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Chapter 26

What Hangul Means for Grapholinguistics: Theoretical Implications of a 'Unique' Writing System

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Abstract

This chapter examines Hangul's 'uniqueness' through the prisms of its structure, historical design and implementation, as well as its sociocultural impact and prevailing ideologies among scholars and users. Unlike many writing systems that evolved gradually, Hangul was deliberately engineered to structurally fit the Korean language while also considering ease of learning and national identity, thus addressing at once – and from its very inception – linguistic, cognitive, and sociocultural needs. On the one hand, Hangul's structural uniqueness is evident in its 'featurality' and the syllabic arrangement of its graphemes, which also pose important questions about how the writing system is processed and how or whether this should affect its description. On the other hand, the strong influence of Chinese writing is also evident, reflecting a balance between innovation and tradition. Generally, sociocultural factors, including national pride and identity, play a critical role in Hangul's prominence, with its celebration as a symbol of Korean heritage manifesting in cultural practices as well as academic discourse. The associated notion of 'Hangul supremacy' highlights an ideology that parallels but at the same time interestingly contrasts with Eurocentric ideologies such as the 'Alphabet Effect', whose claims of superiority apply only to other, i.e., 'Western', alphabets. Overall, this brief foray into exploring Hangul's unique properties aims to highlight the complex interplay between functional and innovative design, historical influences, cultural

significance, and ideological pride, offering a specific lens for valuable insights into open or pressing questions of description and explanation central to an emerging comparative grapholinguistics.

Keywords: Comparative Grapholinguistics, Writing System Typology, Featurality, Syllabic Arrangement, Hangul Pride

26.1 Introduction: Universality versus Diversity

The interdisciplinary study of writing, or *grapholinguistics*[1], much like linguistics, must acknowledge and accommodate the central dynamic between universality and diversity. Indeed, like languages themselves, the writing systems used to write them come in many different forms. 'Forms' is meant quite literally, as the scripts used to materialize writing systems – examples being Cyrillic, Chinese, or Cherokee – are characterized by remarkable graphic diversity. However, this material variety ought not to obfuscate fundamental functional commonalities. Writing systems are 'secondary' semiotic systems – not in that they are less important but in that they systematically map onto 'primary' semiotic systems, i.e., language systems which are primarily spoken.[2] And the fact that there only exist a few reasonable possibilities of how writing can relate to language(s) – basically via sound or meaning – yields a manageable number of types of writing systems (see Section 3). Yet, it is important to consider that assigning a writing system to a given type such as 'alphabet' accounts only for the broadest of strokes and often entails sweeping under the rug crucial

[1] Note that this designation for the field is not unanimously accepted (see for more detail Meletis, 2024a).

[2] Writing systems for sign languages are also possible – and have indeed been proposed or developed – but they are, at this point, not as consistently used as writing systems for spoken languages.

system-specific singularities that could prove significant in general grapholinguistic theorizing. Enter the prime example of Hangul.

Hangul is famously ‘unique’ in several respects, including its origin story (being the product of a sophisticated ‘purposeful invention’ hundreds of years ago, see Section 4.1) and structural features (e.g., the pictography of its basic consonant graphemes, see Section 3.1). While these idiosyncrasies have undeniably gained much attention both in scholarship and among interested language users and learners, they are seldom systematically ported over (or back) to the bigger grapholinguistic picture. Granted, a truly comparative study of writing has started to emerge only recently. It aims to not only juxtapose different writing systems and describe each on its own terms (as is done in major works on writing such as Coulmas, 2003; Daniels, 2018; Daniels & Bright, 1996; Sampson, 2015) but to focus instead on developing a common and unified theoretical and methodological framework for the study of all writing systems. Against the background of such a framework, ‘outliers’ such as Hangul raise vital questions: How can they inform our understanding of other writing systems and writing in general? Phrased most broadly: What do they mean for grapholinguistics? These very general questions generate a plethora of more specific questions dependent on the system one is looking at.

