Kinoshita notes several times that while the Paekche orthography includes graphs not commonly used in *man'yōgana*, many of these Paekche graphs also appear in Yamato records (1964: 292–3). His data are very persuasive—suggesting that Paekche did indeed teach Chinese to the Wa—but they remain one-dimensional. A broader comparison with the orthography preserved on the peninsula would have been more persuasive.

In *Moji*, a collection of essays on orthography, especially the orthography

[4] This is a minor matter, but it is related to the topic of this paper. The spelling of this person's name—as preserved in Japan's oldest records—illustrates that the writers/compilers had relied on different strains of the same story preserved in previously written accounts. *Kojiki* writes Atikisi's name 阿知吉師 *ati-kyisi* (OC ʔay-tre-kit-srij), but *Nihon shoki* writes it 阿直史 *atikisi* (OC ʔay-d(h)rək-srə). The Old Chinese reconstruction is from Starostin, 1989. Notice how close these two spellings are. The actual name of this peninsular man was something like a-tək-si or a-tek-si.

of Japan and the Korean peninsula, Inoue Hideo explores the issue of Chinese usage on the Korean pensinsula, and argues convincingly that Koguryo was the first kingdom to incorporate Chinese script successfully and use it phonetically to spell native (Koguryo) words. He concludes that Koguryo adopted Chinese graphs around the third century A.D. Paekche followed about a century later when it adopted Chinese writing (1975: 100–2).

In the same collection of essays, Kawabata explores the complexities of *man'yōgana*, but all he says about the origin of *man'yōgana*, and how Chinese script crossed the ocean and came to Japan is:

> Near the end of the fourth century … Japan had established diplomatic ties with the three kingdoms on the Korean peninsula. Likely these ties were real, serious associations that had not existed before, and in the beginning of the fifth century, the theoretical time frame for the reign of the Ōjin court, and then the Nintoku court, Japan is engulfed for the first time in a great amount of Korean-related records, as found in *Nihon shoki* (1975: 127).

Nothing further is noted, and very little concrete evidence is presented about the actual transfer of knowledge concerning sinographs. Archaeological evidence does support the theory that Paekche and Yamato had entered into some type of diplomatic relationship.

Kim Sa-yeup's research (1981: 15–22) outlines the history of the Korean peninsula from 200 B.C. until Silla unified the peninsula in 668 A.D. Kim counters scholars who have claimed that the languages of the three kingdoms were not mutually intelligible by showing that the orthography of the three kingdoms was largely uniform.[5] As I will show below, this theory is untenable, based on insufficient or mistaken data. Because Kim presents meager evidence, any conclusions about the relationship of these three languages are speculative. While I am critical of his conclusions, and his poor handling of these data, I do applaud his attempt to cut across the orthography of the three kingdoms.

Seeley's history of Japanese orthography examines several pieces of evidence for a precursor to *man'yōgana*, looking at various inscriptions in Japan, but nothing outside of Japan is examined, making it difficult to reach any persuasive conclusions about the origin of *man'yōgana* (1991: 16–41).[6] This has been the shortcoming of most of the research into the history of Japanese orthography—a lack of attention toward concrete data on the continent. Most scholars have glossed over the next important question in this discussion: which nation on the peninsula actually taught Yamato Chinese and the use of phonograms to transcribe native words? If the legend in *Kojiki* and *Nihon shoki* is based on fact, and Paekche did teach Yamato how to use Chinese phonetically, who originally taught Paekche?

What is needed to answer this question is an examination of all possible data from the peninsula to see what kind of writing system was used by the ancient kingdoms of the peninsula. I am not interested in how the various

[5] It has been pointed out to me that Kim's basic premise here is flawed. Finnish, English, Turkish, and Vietnamese all use the roman alphabet with similar (though not identical) conventions (e.g., *m* represents a labial nasal in all four languages), but this does not mean simply that because the four scripts are uniform that the four languages are mutually intelligible. In other words, we must avoid falling into the trap of thinking that 'script' equals 'language' (thanks to Marc H. Miyake for this example).

