The Writing Systems of Northeast Asia and the Origin of the Korean Alphabet, Han’gŭl *

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1. Introduction

The relationship between the Korean alphabet, Han’gŭl, and one or the other script known in Northeast Asia before the former was created in the 15th century has been a subject of intellectual conjecture not only during the Chosŏn period but also in the modern times. Even in the earliest reference to the alphabet, we read, "This month His Highness personally created the twenty-eight letters of ᄀᆞᆷierre [vernacular script']. The letters imitate the Old Seal [style of Chinese characters]."1 Beside the Old Seal, the Indian and the 'Phags-pa scripts were mentioned as the model of the 'vernacular script' by Confucian scholars in the successive periods of the Chosŏn kingdom. A Confucianist of

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1 See Sejong siliok [Veritable Records of King Sejong] for the 12th moon of the 25th year (December 1443/January 1444). The text in Written Chinese reads 是月 上親製諊文二十八字 其字做古篆 The last word kŏn 古篆 refers to the zhuanshu 篆書 style of Chinese writing

the 18th century even suggested, although in implausible terms, shapes of the speech organs. Since the end of 18th century, western orientalists, who had come to know the existence of the unique Korean script, expressed various opinions on its origin, ranging from 'unknown' to 'of Sanskrit' or 'of Tibetan' origin.

The centuries-old simple assumptions on, or attempts to prove the origin of Han'gul have mostly disappeared since 1940, when the book *Hummin ch'ông'ŭm* 訓民正音 (Correct sounds to teach the people) was dramatically rediscovered. In this work, commonly called *Haerye-bon Hummin ch'ông'ŭm* 解例本訓民正音 (The book of Hummin ch'ông'ŭm with explanations and examples), as it is well-known, all the theoretical details concerned with the creation of the new writing system are presented.

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2 Listings, with brief comments, of works in which the origin of Han'gul are mentioned are found in the following works (arranged by the year of publication)

Yi Nang-hwa 李滿植, *Chosŏn munjiyo tongsa* 朝鮮佛教通史 [History of Korean Buddhism], 1920 pp 573-630

Kim Yun-gyŏng 金允經, *Chosŏn munjach'ŏp daksja* 朝鮮文字及語言史 [History of the Studies on Korean Writings and Language], 1939 pp 120-156


Ch'oe Hyŏn-bae 최현배, *Koch'ŏn Han'gŭl-gal* 고천 한국글 [A Study of Han'gul, revised edition], 1961 pp 604-633


Kang Sin-hang 康信湘, *Hummin ch'ông'ŭm yŏn'gu* 訓民正音研究 [Studies on Hummin Ch'ông'ŭm], 1987 pp 83-87

In Ledyard (1966) pp 351ff some of the Chosŏn and modern Korean scholars' opinions are discussed.

3 For a summary of the opinions of western orientalists of the 18th to 19th centuries, see Ledyard (1966) "Introduction" pp 9-13

4 This book seems to have been lost some time not long after Han’gul was released for public use in 1446 Ch’oe Se-jin 崔世珍 (1473~1542), who was active in the early 16th century and who has been considered to be the most capable scholar in Chinese phonetics and phonology in the five hundred-year history of Chosŏn kingdom, must have mentioned the book if it had been known at his time, but he did not...
Among the explanations given, the one on the systematic formation of signs has been especially admired by modern scholars. Nevertheless, continuously there have been those, although not many in number, who have raised questions about the Haerye explanations and have sought the origin of the Korean alphabet from certain earlier scripts.

For example, Hope(1957) argued that Han’gul was derived from the ’Phags-pa script, basing himself upon certain similarities in the outer forms of the letters.5 Ledyard(1966), having presented in detail the background history, compared the Han’gul signs with those of ’Phags-pa, finding vague similarities in several consonants (but none for the vowels). Ledyard, then, concludes "From ’phags-pa came the idea of an alphabet, anywhere from five to seven letter shapes, squareness (quickly abandoned), and one or possibly two orthographical devices (both quickly abandoned). In other words, ’phags-pa contributed nothing that makes this script perhaps the most remarkable in the world."6

Kim Wan-jun(1983) raises such questions on the Haerye explanations as (1) Why different principles were applied to the creation of basic letters for vowels from those to consonants?; (2) Why only the basic letter for the velar stop, ㅗ, was chosen from the ‘all-clear’ (chŏnch’ŏng 全清) class, while other basic letters were those representing

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5 Hope(1957) is viewed as the first work in which Han’gul was graphically compared with the letters of ’Phags-pa, but the arguments regarded his work as "weakened by his inability to handle an already large Korean literature on the alphabet’s origin." See Ledyard(1966) p 335 and Ledyard(1997) p 56

6 Ledyard wrote in this thesis (pp 368-369) Nothing would disturb me more, after this study is published, than to discover in a work on the history of writing a statement like the following "According to recent investigations, the Korean alphabet was derived from the Mongol ’phags-pa script."

Nevertheless, not a few Korean scholars have mentioned Ledyard as the one who argued that Han’gul derived from the ’Phags-pa script.
'not-clear-not-muddy' (пулч’ёнг-бултаэк 不清不濁) class; (3) Why the 'line-addition' (кахоек 加割) principle was not applied to the letters for bilabial consonants, i.e., ᄀ-ᄋ, and so on. Then, he seeks the 'true' origin in the Seal style (жуаншу 篆書) of Chinese characters, as is said in the earliest reference quoted in the beginning of this study. Each Chinese character presented in Kim (1983) as the supposed source of a Han’gul letter contains a stroke or a combination of strokes similar to the latter and represents a syllabic reading, full or part of which is identical with the phonetic value of the Han’gul sign. For example, ᄃ [o] for ‘ㅅ’ [o], .selectAll] for ‘啞’ [kʰae] for ‘啞’ [kʰ] and so on.7

Ledyard (1997) presents detailed accounts on the combined influence of the Chinese phonological theory and the system and characteristics of 'Phags-pa. In fact, Ledyard has made a remarkable contribution to the understanding of the comparable features between the 'Phags-pa and the Han’gul systems from the point of view of phonological structures of Chinese and Korean, reflected in the two writing systems. However, the same hard-to-convince comparison of graphic forms, that appeared earlier in Ledyard (1966) is repeated. Saying “I accept the Haerye’s testimony as both convincing and authorative. I consider it to be an unmoving rock of fact that is not only strongly documented but makes sense in its own terms.” recognizing that any conclusion must accommodate the Haerye’s speech-organ explanation of the Korean letter shapes, he proposes the 'Phags-pa origin of the Korean consonantal letters, ㅈ [k], ㅊ [t], ㅂ / ㅍ [p/m] and ㅅ / ㅅ

7 Only two post-1940 works by well-known scholars are mentioned here. There are many others, mostly by non-specialists of writing. For example, an Indian lady published as late as in 1983 an article comparing Han’gul letters with Devanagari strokes. In 1996, an article in a daily newspaper reported that a Korean professor, a researcher of Korean talismans, claimed Han’gul derived from the ancient Korean writing, Karama. And, still others have sought the origin from the diagrams of yung-чунг 易經 (Book of Changes) or something else.
[c/s], and argues, "Given the facts that are known from the Haerye, there is room for only five extrinsic shapes; that four of them are available from 'Phags-pa, and shows an 80 percent rate of accommodation." The 'Phags-pa and Korean letters compared are identical with those presented in Ledyard(1966).\(^8\)

**Presumptions**

Most of those interested in the origin of Korean alphabet seem to have believed such presumptions as follows

1. No writing system has ever created independent of the earlier ones.
2. The outer forms of signs composing a new writing system necessarily reflect those of the earlier, model script
3. Therefore, the origin of a system could be sought by comparison of the outer forms of signs.

The first presumption seems to be true. It is hardly thinkable that a new writing system was created entirely free of any kind of influence of the one already known to the creator. However, the second and the third presumptions turn out not to be necessarily true.