This paper will shed light on some of those posed by the supposedly ‘unique’ nature of Hangul. First, Section 2 gives an overview of the descriptive and explanatory categories of a comparative grapholinguistics. Section 3 then addresses contentious typological issues and their relation to the psycholinguistic reality of processing Hangul. Section 4 highlights the inception of Hangul and how it was influenced by a dominant culture, and Section 5 touches upon the importance of ideologies associated with Hangul, its use and study. The different threads are woven together in the conclusion.

26.2 Description and Explanation in Grapholinguistics

While this is not the place to provide a detailed account of an emergent interdisciplinary grapholinguistics (see Meletis, 2020; Meletis & Dürscheid, 2022), the main foundations of grapholinguistic (1) description and (2) explanation shall be presented so that specific questions relating to Hangul can be formulated.

(1) **Description**, on the one hand, deals with the question of *how* writing systems are structured. Answering this requires a multilayered descriptive framework with suitable comparative descriptive concepts. To account for the different parts of writing systems, three grapholinguistic subfields have been proposed: (a) **Graphetics** studies the *material*[3] aspects of writing, e.g., the form and appearance of its shapes, their spatial arrangement on a surface, and writing materials and tools. (b) **Graphematics** (often also referred to as *graphemics*) analyzes the *linguistic* or, in a broader sense, *systematic* aspects of writing as a linguistic 'system', e.g., the question of which linguistic units (phonemes, syllables, morphemes, …) the units of writing (or 'graphemes') relate to and how these graphemes are combined to form larger meaningful written elements and utterances (words, sentences, and texts). Lastly, (c) **orthography** focuses on the often system-externally[4] determined *normative* aspects of writing, e.g., the (implicit or explicit) conventions or rules filtering and restricting the possibilities offered by the graphematics of a writing system. Thus, orthography regulates and dictates what is the '(in)correct' usage of written language by users. To sum up the difference between graphematics and orthography: the former is concerned with *grammaticality*, i.e., whether something is possible in the writing system according to its system-internal

[3] I use 'material' instead of 'visual' here since writing is always also a haptic phenomenon, and sometimes (as is the case for braille) primarily so.

[4] This means that the conventions are not inherent to the writing system but developed or imposed from the outside by users or authorities of language policy. An example is the morphonographic nature of modern Hangul that was decided on in a 20th century reform (see Pae, 2024, Chapter 6).

regularities, whereas the latter is governed by *correctness* with respect to a possibly arbitrary – and often codified – system-external norm.

(2) **Explanation**, on the other hand, attempts to answer *why* writing systems are built the way they are. To answer this complex and multifaceted question, it is imperative to acknowledge that writing systems assume different 'roles': they are not only semiotic systems relating graphic marks to the structures of language(s) but also media that must be processed by readers and writers to allow for communication, as well as indexical socio-semiotic tools of (cultural, political, religious, …) identification. This calls for the consideration and integration of multiple perspectives that transcend the mere study of the structure or systematicity of writing systems and also include their use. In other words, in seeking explanations, usage-based psycholinguistic and sociolinguistic questions and external evidence must complement 'merely' linguistic questions and language-internal argumentation, which is where linguistics must necessarily intersect with disciplines such as the cognitive sciences and anthropology. Furthermore, these above-mentioned 'roles' are potentially in conflict and may be prioritized differently by different writing systems, leading to the fact that – depending on which role or criterion one is looking at – "some writing systems are better than others" (Rogers, 1995, p. 31). This motivates the assumption of evaluative explanatory categories that can also serve the comparison of systems (cf. Meletis, 2018, 2020): the (i) **linguistic fit** assesses how well a writing system suits the structure(s) of its underlying language; the (ii) **processing fit** evaluates how suitable a writing system's features are for physiological and cognitive processing (i.e., the hands, eyes, and the brain and mind); finally, the (iii) **sociocultural fit** is used to describe whether a writing system

meets its users' socio-communicative and identity-related needs and wishes, which are often contextualized very locally and intricately entwined with culture, religion, politics, etc.[5]

This combination of description and explanation accounts for the 'total linguistic fact' (Silverstein, 1985) by dealing with the system as well as its use and associated ideologies. It makes possible a deep engagement with any specific writing system but also comparisons of systems. Table 26.1 collects central questions regarding Hangul.