[6] While one could be critical of Seeley for not seeking concrete proof of the origins of *man'yōgana* on the peninsula (especially since his book claims to be a *history* of writing), it is likely that he felt that such an endeavour would take him too far afield. It must also be noted that phonogrammatic data from the peninsula has to be gathered from inscriptions as no one has compiled epigraphic data from the three kingdoms era on the Korean peninsula.

kingdoms on the peninsula altered sinographs to fit their vernacular. The purpose of this article is to examine how various countries used Chinese graphs as phonograms. There have been several attempts by scholars to extract data from Korean historical records, but I have elected to ignore all information in *Samkwuk saki* (三国史記) and *Samkwuk yusa* (三国遺史)[7] because it is reasonable to suppose that some of these data have been filtered through the language of Silla, the country which oversaw the compilation of both works.

3. *New data*

As noted above, the scholarly consensus seems to accept that ancient Japan is indebted to the peninsula (more precisely Paekche) for what later became known as *man'yōgana*. But there have been very few attempts to support or reject this theory with concrete data. What is needed are data that have been preserved in an unalterable state. The best candidates for an investigation are the oldest known inscriptions. The remainder of this article presents such data, providing stronger proof that anciently Yamato was educated by the kingdom of Paekche in the use of classical Chinese, not only as a language to make the state literate, but also in the use of phonograms (Chinese graphs used phonetically to transcribe native words).

Before analysing data from inscriptions found on the Korean peninsula, I will take a short detour and examine sinographs the Chinese used to transcribe foreign words in China. I follow Zürcher in viewing the ancient Chinese as already having a kind of spelling orthography (what I refer to as a pool of graphs) reserved for non-native (non-Chinese) words. Zürcher notes:

> However, it is a notable fact that this primitive transcription system [using Chinese phonograms to transcribe Buddhist terminology] was not a Buddhist invention at all; it can already be traced in secular literature from Former Han times … More than eighty percent of the characters which are used phonetically in these texts more than one time (*viz*. 77 out of 93) consists of signs which regularly occur in 'Buddhist' phonetic renderings … [W]e must conclude that the Buddhist transcribers made use of an existing rudimentary system for rendering foreign sounds. We cannot give a satisfactory explanation for this fact, but one possible clue as to its origin may be found in the activities of the Department of Foreign Relations (1959: 40).

In other words, the Chinese had developed a transcription system to render foreign words in Chinese. It is quite plausible that much of this spelling orthography would have been taught to the scribes of the three kingdoms of Korea. These data constitute a critical foundation so that the reader can see which Korean phonograms were based on an older Chinese tradition, and which other phonograms were innovations independently used in certain countries.

3.1. *Chinese transcription data*

The ancient Chinese were faced with a dilemma. Chinese graphs were invented to represent native words, and the only way to transliterate foreign words (toponyms and personal names) was to loan a graph with a similar reading as the word (or syllable) in question. For example, the Persian city of Alexandria is recorded in the *Hanshu* as 烏弋山離 EMC ʔɔ-jik-ʂəin-liᴂ or Western Han

[7] The best example of an overview of phonogrammatic data in *Samkwuk saki* is Mabuchi (1973).

*ʔā-lək-ʂān-raj.[8] While there were literally thousands of sinographs to select from to represent foreign words, Zürcher suggests that the Chinese actually had the makings of a specific set of graphs that could be used to transcribe foreign words. This is best illustrated by using Buddhist inscriptions, because the Buddhist clearly transcribed Indic words into Chinese.[9]

There is a wealth of Buddhist transcription data in China. Because there actually is so much information, I have sought to compare two different sets of transcriptions from completely different geographical areas, looking for common phonograms in the various transcriptions. The easiest method has been to compare Coblin's Eastern Han sound glosses (1983) with that of his Northwest Chinese transcriptions (1994).