The relationship between an earlier and a later script has been rarely recorded. In most cases, especially those of archaic and ancient times, the connections have been established by modern scholarship. In establishing a relationship between two scripts, comparison of the outer forms of signs has been a natural, the primary choice of consideration, but has not been regarded as the sole evidence to

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prove historical connection. It is not difficult to see similarities in forms between the Greek and the Latin alphabets. And, from a comparative table of the letters of Phoenician, Old Hebrew, Early Greek, Etruscan, Early Latin, Modern Latin and Cyrillic, one can see similar forms existing in different systems. However, it would be almost impossible for an amateur to point out Arabic signs comparable with those of the Hebrew, both of which are known to have their origins in Aramaic. Also, the numerous scripts used in India and in Southeast Asian countries are said to have been directly or indirectly derived from the Brahmi script of the 3rd century BC, but the outer forms of many of them are fundamentally different from one another. On the other hand, there are many identical signs found between the Runic and the Old Turkic Orkhon scripts, but no relationship has ever been established between the two. Thus, Gelb(1963, pp. 217-218) says "I am in general very reluctant to draw conclusions as to the common origin of writings based solely on the comparison of the outer form," and emphasizes "the inner structural characteristics, such as phonetization or vocalization."

Adoption or Adaptation and Creation of Writing

During the past one and a half millenia, numerous languages spoken in Asia and Europe were written for the first time in history. The scripts employed were either those adopted or adapted from earlier ones, or those created under the influence of the earlier scripts. It would be reasonable to think that no script was created entirely free from any kind of influence of an already known script.

Adoption or adaptation is commonly observed from the scripts of

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9 A comparative listing of the alphabets is shown in Crystal(1987) p 202
Europe and Middle East. In the course of adaptation partial modifications such as addition or deletion, or purposeful transformation of certain letters or diacritical marks may have happened. Nevertheless, since the forms of signs are mostly preserved as such in the adapted system, anyone can easily recognize their identities with those in the source script. This is the case of the Latin alphabet, adopted to write most of the western European languages; the Arabic, for the Persian, Turkic and others, the Uighur, for the Mongolian, the Mongolian, in turn, for the Manchu and so forth. Chinese characters employed to write Korean, Japanese and Vietnamese may be included in this category also. A writing system was often adopted to replace the older one, as we see in Vietnam, where Chữ-nôm script, consisting of Chinese and Vietnamese characters, was replaced by the Latin alphabet, and in Turkey the Arabic was replaced by the Latin.

Creation of a writing system is distinguished from adaptation in that the outer forms of signs cannot be easily and systematically identified with those of the older script. In the history of writing in the West and Middle East, we see creation much less frequently than adaptation. However, in Northeast Asia creation seems to have been a tradition since the middle of the first millennium. Creative forms are found even in the script whose origin is documented. The origin of the 'Phags-pa script, created in the 13th century, is well documented as Tibetan. But, when the outer forms of the two scripts are compared with each other, we find more differences than resemblances. The scripts of Khitan (created in 920-924), Tangut (created in 1036) and Jurchen (created in 1119-1138) suggest strong connections with Chinese characters, but they are unmistakably distinguished from the latter.

Apart from the outer forms, other features, such as the unit of sound designated to a single sign, the method of combining multiple signs and so on were adopted or created. In the case of the
alphabetic system, such as the Latin, each letter represents simple sound(s) and in the adopted system it is generally the same. However, when the logo-syllabic signs, such as the Chinese characters, or consonant-syllabic signs such as the letters in an Indian script, were adapted alteration of the features frequently occurred owing to the linguistic differences of the language, which the adopted or created script was to write, from the language written in the source script, or owing to the development of knowledge in the language and writing. This phenomenon is especially observed in the writing systems created in Northeast Asia. In the Tibetan writing system the vowels, other than [a], are indicated by diacritical marks above or below the consonantal letters (with inherent vowel [a]). Whereas, in the 'Phags-pa, the vowels other than [a], are written in vowel letters following the consonantal letters (with inherent vowel [a]). The Khitan, Tangut and Jurchen scripts are known to have derived from the Chinese characters, but, in addition to the distinguishable outer forms, the principles of representing sounds by signs differ.

Tibetan, Khitan, Jurchen and 'Phags-pa writing systems were created by the learned with the full support of the monarchs, or by the monarch himself. The systems were not the products of long-time gradual developments, as the Chinese characters or the Latin alphabet, but those theoretically accomplished at one time.\(^\text{10}\) Therefore, if a

\(^{10}\) In general, scholars are apt to think of an established model while investigating the development of a culture of the same sort found in other part of the world. This is also the case for the study of the history of writings. As an example, Ledyard (1997) pp 35-36 reads 'Only on relatively few occasions in world history have individuals consciously applied themselves to inventing a script. In the usual case, alphabets and syllabaries have developed along evolutionary lines, spreading from one region and language to another, often in response to movements of imperial conquest, religious proselytization, or commercial expansion.' Anyone, who is familiar with the history of Northeast Asian writing systems, will immediately realize that Ledyard's statements are not wholly true.
similarity was found in the graphic forms of two systems, it could be interpreted more as a coincidence than as an inheritance from the older to the newer. For the creator of a new writing, who were well informed of the system of writing as well as the linguistic knowledge then available, creation of signs distinguishable from one another must have been the primary concern. Whether he adopted a certain signs for certain sounds from an old script must have been quite an arbitrary matter.

We see the same East Asian tradition in the Korean writing system too. The unique forms of signs, theoretical formation, one-time creation, and the involvement of the monarch and/or the learned, all these facts do not sound unfamiliar at all for Han’gül. Therefore, it would be proper to view the creation of the Korean alphabet in the East Asian tradition, rather than seeking the origin from an older writing by comparison of outer forms as has been done in the past century without any success.

2. Writing Systems Known in Northeast Asia Before Han’gül Was Created

There might have been a larger number of scripts used by the Northeast Asians before the 15th century, but those known today are as follows:

1. Chinese characters (earliest specimens dated ca. 15th century BC)
2. Chinese-Korean Kugiyl and Chinese-Japanese Kana scripts
3. Japanese Syllabaries, Katakana and Hiragana
4. Indian Siddham script (Buddhism introduced into China ca. 1 century AD)
(5) Tibetan script (since 7th c. AD)
(6) Orkhon Turkic script (early 8th c. inscriptions extant)
(7) Khitan script (created in 920-924)
(8) Tangut script (promulgated in 1036)
(9) Jurchen script (created in 1119-1138)
(10) Uighur-Mongolian script (the earliest specimen dated ca. 1225)
(11) 'Phags-pa script (created in 1269)
(12) Korean Han'gul (created in 1443)

From the above listings anyone who is familiar with the history of writing of the world would easily see some particular facts. First of all, most scripts known elsewhere are those gradually developed since the antiquity or adaptations of the earlier ones. Whereas, among the scripts listed above, those gradually developed or adapted are limited to the (1) Chinese, (2)-(3) Korean and Japanese and (10) Uighur-Mongolian. The rest, with the exception of (4) and (6), are those created, and the dates of creation are recorded in history (4) the Indian Siddham script was known only to the Buddhists and was not used to write the native languages. The origin of (6) the Orkhon Turkic script has not been definitely known, but presumably created, also. It is interesting to notice that the created scripts have been forgotten, with the exception of (7) Tibetan and (12) Korean.

It would be proper to say that Chinese writing has played important role in the history of writing in Northeast Asia. Not only the Chinese characters themselves, but also the Chinese linguistics advanced in conjunction with the syllabic sounds represented by the characters, i.e., the 'rhyme studies' (yünxué 韻學), seem to have exercised substantial influences upon, or probably offered grounds for, the creation of new scripts. Structural comparison of the writing systems, roughly chronologically listed above reveals a gradual development of analyti-
call understanding of syllabic sounds and its reflection on the created signs.