Table 26.1 Examples of central grapholinguistic questions concerning the structure and use of Hangul

explanation / **description**	**linguistic fit** How does the writing system fit the language?	**processing fit** How does the writing system fit users' physiological and cognitive processing?	**sociocultural fit** How does the writing system fit the literate community's sociocultural wishes and expectations?
graphetics (material) studies the formal and material aspects of a writing system	How consistent is the 'featurality' of the system? How diagrammatic is Hangul (i.e., how systematic are form-function correlations)?	Is the pictographic and diagrammatic nature of the graphemes (un)consciously processed by users and does it benefit processing? Does it play a role in literacy instruction?	How (and why) does the square appearance of the Hangul blocks approximate Chinese (or 'sinographic', Handel, 2019) writing?
graphem(at)ics (linguistic/systematic) studies the genuinely 'linguistic' aspects of a writing system, i.e., how	Does the arrangement in syllable blocks fit the language's structure(s)?	Does the arrangement of graphemes in syllable blocks benefit processing (particularly acquisition, reading, and writing)?	Does it have any sociocultural repercussions that Hangul is alphabetic and has word spacing when

[5] What is omitted here is the systematic fit (see Meletis, 2020, Chapter 5) that is used to assess how systematic a writing system is in and of itself, i.e., how systematic, coherent, complete, … the relations are between its units.

graphic resources relate to language			important writing systems in contact (Chinese, Japanese) are of different types and unspaced?
orthography (normative) studies normative aspects of the writing system (including externally codified rules governing its 'correct' use)	Is the morphonographic nature of Hangul a good fit for the language?	How have external reforms of the writing system (e.g., morphonography; the reduction of Hanja use) affected processing?	What is the importance of pride that Koreans associate with Hangul and its origin story?

Note that several of these questions actually fit into multiple cells as the descriptive modules and explanatory fits interact and overlap: for example, to descriptively study pictography in writing – in this specific case the iconicity of Hangul's basic consonant shapes – one must analyze the relation between visual (i.e., graphetic) and linguistic (i.e., graphematic) properties; to explain how pictography developed, one must consider the interaction between the linguistic and processing fits (see Section 3.1).

The following sections are not (only) devoted to discussing these particular questions but focus on condensing what they mean, at a metalevel, for open questions of general theoretical and methodological importance for grapholinguistics.

26.3 Typological and Transdisciplinary Questions

One of the main concerns and simultaneously most productive subfields of grapholinguistics is writing system typology (for an overview, see Joyce, 2023). The classification of writing systems into different types is commonly based on the dominant level of representational mapping (Joyce & Meletis, 2021), i.e., the linguistic level that the

graphemes in a given writing system map onto primarily. This results in the major distinction between *morphography* (writing related to meaning, specifically morphemes) and *phonography* (writing related to sound), with the latter further divided into *segmentaries* (graphemes relating to sound segments, i.e., phonemes; this term was proposed by Gnanadesikan, 2017) and *syllabaries* (graphemes relating to moras and/or syllables).

While most scholars of writing agree on these broad categories, several open questions remain, all of which are relevant in the context of Hangul: (how) should additional forms of representational mapping – e.g., between subsegmental graphic features and subsegmental phonological features or suprasegmental graphic arrangements and suprasegmental linguistic structures, e.g., phonological syllables – be incorporated into/accommodated by typologies of writing systems? Can we assume useful complementary or alternative typologies of writing systems based on other – not only structural but also psycho- and sociolinguistic – criteria (Joyce & Meletis, 2021; Meletis, 2024b)? And a pressing question that touches upon transdisciplinarity and is central in the context of this psycholinguistic handbook: Should cognitive reality affect descriptive categories? For instance, should the way we process a given writing system – including the units or structures that play a role in reading – influence its typological classification? And vice versa: Should description affect the way the system is, for example, taught?