A handbook of Eastern sound glosses contains phonogram data collected from 11 different sources, the dates of which range from about 20 B.C. to 220 A.D. Coblin's database contains approximately 3,600 phonograms. Coblin's other important work, *A compendium of phonetics in Northwest Chinese*, is a collection of linguistic data based on various transcriptions that date between 400 to 900 A.D. Because this work numbers each phonogram (other than graphically similar characters, which are listed under the phonetics of a different graph), it is easier to get an estimate of the number of phonograms, which I calculate to be about 1,540.

Using the indices of these two collections of Chinese phonograms, I recorded graphs that appear in both collections. This simple though laborious analysis resulted in approximately 650 graphs that overlap between the two databases, which is roughly 42% of the total graphs in the collection of Northwest Chinese inscriptions. This rather low percentage should not be surprising, because there is almost a 400-year gap between the two databases, which means there was a serious rift in the phonology of the two systems underlying the transcriptions. Furthermore, while in many cases a single graph overlaps between the two databases, graphically similar phonograms do not. Thus, both transcriptions have bǐ 俾 for pi, but only one of the two databases uses similar graphs such as 卑婢碑脾裨庳.[10]

Clearly, however, the transcriptions of the Eastern Han (EH) are closer to the Korean peninsula, both geographically and chronologically. It should be noted that the *ZH Guide's* list of modern phonograms shows a remarkable amount of continuity with the pool of phonograms in EH (Kennedy, 1970). If there is a great overlap between EH and modern Chinese phonograms, it stands to reason that there must have been an even greater overlap between EH and the phonogrammatical pool of graphs used by people on the peninsula in the second to fourth centuries A.D.

To illustrate this point, I listed all phonograms used in *Wei zhi* to transcribe personal and place names of the Puyo (夫余), Han (韓), and Wa (倭), noted in Table 1. Each of the following tables of Chinese graphs have been arranged in as simple a fashion as possible. There are 12 general classes according to place of articulation of the initial (glottal, velar, dental/retroflex/palatal, labial) as

[8] This example is provided by Pulleyblank (1999: 73). I also attach Starostin's reconstruction for reference.

[9] An anonymous reader has suggested that it might be more profitable to look at the entire transcription system from Han times since the Buddhist phonetic orthography gradually became more specialized over time. This is an important point, but one which would take us beyond the scope of the present study. The very act of gleaning all the phonograms from the Han material would indeed be daunting. As is noted in the article, while we must give heed to the caveat that the Buddhist orthography is specialized, the amount of overlap between this system and that used on the Korean peninsula is still amazing.

[10] Furthermore, a look at the 50 graphs primarily used to transliterate foreign words included in Kennedy (1970: 31) shows that 37 graphs (74%) also appear in the Eastern Han transcriptions.

TABLE 1. *Phonograms of* Wei zhi

ʔ-阿安伊一尉優烏邑
k-加佳感甘乾支鬼耆臼觚弓躬句狗拘仇革鞠獲遣軍渠勤古沽戸居
ŋ-吾外牛
s-斯襄桑索速者素馺新兜鮮泄小水占肢楚州走姐載升声辰石臣捷秦残淳是漕蘇
t-多旦台大涿済智咨誕侵致塗池踧資柢対鞮凍接涜湛都
x-韓休釁
n-那奴日怒冉児内如難爾
p-巴卑半弁潰百伯夫不辟報柄蒲
m-馬万彌莫模謨米母末牟
y-邪已由惟掖延余与
r/l-来楽藍離利林臨麗臘例廉路盧
w-倭位爰謂雲為越

well as manner of articulation (stop, fricative/affricate, nasal, glide). I have ignored features such as voicing and aspiration, as well as distinctions between dental, retroflex, and palatal, plus fricative and affricate. Each class is represented by a cover symbol, such as *p, which stands for all labial stops (p-, ph-, pj-, b-, bh-, bj-). The initials are arranged according to the Early Middle Chinese (EMC) system of Pulleyblank (1991). I have made only one modification: I write Pulleyblank's ɣ as x. As Miyake has already pointed out (1999: 366), the initials are the least controversial aspect of the reconstruction of EMC.