1) **Chinese Writing: the Model of Writing in Northeast Asia**

*Formation of Chinese Characters*

Chinese writing is the oldest, known system of writing in East Asia. The earliest, extant specimens are *jiaguwen* 甲骨文 (oracle bone inscriptions) dating about 1500 BC. The system was already fully developed at that stage Graphic styles had been devised several times until the period of Han dynasty (BC 206~AD 220), but, since then, the style has remained almost the same until the present day. However, new characters have been continuously created.

Traditionally, Chinese characters are classified by origin into six groups pictographs, ideographs, compound ideographs, phonetic compounds, loan characters and *zhuanzhu* 轉注. Pictographs are characters that originated from pictures of objects. For example, the primitive forms of such characters as 日 *il* ‘sun’, 月 *wol* ‘moon’ and 木 *mok* ‘tree’. Ideographs are diagrammatic indications of ideas, such as 一 *il* ‘one’, 二 *two’, 上 *sang* ‘above’ and 下 *ha* ‘below’ These two classes have been often mentioned as the origin of Chinese characters. But the number of characters falling in these two classes is very limited. Compound ideographs are characters in which the meaning of the whole is a combination of the meanings of its parts, such as the character 明 *myong* ‘bright’ is a combination of 日 *il* ‘sun’ and 月 *wol* ‘moon’; 林 *nim* ‘woods’, 木 *mok* ‘tree’ + 木 ‘tree’ and so on. Compound ideograph has been also regarded as a major method of creating new characters, but the actual number is not so big.

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11 Thus and the next two paragraphs are based on Chao(1968) pp 102-105
12 The reading given to each character is modern Sino-Korean
By far the largest number of Chinese characters belong to the class of phonetic compounds. Under this class each character consists of two parts, a signific (or radical) and a phonetic, the former giving in a very general way something of the meaning of the character and the latter suggesting the pronunciation. For example, 糖 *tang* 'sugar' consists of a signific 米 *mi* 'rice' and a phonetic 唐 *tang* (a proper name).

'Loan characters' are those originally used as phonetic symbols, regardless of the original meaning of the characters. However, the newly-designated meaning became one of the standard meanings of the characters. For example, 来 (Ch lai) originally was a pictograph for a type of grain plant, but had come to be used as a homophonous word for 'to come.' The character, 其 (Ch. qi), originated from a pictograph of 'winnowing basket' but used to write a homophone with the meaning of a demonstrative pronoun, 'his, this, that.' In the case of these two examples, the characters are better known by the secondary meanings. Most of the characters used to write proper names may be understood as loan characters. Some time in the 19th century, the characters 花 (Ch. ying) 'flower corolla' and 美 měi ('beautiful') were chosen by a certain Chinese to write the initial syllable of 'England' and the accented syllable of 'America' respectively. Since then, the two characters have come to frequently signify 'British' and 'American.' Loan characters may be viewed as "the way of creating Chinese characters without creating new signs."13

Thus, phonetic compounds was the most popular method to create new characters, and loan characters have commonly used to write new concepts. This fact may suggest that, contrary to the general assumption, representation of sound, rather than the meaning, has been the

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13 The last class zhuangzi is so obscure that it has been usually left out of discussion by modern scholars. See Chao (1968) p. 103
most productive function of Chinese characters. Of course, the existence of meaning value for each character characterizes Chinese writing.

_Adoption of Chinese Characters to Write Non-Chinese Languages_

As is well known, Chinese characters were originally the writing for Written Chinese—*wenyan* 文言 in Chinese and *Hanmun*_ 漢文 in Korean—and they have been used for that purpose in China, in Korea, in Japan, in Vietnam and elsewhere.\(^4\) Since ancient times, however, the characters have been used to write other languages also, including spoken Chinese, Korean, Japanese, Vietnamese and so on. The *bāihuā* 白話 literatures of the successive historical periods since the Han dynasty in China, *hyangga* 鄉歌 of ancient Korea and *man'yoshū* 萬葉集 of ancient Japan are examples of non-Written Chinese written in Chinese characters.

The methods of writing native tongues in Chinese characters were fundamentally identical in Korea, in Japan, in Vietnam and elsewhere. Basically there were four methods of employing Chinese characters to write non-Chinese.\(^5\)

1. A character may have been adopted for both its Chinese-originated sound and its meaning value.
2. A character may have been adopted for its Chinese-originated sound value, regardless of the meaning.
3. A character may have been adopted for its meaning value, with a representing sound of a native form denoting the same or similar meaning.

\(^4\) Written Chinese had functioned as written *lingua franca* in East Asia. In the past, intellectuals from China, Korea, Japan and Vietnam were able to communicate one another in writing, but not in the spoken language.

\(^5\) See Song Ki-jung(1997-2)
(4) A small number of supplementary characters were created to write certain words

The expression 'Chinese-originated sound' in (1) and (2) above denotes the representing sounds originated in Ancient Chinese, but had changed in the language to which it was adopted. That is, the naturalized phonetic forms commonly called with a prefix 'Sino-', such as Sino-Korean, Sino-Japanese, Sino-Vietnamese and so on.

The Ancient Chinese sound represented by a character were originally mono-syllabic. Once a Chinese character, accompanying the representing sound and meaning in Ancient Chinese, was adopted by a different language-speaking people, the Chinese sound must have been inevitably adjusted to fit into the phonemic system of the native tongue and, thereupon, has experienced sound changes along with the host language. In the meantime, the Chinese phonetic value of the character has undergone changes too. Thus, the representing sound of a character has become different from one language to another. Yet, the different readings for the same character often reveal comparable features from one another, because all of them have originated in the same Ancient Chinese. For example, the character 國 'state, nation' is read in modern Mandarin guó, in Sino-Korean kuk and in Sino-Japanese koku, all of which are supposed to have originated from Ancient Chinese kwok. One could easily see differences as well as similarities from the readings of a character in the different languages.

On a single characters' level, method (1) above may be regarded as phonetic borrowings of Ancient Chinese, but the compounds are not necessarily borrowings. For example, the Sino-Korean form 삼 'three' represented by the character 三星 and ch'on 'inch', by 삼 are borrowings

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16 After Bernhard Karlgren, *Grammatica Serica Recensa*, Stockholm 1964
from Ancient Chinese sâm and ts'awon respectively. However, the compound samch'on 'uncle' is of Korean origin.

Method (2) is frequently found in the writing of proper names and grammatical forms. The characters writing the names of the ancient Korean kingdoms, 新羅 Silla, 高句麗 Koguryô and 百濟 Paekche seem to have been used only for the readings, not for the meanings. In Hyangga the characters 隱, 音 and 尸 frequently appear as phonetic signs for ŭn, ŭm and ŭl respectively. Method (2) is in principle identical with 'loan character' in Chinese, as mentioned above.

Method (3) was also commonly used by the East Asian peoples who adopted Chinese characters to write their native languages. In Ancient Korean history we find many examples of two forms for the same names, the one seems to have been used in method (2) and the other, in method (3). From the pairs 韓舍 hansa / 大舍 taesa and 韓山 hansan / 大山 taesan, we can figure out that the character 韓 han (originally denoting the name of an Ancient Chinese state) was used in method (2), i.e., only for the Sino-Korean sound value, while the character 大 tae ('big, great'), in method (3), i.e., for the meaning value. Since there was a Korean word han with the meaning of 'great, big', the latter character 大 must have been read han, not the Sino-Korean form dae (<dai). In Korea, method (3) was practised until fairly recent times. But, at present the sound values of virtually all Chinese characters are fixed to Sino-Korean forms. In Japan, however, both method (2) and (3) are still widely used. Consequently, each Chinese character employed to write Japanese represents at least two sounds, Sino-Japanese and native Japanese.