To address these questions, two central properties of Hangul (featurality and syllabic arrangement) shall first be presented from the perspectives of *description* (How is the property described?) and *effect* (What – if any – effect does it have in use, e.g., for reading or literacy instruction?) to then discuss what they mean for a comparative grapholinguistics (Section 3.3).

26.3.1 Subsegmental Properties: Iconicities and Featurality

Description. As Ko (2016, p. 1) observes, "[u]p until the 1980s the typological classification of the Korean alphabet was simple and clear; it was classified as a phonemic writing system". This classification makes sense, as the smallest discernible 'units' of Hangul are indeed related to vowel or consonant phonemes, rendering Hangul – as stated in the quote – an alphabet. According to Ko, the situation only got complicated – and in both Anglo-American and Korean scholarship – after Geoffrey Sampson, in his widely received 1985 book[6] on writing systems, categorized Hangul as a so-called 'featural' system (Sampson, 1985, Chapter 7; see also Daniels, 2001). This highlights that (parts of) shapes indicate phonological features. The unique – and arguably overemphasized – property that largely motivated this new type is well-known: Hangul's five basic consonant shapes are pictographic (i.e., exhibit imagic [or imaginal] iconicity, see Nöth, 2001; for that reason, Pae, 2024 refers to featurality as 'phonological iconicity'). They adopt a left-lateral perspective on a speaker's head or a frontal perspective on a speaker's mouth to schematically depict the "shape[s] of the speech organ[s] and articulatory gesture[s]" involved in producing the consonant sounds that are represented by the respective shapes (S.-D. Kim, 2011, p. 181; see Figure 26.1).

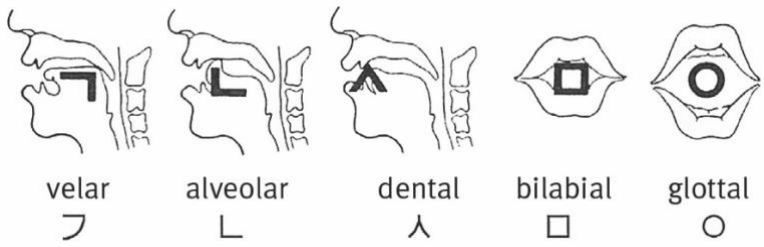

Figure 26.1: Pictography of basic consonant shapes (from Meletis & Dürscheid, 2022, p. 229)

[6] A second edition was published in 2015. However, since I am focusing on the historiographic influence of the book's initial publication on the prevalent views on Hangul, I am citing the original version here.

While most scholarly (as well as lay) attention is given to this unique consonantal pictography (see also Section 5), the 'featurality' of Hangul is more extensive, general, abstract, and arbitrary: to derive other consonant graphemes from the basic five, tenseness can be indicated by reduplicating the basic consonant shapes, whereas adding a line to them represents aspiration: <ㄱ> is /k/, <ㄲ> is tense /k*/ and <ㅋ> is aspirated <k^h>. This is obviously not pictographic since tenseness, for example, does not 'reduplicate' a sound. The featurality is also evident in the vowel graphemes, whose basic shapes < ㆍ >, <ㅡ>, and < ㅣ > are not pictographic but metaphorically iconic[7] as they are motivated by the Neo-Confucianist cosmological principle: "the dot stands for Heaven, which is round; the horizontal stands for Earth, which is flat; and the vertical stands for Man, who is upright" (Sampson, 1985, p. 130).