There are 159 graphs in this database from *Wei zhi*, and 110 of these are also found in the Eastern Han transcriptions, resulting in 70% overlap. Graphs in the Eastern Han transcription are labelled as the Chinese Transcription Pool (CTP), and this will be the initial touchstone for the analysis of the orthography on the Korean peninsula.

3.2. *Peninsular data*

This section addresses the oldest known orthographic data on the Korean peninsula. These data come from 50 inscriptions found on the peninsula, from the Kwangkay Wang (広開王) stele of Koguryo,[11] to the seven inscriptions of Namsan (南山) from Silla, to the metal inscription from the Palace of King Iksan (益山王宮). My inscription data come from He Hungsik (1984: 1–81), and *Paekche Saryocip* (1985: 345–66).

The following analysis divides the inscriptions into three groups which represent the three ancient kingdoms of Koguryo, Silla, and Paekche. I have then analysed the overlap between each group, and finally compared these results with the Korean orthography contained in *Nihon shoki*. I have selected *Nihon shoki* because it is clear that the work is a broad compilation of various documents from the Asuka era and earlier. Much of the historical data come from Korean records. Having completed this analysis, my results are then compared with sinographs used phonetically by Yamato in the Asuka period (or all graphs the Japanese have used to write words phonetically from that era).

[11] I have used Yale romanization for Korean words and Sino-Korean, aside from historical place names, where the traditional romanization is already well known. For those unfamiliar with Yale romanization of Korean, see Sohn (1994: xiv–xv).

3.3. *Koguryo*

Most of the graphs used phonetically in transcriptions from the kingdom of Koguryo come from the famous Kwangkay Wang stele on the border of North Korea. I have found 119 graphs used as phonograms in Koguryo inscriptions, and those graphs are listed in Table 2.

Of these 119 Koguryo phonograms, 78 (65%) are also found in the CTP. This would mean that there are phonograms in the Koguryo orthography that are likely Koguryo innovations. I submit that the phonograms in Table 3 are Koguryo innovations, because these graphs do not appear in the CTP, nor in the oldest strain of Coblin's Old Northwest Chinese transcriptions (those dating to around 400). Even if a character is lacking in the Northwest Chinese transcriptions, I have not included it in the list of innovative graphs as long as either of the following two criteria could be met: 1) the graph is graphically similar to another in the CTP; for example, 圭 appears in the CTP but not in the Koguryo inscriptions. However, the graph 佳 does appear in the Koguryo inscriptions, and I believe it is simply graphically similar to 圭, rather than an innovation; 2) the phonogram is already used in the early Chinese histories, which mainly refer to toponyms. Thus 韓 or 倭 would be eliminated from consideration.

TABLE 2. *Koguryo phonograms*

ʔ-阿安晏奄燕烟於鴨奧
k-加家佳炅獲閣看幹貫支臼句刻仇客求古高戶居交突谷溝
ŋ-岩巖
s-沙舍雜散斯師掃細船析旋彡水盛岑蘇
t-旦珍豆天弖底就鄒敦住琢東頭蔦咨
x-韓忽
n-那南奴若閏穰任農
p-巴抜八沸比卑夫負富豊本匝輔北
m-麻彌牟侔賣味門旻模
y-塩余楊
r/l-耶良楽利力林流龍連麗盧呂婁
w-倭永禹穢