In those countries, where Chinese characters were adopted, a small number of characters have been created, known as kukcha 國字 ('national characters') in Korean or kokyuji in Japanese. Examples of Korean-made characters are 畑 tap ('rice field'), 個 tae ('house lot'), 棵
changing ('wardrobe'), 嫄 si ('husband's family'); of Japanese-made, 亙 kamasu ('straw bag'), 迫 ko ('crowded'), 迁 tsui ('crossroad') and so on. In the country where they were created, the national characters are hardly differentiated from those originated in China, but outside the home country they cannot be recognized. The creation of Chinese characters by Non-Chinese is, of course, different from the creation of a new script under the influence of Chinese writing, such as the Kugyŏl script of Korea, the Kana of Japan, the Kitan script, the Jurchen script and so on.

Methods of Writing Sounds in Chinese Characters

Since a Chinese character originally represented a mono-syllabic sound, it could not be used like an alphabetic sign to write a certain sound. In China there had been two traditional methods. By the first method the full sound value, i.e., a syllable, of each character was used to write a certain syllable. Then, an unknown or unusual reading of a character was indicated by a commonly used character representing the same syllabic sound. For example, in 可汗, 汗, 音寒” the proper reading of the character 汗 (han) is indicated by the character 寒 (han). Likewise, in "吐谷渓, 谷, 音浴“ the phonetic value of the character 谷 (normally g’nak in Ancient Ch.), by 浴 (nuok in Ancient Ch.).

The second method is the one commonly known as fanqie (反切) spelling. By this method a syllabic sound is described by a combination of two characters, the first one indicating the initial consonant, the second, the rhyme. For example, “祻, 即亮反” means "the proper reading of the character 祻 is the combination of the initial sound of

17 Supplementary characters were created by the Vietnamese, by the Bai people (白族) and many others who adopted Chinese characters.
即 (tsiek) and the rhyme of 竜 (liang), that is, tsiang. This method can be simplified as follows:

\[ C^1R^1 + C^2R^2 \rightarrow C^1R^2 \quad (C: \text{consonant}, R: \text{rhyme}) \]

This fanqie spelling developed beginning in the 6th century and was applied in the earliest rhyme dictionary, Qieyun 切韻 (601 AD). This method could have been a product of phonological study. Those who devised such a method must have been able to analyze a syllable into two elements: the initial sound (聲 shēng in Chinese) and the rhyme (韻 yùn in Chinese). Such an advanced knowledge on the language, together with the fanqie, seem to have laid ground for the creation of new scripts by the neighboring peoples in Northeast Asia.

However, the Chinese had never developed a method to write every sound properly. Consequently, certain sounds in a foreign word were frequently ignored when written in Chinese characters. In the Ancient Chinese readings of the two characters 佛陀 b’uok-t’a, every sound contained in the Sanskrit name buddha (‘Buddha’) is at least represented, although not necessarily accurate, but in 菩薩 b’uok-sat the sounds composing Sanskrit bodhisattva are partially represented. This is the case even at the present time.

2) Chinese-Korean Kugyŏl 口訣, Chinese-Japanese Kana 假名 and the Japanese Syllabaries Katakana and Hiragana: Gradually Developed Scripts

The exact date of when the Koreans adopted Chinese characters has not been known. However, that must have happened no later than the first century BC, as in 108 BC Chinese Han dynasty extended its border to the northern part of Korean peninsula. When the three kingdoms were inaugurated one after another in the middle of the first century BC, the Koreans, as an immediate neighbor of the
Chinese, must have already known Chinese writing. The Japanese learned Chinese characters a few centuries later than the Korean. In Japanese history Wang'ın 王仁 of Paekche is known as the one who introduced Chinese writing to Japan in the 4th century.

Since Korean and Japanese were linguistically so different from Chinese that the Koreans and the Japanese, from the very beginning of the adoption of Chinese writing, must have realized the difficulty of understanding Written Chinese and writing their native languages in Chinese characters. In the early Korean records, dating the 5th century A.D. onward, we find traces of adaptation of Chinese writing for Korean distortion of Chinese word-order along that of Korean, characters indicating Korean suffixes, loan characters writing Korean names and so on. The songs of Silla, Hyangga 鄉歌, show full Korean sentences written wholly in Chinese characters, employing in combination the different methods described above.

In Korean history it is recorded that Sŏl Ch'ŏng 薛聰 of Unified Silla created ldu 吏讀 in the middle of the 8th century, by which he read and interpreted the Confucian Classics in the vernacular language. Since the details of ldu created by Sŏl Ch'ŏng have not been handed down, we do not know exactly whether it was an auxiliary script added to the Written Chinese texts, as the term meant in the later times, or a method of reading or interpreting Written Chinese in the Korean way. Anyhow, with the exception of a few simple characters unusually used to write Korean suffixes, non-Chinese writing signs have not been found in the extant records of the first millennium AD.

The earliest non-Chinese writing signs in Korea are found in the superscripts added to the Buddhist scriptures in the early 12th century. The superscripts, in general, were written in Korean gram-

18 See Nam Kwŏn-hŭi (1997) for bibliographical information on the Buddhist scriptures.
matical forms, such as cases and verbal suffixes. By the addition of them the syntactic structure of Written Chinese can be altered closer to that of Korean and, consequently, the understanding of the text by the Koreans could remarkably improve. The signs devised for this purpose have been called upkyŏl 입 tịch in Korean or kugyŏl 口訣 ('oral particles') in Sino-Korean.

Researchers have counted about two hundred-forty Kugyŏl signs from the extant Buddhist scriptures of the Koryŏ period.19 The signs include Chinese characters, mostly those with simple strokes, and non-Chinese characters. The latter occurs more frequently than the former. Some of the non-Chinese signs are traditionally known to have been derived from a certain Chinese characters, chosen either for the sound or for the meaning values. For example, the sign 'ㄴ', representing the syllable [ko], came from the lower half of the character '古', which had a sound value [ko]; the sign '袤' represented [ha] and was derived from the character '馬/馬', which had a meaning value 'to do', of which the corresponding form in Korean was [ha-] and so on.

In the earlier stage, the Japanese, as the Koreans, wrote the grammatical forms of their language in the full forms of Chinese characters. This practice has been called Manyogana 萬葉假名. Beginning in the 9th century, a non-Chinese script, Kana 假名, evolved from Manyogana. The signs look like Kugyŏl of Korea and were also used for the superscripts found in the Buddhist scriptures. The similarities in forms and functions between Kugyŏl and Katakana suggest a certain historical connection, but no one has definitely proved it yet. Some Korean Kugyŏl and Japanese Katakana signs are compared below.20

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19 See Paek Tu-hyun(1997) for listings of kugyŏl signs.
<table>
<thead>
<tr>
<th>Signs</th>
<th>Kugyŏl</th>
<th>Reading</th>
<th>Origin</th>
<th>Kana</th>
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<tr>
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</table>

Kugyŏl and Kana Signs with Identical Forms

While Kana was developed into Katakana 片假名 ('square forms'), another style of script, Hiragana 平假名 ('cursive forms'), evolved. The Hiragana signs are also known to have derived from Chinese characters, the cursive styles in Manyogana. Each of the two styles of syllabary consists of some 50 signs. Thus, Hiragana was different from Katakana only with respect to the outer forms of signs. However, the creation of Hiragana was significant in the development of writing in Japan, as it was used as a full writing, i.e., without employing any Chinese characters, especially by women.21

The Kugyŏl and Kana scripts were originally devised to make the Buddhist scriptures in Written Chinese easier for the Korean and Japanese readers. The same practice was occasionally applied to the

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Confucian Classics and histories in Written Chinese. In principle, they were extrinsic, unessential signs to the main body of the texts. The scripts were not developed to write full sentences of Korean and Japanese. In fact, Kugyŏl signs are not found in the literary works in Korean. Before Han'gŭl was created, Koreans seem to have written literature in Korean in the full forms of Chinese characters. However, the custom of concurrently using different scripts must have its origin in the practice of adding grammatical forms in the different scripts. The Koreans and the Japanese might be the only peoples in the world employing more than one script to write their language, traditionally Chinese characters and the native script.