Thus, when considering not only the pictographic basic consonant graphemes but also graphemes for complex consonants as well as vowels, 'featurality' relates more generally to the grain size of the level of relational mapping, specifically the level of the phonological feature, and is not contingent upon any (undeniably fascinating) pictography of graphemes. What featurality ultimately results in is that "similar phonemes are given similar shapes" (Gnanadesikan, 2017, p. 19), simultaneously rendering graphemes of dissimilar (groups of) phonemes less graphically similar to each other and constituting another kind of iconicity: diagrammaticity, in which "the similarity between the sign and its object is only a structural or relational one" (Nöth, 2001, p. 21). It is a pervasive but gravely understudied property of many writing systems. One of its main effects – also in Hangul – is that vowel graphemes look different from consonant graphemes.

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[7] For an overview of types of iconicity in phonographic writing, see Meletis (in press).

Effect. Whether Hangul's featurality is merely a 'cool feature' or has an impact on how the system is processed remains, to a large degree, unclear (see Chapter 2 in this handbook). Decades ago, Sampson (1985, p. 143) stated that "one may doubt whether Koreans do in fact commonly learn or perceive their script in terms of the featural principle that was used to construct it" (see also DeFrancis, 1989, p. 197). S.-O. Lee (2009, p. 210), on the other hand, in an article lauding Hangul for its featurality (see Section 5), writes that – at the very least – "children in learning the Korean alphabet understand these features in the system", implying that they do play a role in instruction.

26.3.2 Higher-order Properties: Syllabic Arrangement

Description. The questions raised by the subsegmental property of featurality are also raised by a striking higher-order property of Hangul: its phonemic graphemes do not occupy their own adjacent segmental spaces on the line (like letters do in this English text) but are rather grouped together in syllable blocks that are themselves graphically segmental. For example, the word *saram* 'person' is not written ㅅ ㅏ ㄹ ㅏ ㅁ but 사람. Thus, a syllable block like 람 displays three mapping relations at once (see Coulmas, 2003, p. 165): the entire block relates to the syllable /ram/; its constituent graphemes <ㄹ>, <ㅏ>, and <ㅁ> relate to the phonemes /r/, /a/, and /m/, respectively; and the graphic shapes of these graphemes indicate specific phonological features (and thus, the belonging to specific classes of phonemes, such as that the basic shape ㅁ indicates a bilabial consonant). At even higher levels, the syllable blocks that combine to form the written representation of a word are separated by word spaces, and, as in most writing systems, syntactic and textual structures are visualized with the help of punctuation units (see J. K. Lee, 2014) and the spatial arrangement of graphic units on the writing surface.

The salience and consistency of Hangul's syllabic arrangement have fueled the typological question of whether "Korean [is] a syllabic alphabet or an alphabetic syllabary" (Pae, 2011) – in other words, whether the phonemic mapping of graphemes or their syllabic arrangement should be prioritized in Hangul's assignment to a given type of writing system. In this context, Gnanadesikan (2017, p. 26, my emphasis) touches upon a crucial qualitative distinction in observing that "the *how* of a script's representation is equally important as – but different from – *what* basic units the script encodes". *What* is represented is phonological segments (and, as we saw above, partially also features), and it is by *how* these are presented that higher-order structures like syllables are indicated. In a purely descriptive typology that traditionally foregrounds the *what* question, Hangul is clearly an alphabet (or fully-vowelled segmentary), meaning its syllabic arrangement (part of the *how*) is treated as an additional property (cf. Gnanadesikan, 2017).[8]

Effect. Addressing both featurality and syllabic arrangement, Sampson (1985, pp. 131f.) wrote that "by using a small number of basic graphic units and arranging them into syllable-sized perceptual groups Han'gŭl succeeds in reconciling the two contradictory desiderata for a writing-system: the fewness of the basic graphic elements makes Han'gŭl easy to learn, while the large size of the perceptually-salient units makes it efficient to read" (see for a similar argumentation Coulmas, 2003, p. 165). This insinuates that the syllabic grain size makes Hangul easier to read, which is confirmed by Pae et al.'s (2019, p. 240) recent review of psycholinguistic evidence on the linguistic levels relevant in processing Hangul in which they conclude that "syllables are the primary processing unit when reading Hangul" (see Verdonschot et al., 2021 for corresponding evidence from speech production). In other words,