TABLE 3. *Innovative Koguryo phonograms*

ʔ-晏燕烟奧鴨
k-閣獲溝客突
ŋ-岩
s-雜散掃船析旋彡
t-弖鄒旦
n-閏
p-匝
m-麻味旻模
r/l-良楽呂
w-永穢

There are at least two reasons why Koguryo would have selected their own phonograms (or deviated from the Chinese standard). The first would be to avoid graphs with unpleasant semantics, at least for native, Koguryo personal names and toponyms. Surely Koguryo continued to call Yamato Wa 倭, which means dwarf, because that is what China called the state, and Koguryo had no reason to change this usage. Also, Koguryo does not appear to have had diplomatic ties with Yamato early on, and if we can trust the gist of the military story inscribed on the Kwangkay Wang stele, Wa (Yamato?) had already invaded Koguryo once before. The court of Koguryo probably would have wanted to keep the pejorative usage. The second reason for innovative sinographs may have been because there were not enough characters in the Chinese repertoire of a certain phonological group to represent adequately the phonemic inventory of the Koguryo language. It is thus interesting that there are several innovative glottal stop initial phonograms (ʔ), suggesting that the language of Koguryo had a rather rich inventory of vowel initial words.

This theory can be tested in a simple fashion. Lewin (1973: 24–6) has a list of 54 Koguryo words preserved in place names from *Samkwuk saki*. (I have ignored Lewin's reconstructed Koguryo forms, because they are not always true to the Chinese.) As an example, he reconstructs *u- 烏 in *usigam 'hare', but *wus 'cow' from 烏斯. How does he know the phonogram 烏 is doing double duty, transcribing both *u- and *wu-? Simply put, he does not. Thus I have examined only the original Chinese transcriptions, and have found eight words that are vowel initial in the list (those words being: 伊 'enter', 于次 'five', 於乙 'well, spring', 烏斯含 'hare', 烏斯 'cow', 於斯 'slant', 伊伐支 'neighbour', 于尸 'having neighbours'). These eight words equal 15% (8:54) of the total list of words, which is a fairly high number. Conversely, vowel initial graphs in the *Wei zhi* phonogrammatic pool equal only five percent of the total (8:159).

We now turn our attention to the other two kingdoms on the peninsula, Silla and Paekche. Unfortunately, few conclusions can be drawn from the orthographic data provided below for Silla and Paekche. Of the various kingdoms on the peninsula, Koguryo was the first to import Chinese script, and it would appear that Koguryo (directly or indirectly) influenced the other kingdoms.

3.4. *Silla*

Perhaps because Silla unified the peninsula in 668 with the demise of the kingdoms of Paekche and Koguryo, there are more artefacts from Silla than from any other kingdom on the peninsula. This also means the orthography of Old Silla is the best preserved. I have found 153 graphs in the Silla orthography, noted in Table 4. Any comments on these graphs, however, must wait until we discuss the Paekche orthographic pool, which is the smallest of the three.

3.5. *Paekche*

Much of Paekche's history can be characterized as being at war: either with Koguryo or Silla. Paekche was destroyed by Silla in 660. Unfortunately, available epigraphic data on Paekche are scarce compared with the other two kingdoms. I have only been able to identify 64 graphs, as noted in Table 5.

A few words can be said about this group of sinographs from Paekche, small though the database is, but I defer that to the section on a comparison of these data from all three kingdoms. For reference, the following sinographs appear to be Paekche innovations (see Table 6).

TABLE 4. *Silla phonograms*

ʔ-阿安伊以塢一烏於於乙
k-加可架甘過干支記吉爻句仇久及下奚古高戶居許去
s-沙舍社尺斯士只之司史思自叱心須小宿生撰助柴衆失春首吹守匠
t-陀智知珍災鄒大次旺竹冬斬典且屯捉曾祝徒豆刀都登頭丁得即
x-喙漢欣郝呼黑兮
n-那奈內難爾仁日奴尼乃
p-波巴伐比枇彼碑非平夫婦部弗福兵服步本
m-馬麻末彌瀰美未牟兮武勿沒買莫面毛木文
y-与尹
r/l-羅邏良利里尸礼路婁力六
w-于

TABLE 5. *Paekche phonograms*

ʔ-阿夷於
k-迦訶祇句久古
ŋ-願嵎
s-砂沙舍釈薩三斯司真須州積率
t-多大知智宅吒卓珍提済曾千次兎止枕
x-韓
n-奈拏耨乃
p-波比百福夫菩
m-麻摩馬末牟武
y-与
r/l-羅利林李魯
w-衛