The Kugyŏl and Kana signs were not created at once, but gradually developed. Consequently, theoretical consideration of any kind can hardly be found in the choice of the Chinese characters and in the outer forms of the signs created. Although many of the signs are known to have derived from certain Chinese characters, if the traditional identifications have not been transmitted in the present form, the origins can not be judged with certainty by the outer forms alone. In other words, the relationship between a Chinese character and a sign of Kugyŏl or Kana seems to be quite arbitrary. In this respect, it would not be so important to find out the original character from which a Kugyŏl or Kana sign was derived. The very fact that signs unmistakably different from the Chinese characters were felt necessary and were to be created must be the main issue. Under such a circumstance, the newly created signs could have taken any forms and could have been conventionalized.

As the Kugyŏl and Kana scripts were the results of gradual developments for centuries, characteristic features observed from them may be interpreted as those naturally reflected, owing to the phonological systems of the languages of the users and the logo-syllabic nature of
Chinese characters. Each sign of both scripts represents a syllabic sound. On the contrary to the interpretation of some Korean and Japanese scholars, a sign representing a single consonant, i.e., an alphabetical sign, does not seem to exist. The syllables are either open or ending in a nasal consonant, one of [-ng], [-n] and [m] or a liquid [-l].

3) The Siddham Script

Buddhism was introduced into China around the beginning of the Christian era and into Korea, in the 2nd year of King Sosurim of Koguryo (372 AD). Since translation of Buddhist scriptures into Chinese began in the Later Han dynasty (25-220 AD), Indian writing must have been known then. However, it is difficult to confirm in which Indian scripts the sūtras, brought to China in the first and the second centuries AD, were written. In the world of Chinese (Mahayana) Buddhism 'Sanskrit writing' (梵書 Ch. fanshu / Ko. pŏmsŏ or 梵字 Ch. fanji / Ko. pŏmcha ) has referred to the Siddhamatika script, known by the abbreviation 'Siddham' (悉曇 Ancient Ch Siet-tam / Ch. Xitan 悉曇 / Ko. Siddam). Modern scholars consider that the Siddhamatika script developed out of the western branch of the eastern Gupta script in the 6th century AD.22 Buddhism and Buddhist manuscripts took this script to China where it introduced the knowledge of Indian syllabic writing and the phonetic letter arrangement.23 It is noted that the most important Indian script, Devanagari, also an offspring of the Gupta script, developed in the 7th-8th century, i.e., later than Sid-

22 I merely mention what is written in Diringer(1968) pp 357-358 If this script had developed in the 6th century AD, the Buddhist scriptures introduced in the first or second century could not have been written in it
23 See Gaur(1967) p 112
Manuscripts extant written in Siddhamatrika are scarce. The table of 42 or 52 signs is known in the countries of Chinese Buddhism. Several editions of collection of mantra (‘magical formulae, spells’) written in three scripts side-by-side, Siddham, Chinese and Han’gül, printed during the Chosŏn dynasty under the title of Chunŏn-jip (lit., ‘collection of true words’) are extant. At a glance, one can see certain similarities between the Siddham and Devanagari signs. However, Siddham lacks the top lines of Devanagari and is written vertically. Many signs of Siddham are comparable with those of "so-called Kutila type scripts" by Diringer. Perhaps, because of the paucity of materials, Siddham script has not been studied in detail by modern scholars. However, it obviously share most of the following common features with other Indian scripts.

(1) All consonants are perceived as syllabic, that is, containing an inherent [a].

(2) Vowel signs are written in their full form only if used on their own or in an initial position, in conjunction with a consonant they are abbreviated to auxiliary signs before, after, below or above the consonant sign.

(3) Consonants which have no vowel after them are amalgamated if possible, usually by writing one above the other, by forming ligatures or by having a special sign added to them, such as a

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24 See Diringer(1968) p 398
25 See column 7 “The so-called Kutila type” in “Fig. 153—Indian and Further Indian branches I” on page 330 in Diringer(1968) In this table, signs of various Indian scripts, Tibetan and Pās-pa are compared
27 In some Southeast Asian scripts, including Tai and Lao, the inherent vowel is an [o], instead of an [a]
stroke below or a dot above, indicative of the absence of any vowel.

(4) The arrangement of letters is strictly phonetic: the vowel signs, short and long, are listed first, followed by the diphthongs as understood in India. The consonants are arranged in seven groups indicative of the way in which they are pronounced, beginning with sounds produced at the lowest level of the larynx, and moving forward to those produced by the tongue, the lips etc

(5) The direction of all Indian scripts runs from left to right, with the exception of some of the earliest Brahmi inscriptions which were written from right to left or even boustrophedon.

As noted above, the last feature is not applicable for Siddham.

No less than two hundreds Indian and Southeast Asian scripts are considered to have directly or indirectly originated from the Brahmi script of the 3rd century BC. The relationship between earlier and the later, or among the contemporary, scripts have been established not by the similarities of the outer forms, but by such common features as above. The structural similarities found in various scripts suggest that they were not the products of long-time gradual developments, but one-time creations, modeled after the older, known scripts. It would be reasonable to think that the one who was to create a new script, deliberately avoided signs identical with those of model script in order to differentiate the new script from the older one.

4) The Tibetan and the ‘Phags-pa Scripts: Creation by Alteration

According to historical records, the Tibetan script was created in 635 AD modeled after the Indian script brought back by Thon-mi-sam-bhota, the minister of the great king Srong-btsan-sgam-po (Song-tsen-
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<td>ksa</td>
</tr>
</tbody>
</table>

**Siddham Script**

gam-po r. 620-649), who founded the kingdom of Tibet and established the capital in Lha-sa. However, modern scholars believe that it was
not a creation but a revision of an older script already in use in Tibet at an earlier period.\textsuperscript{28} Also, the Gupta script is believed to have been the immediate forebear of the Tibetan. The Tibetans, however, made significant changes necessary because of the linguistic differences. Those letters representing the Indian sounds unknown in Tibetan were eliminated and new ones necessary for Tibetan were created. Besides, structural adaptations were made also. The characteristic features of the Tibetan script are as follows:

1. As the Indian scripts, the Tibetan script consists of consonantal signs with the inherent vowel [a].
2. Unlike the Indian scripts, there is only one sign for the vowel, which represents [a].
3. Vowels, other than [a], are indicated by diacritical marks attached above or below the consonantal letters.
4. Syllable boundaries are marked by a dot.

Obviously the Tibetan script was a product of the learned insight into the model script and the Tibetan language. The second, third, and the fourth features above must have been innovations of the creator. It is hardly thinkable that they were achieved in the course of gradual development of the Tibetan script from the time of adoption of a certain Indian script.

The 'Phags-pa script was created by 'Phags-pa lama in 1269. Emperor Qubilai (r. 1260-1294) of the Yuan dynasty ordered the Tibetan lama to create a writing system that could be used by various peoples residing in the empire. This writing system enjoyed the status of 'the national script' (guozi 國字) during the Yuan, but

\textsuperscript{28} See Gaur(1984) pp 112-113 and Dirmger(1964) pp 352-355
Alphabet

\[
\begin{array}{cccccccccc}
\text{ka} & \text{kha} & \text{ga} & \text{nga} & \text{cha} & \text{chha} & \text{ja} & \text{nya} \\
\text{ta} & \text{tha} & \text{da} & \text{na} & \text{pa} & \text{pha} & \text{ba} & \text{ma} \\
\text{tsa} & \text{tsha} & \text{za} & \text{wa} & \text{sha} & \text{sa} & \text{\text{'}a} & \text{ya} \\
\text{ra} & \text{la} & \text{sha} & \text{sa} & \text{ha} & \text{a} \\
\end{array}
\]

Vowel signs

\[ -a \quad \sim \quad -i \quad \sim \quad -u \quad \sim \quad -e \quad \sim \quad -o \]

examples: \text{\text{'}i\text{ka:} \quad \text{\text{'}i\text{ki} \quad \text{\text{'}i\text{ku} \quad \text{\text{'}i\text{ke} \quad \text{\text{'}i\text{ko}}

independent vowels: \text{\text{'}a \quad \text{\text{'}i \quad \text{'u \quad \text{'e \quad \text{'o}}

The Tibetan Script

After the fall of the empire in 1368, its use became almost extinct.

Although the model of the \text{'}Phags-pa script is known in history as the Tibetan, when compared with the latter, not a few differences are observed.

1. As the Tibetan system, a consonantal sign in the \text{'}Phags-pa script represents a single consonant followed by an inherent vowel [a].

2. Unlike the Tibetan, vowels are written in independent signs. Thus, a consonantal letter by itself represents [Ca], a consonantal and a vocalic letters combined, i.e., [Ca][V] represent, [CV] and three letter combined, i.e., [C\text{'}a][V]\text{'}Ca, represent [C\text{'}V\text{'}C\text{'}. For example, what is written in the Tibetan script, \text{ba-o} reads [bo] and \text{ba-o-da} reads [bod]}
(3) In the Tibetan, syllables are separated by dots, whereas in the 'Phags-pa, syllables are spaced.

(4) 'Phags-pa script runs vertically, unlike the Tibetan that runs horizontally.

From the 'Phags-pa writing system, it is clearly observed that the initial consonants and their variations in the final syllable final positions are recognized as the same sounds.

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The 'Phags-pa Scripts
5) The Orkhon Turkic Script: an Adaptation or a Creation?

The Orkhon Turkic script was used by the Turks in the 7th-8th century AD, whose political center was situated in the central part of Mongolia, around the Orkhon river basin. Although the existence of inscriptions in that area, written in an unknown writing, had been known for centuries, investigations into them began by Finish and Russian scholars at the end of the 19th century. The inscriptions were dramatically deciphered by the Danish scholar, Vilhelm Thomsen, in 1983. Thomsen's interpretation of the system of the script and the phonetic representation of the signs have been modified very little.²⁹

The Orkhon writing system consists of thirty-eight syllabic signs: four of them may be regarded, in the modern sense, as 'vocalic' and the rest thirty-six, as 'consonantal'. Each of the four vocalic signs represents two vowels each. Of the 36 consonantal signs, eleven occur in back vocalic environments and eleven, front vocalic environments. Thus, a consonant is represented in a pair of signs, one for the back vocalic and the other for the front vocalic environments. Since Thomsen, the back vocalic group of consonantal signs have been transliterated in Latin letters with the arabic number '1' superscribed, and the front vocalic signs, with '2', with the exception of q : k and γ : g pairs. Seven signs for single consonants and three signs for double consonants are interpreted to be 'neutral' in relation to the front-back vocalic environments. The last two signs on the table below occur only once.

Thomsen and his followers have interpreted the sounds represented by a consonantal sign to be one of C, CV and VC. For example, the letter 'b₁' stands for one of b, ab, ba, ḫb, b, b, bo, ob, bu and ub; and 'b₂',

²⁹ For the history of study on Orkhon Turkic, see Tokun(1968) pp 7-20
Vocalic Signs

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<td>i/i</td>
<td>o/u</td>
<td>o/u</td>
</tr>
</tbody>
</table>

Consonantal Signs

| Back Vocalic C¹ | झ | ञ | ट | ठ | ड | ढ |
| Total | ट | ठ | ड | ढ | न |
| Transcriptions | b | d | g | q | k |

Front Vocalic C²

| ङ | च | छ | ज | झ | ञ |
| चा | छा | जा | झा | ञा |
| Transcriptions | ङ | च | छ | ज | झ |

Back or Front

| ङ | च | छ | ज | झ | ञ |
| चा | छा | जा | झा | ञा |
| Transcriptions | ङ | च | छ | ज | झ |

The Orkhon Turkic Script

b alone or with one of e, i, o and u, preceded or followed.

Under the system of other scripts, the way of understanding the Orkhon script is doubtful. Especially, a consonantal sign representing both CV and VC is unknown in any other script. Such an explanation must presuppose that the users of the script perceived the initial plosive consonantal sounds and the final unreleased variations to be the same sounds, e.g., the [bʰ] in ba and the [bʰ] in ab, the [tʰ] in ta and the [tʰ] in at and so on.

The minimal unit of sounds able to be pronounced, or recognizable sounds by ordinary speakers, of most of the Northeast Asian languages is a syllable. The fact is reflected in the writing systems. That is, one sign unit in a script system represents a syllabic sound. Probably under the influence of Indian phonetics, the Chinese were able to analyze the syllable into two components, the initial sound.
(sheng 聲) and the rhyme (yun 韻) in the 6th century. Further analysis of the rhyme into the vowel (yunfu 韻腹, lit., 'rhyme belly') and the final consonant (yunwei 韻尾, lit., 'rhyme tail') was achieved during the Sung period (10–13th centuries). This fact may suggest that the Chinese did not perceive the identity of the initial and the final sounds at least until the 10th century. In the Sogdian-Uighur script there are three different forms representing, certain sounds in the modern sense word-initial forms, medial forms and final forms. (This is also the case in the Arabic script.)

In short, it is hard to believe that the creators of the Turkic Orkhon script recognized the identity of the initial and the final consonants, especially the released plosives in the initial positions and the unreleased stops in the final positions. Therefore, it would be necessary to understand the signs of the Turkic script representing either CV or VC(C). CV is universal as the sound value of a syllabic sign, but VC is rare. A few VC's are found among the signs of Korean Kugyŏl and Japanese Kana scripts. Obviously, the existence of VC is related with the syllabic structure of the language it writes.

The way of writing words in the Orkhon script seem to have been as follows:

| Turkic signs | Q V N¹ | Q T¹U N¹ | T²UR¹K¹ |
| Transliterations | qa-a y-an | qa-ta-u-an | tu-u-ar-uk |
| Transcriptions | qa y-an | qatun | tirk |

The way of writing a syllable, not existing in the syllables represented by signs, reminds us of the Chinese fanqie spelling, as mentioned in section "1. Chinese Writing" above.

The outer forms of the Orkhon script look very like the Runes of Scandinavia, but no relationship has been established between the two scripts. Various theories were presented on the origin of the
Orkhon script. Among them the one by Thomsen has been generally accepted. Thomsen suggested that the forms of the letters were mainly derived from the Aramaic, through one or more Iranian intermediaries. However, the theory has never been proved satisfactorily.

The Orkhon script seems to have been created by the Turks, not long before the 8th century, when the extant monuments in the script were erected. The relative uniformity of signs and spellings are characteristics commonly found in the specimens written in the newly created scripts. For example, the forms of letters and the orthography found in the Pags-pa inscriptions of the 13th century and the works in Han’gül of the 15th century are much more unified and formalized than those in the works of later times. In the Yenisei inscriptions and fragmentary manuscripts in the same Orkhon script, graphic variations are frequently observed. Also, the fact that no specimens of earlier periods have been found may be taken as a suggestive for the date of creation.

The person who created the script must have known well and been able to achieve knowledge on writing and phonetization. He must have deliberately created signs entirely different from any of the scripts currently used by the neighboring peoples.

6) The Khitan, the Tangut and the Jurchen Scripts: Adaptation of the Principles and Deformation of the Outer Forms of the Chinese Characters

The Khitan Script

According to the records in Luoshu 遼史 (History of the Luo Dynasty)

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30) See Tekin(1968) pp 26-27 In Song Kajung(1997) pp 68-76 specimens of the Runic, the Székely of Hungary, the Aramaic and the Lycian of Proto-Asia Minor scripts are presented for comparison with the Orkhon
the Khitan 'Big' script (Xietan daozi 契丹大字) was created in 920 AD by an imperial order and the 'Small' script (契丹小字) was created four years later. They were the official script of the Liao dynasty (907-1124). The script seems to have been used after the fall of Liao by the Jurchens. In 1191 the Jin (=Chin) court decreed not to use the Khitan script. Thereafter, the script had been almost completely forgotten until the early 20th century.