TABLE 6. *Innovative Paekche phonograms*

ŋ-嵎
s-砂率
t-次兎止
r-李魯

3.6. *A comparison of these data*

There are 13 phonograms common to all three peninsular orthographies. Comparing the Paekche sinographs noted above with Koguryo's orthography, we find 15 common graphs. Between Silla and Koguryo, there are 32 common graphs. Between Paekche and Silla, there are 28 common graphs. These results are illustrated in Tables 7–10.

Finally, I have compared the graphs in the orthographic pools of these three kingdoms (Tables 2, 4, 5) to the orthography found in *Nihon shoki*. I have relied on the work of Ryu Min-hwa (1994). However, because Ryu's work has some confusing lapses, I have consulted as well the work of Kinoshita

TABLE 7. *Phonograms common to all three kingdoms*

ʔ-阿於
k-句古
s-舍斯
t-珍(珍)
p-波比夫
m-麻牟
r/l-利

TABLE 8. *Phonograms common to Koguryo and Paekche*

ʔ-阿於
k-句古
s-舍斯
t-珍
p-波比夫
m-麻牟
r/l-利林

TABLE 9. *Graphs common to Koguryo and Silla*

ʔ-阿安於
k-加支句仇古高戸居
s-沙舍斯
t-珍鄒豆頭
n-那奴
p-波巴比卑(碑)夫本
m-麻彌牟
r/l-良利婁

TABLE 10. *Phonograms common to Paekche and Silla*

ʔ-阿於
k-句久古
s-舍斯須沙
t-大知智次珍曾
n-奈乃
p-波比夫福
m-麻末武牟
y-与
r/l-羅利

TABLE 11. *Koguryo and* Nihon shoki

?-阿安燕
k-加支句高古居谷
s-舎沙斯水蘇
t-天弖鄒敦東珍頭
x-韓
n-那南任若奴
p-巴抜比夫豊富本北
m-麻彌味牟
y-余楊
r/l-良耶利林流連盧婁

TABLE 12. *Silla and* Nihon shoki

?-阿安伊烏乙
k-加可甘過干支吉及喙仇久奚古高居許
s-沙舎斯士自叱失心須首衆宿春助
t-陀大知智徒珍鄒次耽竹典丁且刀都頭登得即
x-漢欣
n-爾那奈日奴尼仁
p-夫伐巴部弗福服非本比平
m-馬麻末彌美未武牟勿没買毛莫木文
y-与尹
r/l-羅良利礼婁

TABLE 13. *Paekche and* Nihon shoki

?-阿夷
k-迦祇句久古
s-沙舎釈薩三斯真須州積率
t-多大宅吒卓知智珍済曾次枕
x-韓
n-奈
p-波比百夫菩福
m-麻馬摩末武牟
r/l-羅利林魯

(1964). Graphs common between each kingdom's orthography and that found in *Nihon shoki* are noted in Tables 11–13.

The comparison in Table 11 yields 49 common graphs, a 41% overlap between the orthography of Koguryo and *Nihon shoki*.

In Table 12, the analysis shows that there are 93 graphs in the Silla phonogrammatic pool that overlap with *Nihon shoki*, roughly a 61% ratio.

The last analysis in Table 13 provides very interesting results, considering that our database of Paekche phonograms is severely limited, even when compared with the other two kingdoms. In spite of the dearth of data, the overlap between Paekche and *Nihon shoki* is about 75%. Of the 64 graphs,

there are 48 graphs that overlap with *Nihon shoki*. Of course, this should not be surprising since internal evidence in *Nihon shoki* clearly shows that the compilers relied quite heavily on Paekche records. This evidence also provides further proof that the Paekche material in *Nihon shoki* is not a sham, as some have suggested.

3.7. *Early Japanese orthography*

The final analysis compares the orthography of three kingdoms with the Asuka Japanese orthography.[12] Rather than list these characters again, I will merely quote the number of overlapping characters, and the overall ratio of overlap between each orthographic group and the Suiko-era corpus (SEC).

Comparing the Koguryo orthography with the SEC, we find that there are 54 overlapping characters (45%). There are 88 overlapping Silla graphs (57%) with SEC, and there are 40 (63%) overlapping Paekche graphs. A word should be said about this last figure. If graphs with closed syllables are excluded from the Paekche database (those being 韓千宅吒珍釈積真願卓福), then the ratio is 40:53 (75%), which is very impressive. It is even more impressive when we recall that the Japanese orthographic system tends to avoid using closed syllable phonograms, because the language of Old Japan did not allow closed syllables. It should also be noted that a few closed syllable-graphs were used to transcribe disyllabic words in Old Japanese (薩 sat > OJ satu).

4. *Conclusion*

This paper has conducted a simple survey of the graphs of the three ancient kingdoms on the Korean peninsula, and then compared this pool of graphs with the orthography preserved in the Asuka records of Japan. Several interesting facts have come to light, and allow us to draw the following conclusions.

The legends preserved in *Kojiki* and *Nihon shoki* have at least conveyed the truth that Paekche did educate the ancient court of Yamato in the use of Chinese phonograms to transcribe native words. Even though the Paekche orthography from the peninsula is only one-third to one-fourth the size of the Koguryo and Silla orthographic databases, the percentage of overlap with *Nihon shoki*, and thus the entire Asuka corpus, is greater than the other two kingdoms.

As for the tradition that Silla taught its orthography to the court, as preserved in the *Shiki*, this is likely based on inaccurate knowledge of the history of the peninsula. By the tenth century Silla had unified the peninsula and, to the Japanese court, 'Silla' meant the Korean peninsula.

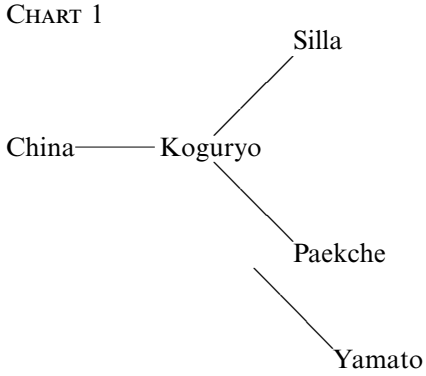
It should be noted in passing that Mabuchi (1973) has already conducted a similar study on the graphs used in the geographic sections of *Samkwuk saki*, and I give a simple overview of his results. *Samkwuk saki* preserves 117 sinographs used to transcribe Koguryo place names. Of these, Mabuchi reports

[12] These data come from Omodaka *et al.* (1967: 891–903). The so-called Asuka database includes the Suiko era corpus, *Kojiki*, *Nihon shoki*, stone and metal inscriptions, and the liturgies (for reasons why the liturgies are included, see Bentley forthcoming). For those unfamiliar with the Suiko era corpus, it consists of the following sources: i) Stele inscription of Iyo Yunooka (596); ii) inscription of the casting of the Bodhisattva statue of Maitreya (*c.* 600); iii) inscription from the base of a statue at Gangōji Temple (*c.* 606); iv) inscription on back of the halo of the Shaka statue at Hōryūji (621); v) inscription of Yakushi in Golden Pavilion at Hōryūji (607); vi) inscription on back of the halo of the statue at Gangōji (*c.* 606); vii) Tenjukoku embroidered veil (*c.* 625); viii) inscription on the back of the halo of the Three Deities Shaka statue at Hōryūji (625); ix) fragment from *Jōgūki* (*c.* 625); x) genealogy of Crown Prince Shōtoku (*c.* 630); xi) *Jōgū shōtoku hōō teisetsu*. Not everyone considers the last two to be from the Suiko era, but I have followed the majority in including them.