Since a Belgian, Father L. Kervyn, discovered grave inscriptions written in the Khitan and Chinese scripts in Inner Mongolia in 1922, more specimens, mostly grave inscriptions, have been found. Beginning in early 1950s, studies on the Khitan script were carried on, especially by Japanese scholars. However, persuasive interpretations have appeared since the 1970s, mostly by Professor Chinggeltei and his colleagues of Inner Mongolia.

The 'Big' Khitan script is thought to be ideographic, like the Chinese characters. In fact, among the Big Khitan characters, those with outer forms identical with the Chinese characters, are occasionally found. In the Xietan guozhi 契丹國志 (Gazeteer of the Khitan State) it is said that 3000 Big characters were created. From the inscriptions so far discovered, about 1800 characters have been collected. The basic principles encompassing the Khitan script are those of Chinese characters. The Big script consists of a small number of adopted Chinese characters and a large number of created logographic characters, which are unmistakably distinguished from the Chinese characters. It would be meaningless to attempt to identify the origin of the Big characters in the Chinese, based upon partial resemblances of strokes. The creators of the script must have intended to make characters different from the Chinese.

31 See Chinggeltei(1997), p 124
The 'Small' Khitan script is now understood as consisting of signs, named yuaniu 原字 'primary letters', representing syllabic or single consonantal(?) sounds. The sound values of about 150 primary letters, out of some 400 so far found, have been deciphered with the help of the Chinese texts accompanying the Khitan inscriptions. The majority of the sound values of the primary letters are either [C(V)] or [VC], very similar to the initial consonant (sheng 聲) and rhyme (yun 韻) in traditional Chinese phonology. That also reminds us of the Old Turkic Orkhon system, as briefly introduced above. Thus, the combination of t(V?)-em reads [tem] and x(V)-i-ing reads [xing]. Single or multiple, as many as seven, primary letters form Small characters, representing single or multiple syllables. The Graphic structures of the characters are as follows:

\[
\begin{array}{cccccccc}
1 & 12 & 12 & 12 & 12 & 12 & 12 \\
3 & 34 & 34 & 34 & 34 & 34 & \\
5 & 56 & 56 & 7 & \\
\end{array}
\]

**The Tangut Script**

The Tangut script is known to have been created by the founder of the Tangut or Xixia/Hsihsia 西夏 kingdom, Li Yuanhao 李元昊 (r. 1032-1048), and promulgated in 1036. The Xixia kingdom collapsed by Chunggis Khan's last campaign in 1227, but the script was used well into the Mongolian Empire of Yuan. Consequently, a great deal

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32 As Chinggeltei (1997, p. 129) says, the basic phonetic values of those, interpreted as representing single consonants, may be properly understood as [CV]s.


34 Nishida (1997, p. 163) argues the real creators of the Tangut script were the Chinese Yeh Renrong 野利仁榮 and his colleagues.
Examples of Khitan Small-Characters

<table>
<thead>
<tr>
<th>Primary Letters</th>
<th>आ इ उ ए औ ख म न य/क़ झ ह श ट</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcriptions</td>
<td>a i u am em en g k m n y/k' s t</td>
</tr>
</tbody>
</table>

Complex Characters

| Transcriptions  | अ न म झ ष स म क त ख ग न म क़ उँग |

Examples of Khitan Big-Characters

<table>
<thead>
<tr>
<th>Characters</th>
<th>奈 夫 王 一 二 世 求 国 忌</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corresponding Chinese Characters</td>
<td>天 大 王 一 二 四 六 國 忌</td>
</tr>
<tr>
<td>Meanings</td>
<td>heaven big king one two four six state loyalty</td>
</tr>
</tbody>
</table>

of materials in the scripts, including Buddhist scriptures, Confucian classics, rhyme dictionaries, literary works and so on, have come down to the present. Different styles of the script had also developed.

The Tangut writing system consists of logographic characters like the Chinese. However, the characters represents tone and grammatical information, in addition to sounds and meanings This feature distinguishes the Tangut script from the Chinese. Over 6000 differing characters have been counted from the extant works. The strokes of most Tangut characters are so complicated that they are clearly distinguished from the Chinese, Khitan, and Jurchen characters.

The characters are classified into two categories: the simple and the

35 See Nishida(1997) p 163
complex. The simple characters are those which cannot be further analyzed into smaller units and thus the number of them is small. They function by themselves or construct complex characters. The complex characters are composed of simple characters and the number is large. According to Nishida (1997), there are found about 350 kinds of graphic elements, including the simple characters, and about forty-four methods of composing complex characters.

The basic principles of the Tangut script were obviously originated in the Chinese system, but the script itself, together with the additional features lacking in the Chinese, was a creation.

<table>
<thead>
<tr>
<th>Simple Characters</th>
<th>炎 炎 炎 炎 炎 炎</th>
<th>火 火 火 火 火 火</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corresponding</td>
<td>一 萬 人 樹 高 八 半</td>
<td></td>
</tr>
<tr>
<td>Chinese Characters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meanings</td>
<td>one simple man tree high eight half</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Complex Characters</th>
<th>畏 畏 畏 畏 畏 畏</th>
<th>畏 畏 畏 畏 畏 畏</th>
</tr>
</thead>
<tbody>
<tr>
<td>Corresponding</td>
<td>雙 集 分 人 心 水</td>
<td></td>
</tr>
<tr>
<td>Chinese Characters</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Meanings</td>
<td>pair collect divide man mind water</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Examples of Tangut Characters

The Jurchen Script

The Jinshì 金史 (History of the Jin/Chin Dynasty) records that the founder of the Jin dynasty, Agutuo 阿骨陀, ordered Wanyan Xiyou 完颜希尹 to create a script. A Jurchen script was created modeled after the Chinese and Khitan characters and was promulgated in 1119. This script is believed to be the Big Jurchen characters, or Nuzhen tazi 女真
大字. In 1138 another script was promulgated, which might have been the Small Jurchen characters, or *Nuzhen xiaozi* 女真小字. Other than this information, nothing else has been known concerning the two kinds of Jurchen scripts

Until the 1970s, scholars had assumed the Jurchen characters found in the Chinese-Jurchen glossary, *Nuzhenguan yinyu* 女真館譯語, and other sources to be the Small script. As the study on Khitan writing was remarkably progressing in the 1970s, the difference between the Big and the Small Khitan scripts came into light. Thereupon, it turned out that most of the Jurchen signs found in the extant specimens are logographic signs comparable to the Chinese and the Big Khitan characters. Jurchen characters, of which outer forms are identical with those of Chinese and/or Khitan are occasionally found, but the three scripts are easily differentiated from one another. In each script there are stroke forms unique to itself but lacking in the other two systems. And, in general, Jurchen characters look simpler than the Khitan. Each Jurchen character represents one to four syllables and a meaning. Specimens of the Small Jurchen characters are extremely scarce that most of them are yet to be deciphered.

<table>
<thead>
<tr>
<th>Jurchen Characters</th>
<th>吐天金一二本于国恩尊</th>
</tr>
</thead>
<tbody>
<tr>
<td>Transcriptions</td>
<td>abka dai wang emu juwe dum nungu gum tondo</td>
</tr>
<tr>
<td>Corresponding Chinese Characters</td>
<td>天大王一二四六国忠</td>
</tr>
<tr>
<td>Meanings</td>
<td>heaven big king one two four six state loyalty</td>
</tr>
</tbody>
</table>

Examples of Jurchen Characters
7) The Uighur-Mongolian Script: a Typical Adaptation

The Uighur Turks, who flourished in the northwestern part of China in the 8-10th centuries, employed the Sogdian script to write their language. The Uighur script was adapted by the Mongols some time in the second half of the 12th century. The earliest, extant specimen is a monument erected in circa 1225 in commemoration of Chinggis Khan’s nephew, Yisungge. As the orthography of the inscription is so refined, and considering the political situations in Mongolia on the eve of the Mongolian domination under Chinggis Khan, scholars have assumed that the Uighur script had been used by the Mongols for at least several decades. However, contrary to the general assumption, ‘the refined orthography’ can be interpreted as an evidence of a recent creation or adaptation of a script, as we see in the case of the ‘Phags-pa and Han’gul. Nothing is known in history about the Mongolian adaptation of Uighur writing, but, it is very likely that it was theoretically achieved at one time by the hand of the learned and following the intention of the ruler, as commonly happened in Northeast Asia at earlier and later times. Gradual adaptation of a foreign script by commoners has rarely occurred during the past one and a half millenia.