TABLE 14. *Graphs common to the three kingdoms (SKKS)*

ʔ-阿伊已烏音乙
k-加支仇古
s-沙只斯
t-多達知次豆
x-兮
n-奈奴
p-波伐比夫
m-馬彌武勿文
r/l-羅利婁
w-于

CHART 1



that only 13 sinographs are also found in *Nihon shoki*, resulting in about 11% overlap.

Looking at the figures from Silla, Mabuchi finds 125 sinographs used to transcribe Silla toponyms. There are 34 graphs that overlap with the record in *Nihon shoki* (34: 125, 27%).

Finally, Mabuchi analyses 97 sinographs used to spell Paekche place names, and notes there are 39 overlapping graphs with the record in *Nihon shoki*, resulting in an overlap ratio of 40%, again the highest of the three kingdoms. He then concludes that the figures are not very high, because *Samkwuk saki* was compiled some five centuries later than *Nihon shoki*.

Of these many graphs, Mabuchi finds that Koguryo has 15 innovative graphs, Silla 17 innovative graphs, but Paekche has only six (those being 雨意哥只乞芳). Mabuchi (1973: 72–3) then lists the graphs common to the orthographies of all three kingdoms (see Table 14—altered to fit parameters noted above) and reaches this important conclusion. 'Most of these graphs were also used in *man'yōgana* of ancient Japan'.

From the data that have been presented, I believe that the Chinese orthographic system took the following journey from China on its way to the Japanese archipelago (Chart 1). Thus, it has been shown that the ancient Chinese had a pool of phonograms used to transcribe foreign names and words. This orthographic system (phonogrammatic pool) was passed on to Koguryo when the kingdom adopted classical Chinese. The transfer of this system from Koguryo to Paekche is unclear, but because the ruling class of Paekche originally came from the north, I believe much of the orthographic

system used in Koguryo was imported and then modified in Paekche. Naturally, when diplomatic relations were opened between Paekche and Yamato (probably with Paekche asking for an open dialogue with the court in Yamato), Paekche educated the court of Yamato in how to use classical Chinese, as well as in how to transcribe the Japanese language (a term I use loosely here[13]) in Chinese via phonograms.

This conclusion suggests that the Japanese, in all likelihood, were not originally taught actual Chinese pronunciations, but rather were taught Chinese filtered through the pronunciation of Paekche. For example, the sinograph 'wealth' 富 (OC *pəh, LOC *piw, EMC puw) has final -u in all strains of Sino-Xenic: Sino-Vietnamese phú, Sino-Korean pwu, Go'on fu, and Kan'on fuu. It is interesting that this graph is used in the earliest inscriptions in Japan to transcribe *po* [pə], which matches well with Old Chinese.[14] So is the reading *po* for 富 a relic of OC, or does this *po* actually reflect the pronunciation of Sino-Paekche, or possibly both? We cannot answer these questions at this stage of our knowledge, but it seems inescapable that the Chinese pronunciation taught to Yamato was coloured with Paekche phonology. Having examined and analysed with concrete data the tradition of Paekche teaching a Paekche-based Chinese orthography, further scholarship will need to investigate if what is traditionally called Go'on is actually based on Sino-Paekche, or if it is perhaps based on a common ancestor of Chinese dialect from which sprang both Sino-Paekche and Go'on. This research is critical because, when compared with Sino-Vietnamese and Sino-Korean, Go'on is the oldest of the three, and preserves a number of interesting clues about Chinese phonology (and possibly the phonology of Paekche) that need to be explored in greater detail. Of course, such a question could not even have been entertained until it was shown conclusively that the ancient Japanese learned how to use Chinese phonograms from the kingdom of Paekche.

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[13] I use the term loosely because we simply do not know exactly what language the Yamato court spoke at the time. It may have been a Kyūshū language that was closer to Ryūkyūan than the central dialect of Old Japanese.

[14] The Inariyama Tumulus sword inscription (*c.* fifth century) has the word *opo* 'large' transcribed as 意富, and this same spelling is also found in *Kojiki*.

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