In the course of adaptation, the Mongols made few modifications. As a result, differing sounds in Mongolian, such as [o] and [u], [ø] and [u], and [t] and [d], were written in the same letter. Whereas, the same sound was represented in different forms according to the position of the occurrence in a word. That is, in Uighur-Mongolian script, a sound is, in principle, represented by three different forms of letters: word-initial form, medial form and final form. The letters for vowels have independent forms too. This fact reflects that not only the Sogdians and the Uighurs, i.e., the earlier users of the script, but also
<table>
<thead>
<tr>
<th>Transcription</th>
<th>Characters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Initial</td>
</tr>
<tr>
<td>a</td>
<td>d</td>
</tr>
<tr>
<td>e</td>
<td>d</td>
</tr>
<tr>
<td>i</td>
<td>d</td>
</tr>
<tr>
<td>o</td>
<td>j</td>
</tr>
<tr>
<td>u</td>
<td>j</td>
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<tr>
<td>o</td>
<td>j</td>
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<td>n</td>
<td>j</td>
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<td>ng</td>
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<td>k</td>
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<tr>
<td>r</td>
<td>-</td>
</tr>
<tr>
<td>v</td>
<td>-</td>
</tr>
<tr>
<td>h</td>
<td>-</td>
</tr>
</tbody>
</table>

The letters of the Old Mongolian alphabet
the Mongols perceived the signs in combined forms, representing syllables or words. In other words, in the spelling of a word each sign does not represent a certain distinct sound, but the spelling of a word as a whole indicate the phonetic value. For example, the Uighur-Mongolian spelling of the word 'Mongol' may be transliterated into the Latin alphabet as MONGOL. The 'O' represents either [o] or [u]. Therefore, the spelling reads any one of [mongvol], [mongvul], [mungvol] and [mungvul]. Anyway, the Mongols and the Manchus, who adapted the Uighur-Mongolian script at the end of the 16th century, did not learn the signs of the script separately, like the signs of the Latin alphabet, but in combined form representing syllables, such as ta, te, to, to, tu, tu, tu.

3. Conclusions

By a survey of the history of writing in Northeast Asia, it is possible to make such conclusions as follows:

1) In the earlier periods, Written Chinese writing, i.e., the Chinese characters, were adopted by such peoples as Koreans and Japanese to write their native languages, but in later times, scripts were usually created. Even in the case of adaptation of an already existing system, creation by transformation of the signs commonly occurred.

2) The task of introducing, by either creation or adaptation, of a new writing system was carried out by the learned men on the order of the ruler or by the ruler himself. The writing systems of Khtan, Tangut, Jurchen and 'Phags-pa fall under this category. Other systems, of which beginnings are unknown, such as the Orkhon Turkic and the Uighur-Mongolian, might have also been the case. The creation of Han'gul in the 15th century (and the introduction of Manchu writing at the end of the 16th century) was none other than the continuation
of the tradition.

3) The majority of the signs in the new systems, not only the created but also the adapted, cannot be systematically compared with those of the older writing. Obviously the creators of new scripts intentionally produced distinguishable signs. The creators' primary concern must have been to produce signs distinguishable from each other and distinguishable from those of the older system. Simplification, or imitation, or maintenance of the outer forms of the model script do not seem to have been the creator's interest, contrary to the presupposed assumptions of the scholars, who have sought the origin of Han'gul on the basis of graphic resemblances.

4) The writing systems created in the successive historical periods in Northeast Asia reflect, on the one hand, the influence of the system of known writings and, on the other hand, the creator's understanding on sound and writing.

(1) In Chinese-Korean writing of the 8th-9th centuries, syllable-final consonants, such as [-n], [-m] and [-l], are written in the Chinese characters representing a vowel with the same sounds, i.e., [Vn], [Vm] and [Vl] respectively. The creators of the Orkhon Turkic and the Small Khitan writing seem to have devised a system, in which a certain syllabic sound is written basically in two methods by the first method, a syllable is written in a sign representing the same syllabic sound and by the second method, with the combination of two signs, the first one, in principle, representing the initial consonant and the second one, the rhyme. The latter reminds us of the funque spelling which began to develop in China in the 6th century AD. In regard to the economy of writing, the Orkhon Turkic system is much advanced than the Small Khitan script.

Although there are some signs in the Orkhon Turkic and the Small Khitan scripts, which have been interpreted as representing both the
initial and the final consonants, such as the single sign for [m-] and [-n] in both scripts, the second method reflects that the creators of the scripts hardly or partially recognized, in the modern linguistic terms, the allophones or positional variations of the same phoneme. The same phenomenon is also observed in the Uighur-Mongolian system, i.e., the existence of differing signs in accordance with the positions of occurrence.

(2) In the Indian tradition the initial and the final consonants are written in the same letters. The same is true of the Tibetan and 'Phags-pa writings. However, up to the 'Phags-pa system, no signs had been created to represent simple consonants. All consonantal signs represent the basic syllabic sound [Ca] Creation of signs for simple consonants was achieved for the first time in Han'gul.

(3) Since the Song era in China, the syllable-initial sounds (sheng 聲) were classified into five categories by the articulatory positions: molar (velar), tongue (alveolar-ridge, palatal), lip (labial) and throat (laryngeal). The sounds produced by the same articulation, but differentiated by features, were classified into four classes: all-clear (non-aspirated), second-clear (aspirated), all-muddy (voiced) and not-clear-not-muddy (nasal, liquid). This way of classification was originated in India and, thus, reflected in the ordering of consonantal signs in most writing systems, directly or indirectly derived from the Ancient Indian system, including the Tibetan and the 'Phags-pa.36

The Indian-Chinese classification of the consonants offered one of the most fundamental, theoretical grounds for the creation of Han'gul.

(4) In the Indian writing systems there are independent signs as

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36 The Chinese and the Indian classifications are slightly different, notably in the categorizing of the affricates [ch], [ch'], [tch] and so on. In the Chinese classification they belong to the 'tooth' category, but in Indian, the 'tongue' category.
well as diacritical marks for vowels. In the Tibetan system vowels are marked in diacritical marks. Vowel signs are created in the 'Phags-pa and, then, in Han'gul. In the earlier writings, vowel signs are hardly distinguished from those of consonant, although modern scholars have interpreted some letters as vocalic and others as consonantal.

(5) The practice of forming square shapes, representing mono-syllables, by the combination of two or more simple signs is found in Phags-pa and in Han'gul. In the Small Khitan system, the square shaped unit represents one or more syllables. The square shape may be considered to have originated from Chinese characters.

(6) The most outstanding innovation by the creators of Han'gul could be the finding of systematic relationships, or correlations in modern linguistic terms, between series of Korean vowels. The above mentioned Indian-Chinese classification of the consonants may be understood as the evidence of their understanding of the correlations of the consonants. But traces of conceiving the correlations of the vowels are hardly found elsewhere.

For those Koreans, who thoroughly recognized the systematic relationships among the Korean phonemes, it was natural to create phonetic signs systematically.

Han'gul was created in accordance with the Northeast Asian tradition, utilizing their deep knowledge on writing and their thorough understanding of sounds, partially learned from the Chinese and partially achieved by themselves.

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