[8] See more recently also Iyengar (2023, p. 49): "[…] the arrangement of `kr-Hang`'s graphs [= the graphs of Korean Hangul, DM] into graphetic blocks that are more or less coterminous with their corresponding phonological syllables can be understood as a visual-spatial feature that does not necessarily impinge on the [writing system's, DM] membership of other typological categories."

syllabic arrangement may be favored with respect to Hangul's processing fit. At the same time, it may also contribute to Hangul's 'good' linguistic fit[9] against the background of Korean phonology and especially its speech rhythm; however, this should be taken with a grain of salt as there is still debate surrounding the question of whether Korean is indeed syllable- or mora-timed instead of stress-timed; in the former case(s), Hangul's syllabic arrangement would accommodate the language's rhythm (see, for example, Cho, 2004). In any case, what these considerations underline is the central question of whether psychological reality should factor into typologization, which is explored in the next section.

26.3.3 Implications for Writing System Typology

Three criteria can aid in deciding whether any 'unique' properties of a writing system should influence its typological classification in terms of a 'classic' representational, i.e., graphematic typology (for alternative typologies, see below).

Systematicity: *How systematic does a property of a writing system need to be to justify the assumption of a distinct type based on it?* Current consensus appears to be that a property needs to be completely systematic, pervasive, and consistent for it to be considered as the basis of a typological category – at least if another, more systematic property is available. For Hangul's featurality, many argue "that the encoding of features is not so thoroughgoing and systematic as to be the script's basic unit of representation" (Gnanadesikan, 2017, p. 25; see also DeFrancis, 1989, pp. 196f.). This is also echoed by Ko (2016, p. 10): "Graphemes that can denote features are limited in number, and some of [the] featural values can be expressed, not by independent units, but rather by inconsistent subcomponents that are fused into basic graphemes. Those subcomponents are irregular and depend on the basic phonemic graphemes." On the other hand, Hangul's syllabic arrangement

[9] The sociocultural fit should, of course, also be mentioned, which is why vital cultural and political motivations underlying Hangul's syllabic arrangement are discussed in Section 4.2.

is systematic, therefore warranting serious typological consideration. It is, however, arguably not the dominant mapping principle of the system.

Dominant level of representational mapping and psychological reality: *If the writing system maps onto multiple levels simultaneously, which of them is the 'dominant' level that should be prioritized in the assumption of a type – and does psychological reality play a role here?* The simple answer: the more systematic and consistent one. However, the picture is complicated when – as mentioned above – the writing system maps onto more levels systematically. Yet, it is important to note that these levels are never of completely equal status: one of them is the basic one in that the others depend on it. In the case of Hangul, syllabic arrangement depends on the phonemic mapping of consonant and vowel graphemes; the arrangement is constrained by the graphemes' position coding, i.e., the position of consonants and vowels is predetermined with(in) the syllabic block. This also means consonants and vowels can be recovered from syllable blocks – something that is not possible, for example, in the holistically syllabographic kana graphemes of Japanese. Consequently, the syllabic arrangement is, in a way, 'optional': it would, in theory, be possible to write Hangul linearly grapheme-for-grapheme, as has indeed been proposed in the past (see Pae, 2024, pp. 144–146; Traulsen, 2012). In that scenario, the phonemic mapping principle would remain untouched; it is undeniably the dominant level of representational mapping. This is also reflected in the fact that – if we leave the (not completely systematic) featurality aside – the phonemic mapping principle yields the smallest, i.e., most economic grapheme inventory, which from a linguistically descriptive perspective is also a strong argument.

'From a *linguistically* descriptive perspective' is the key phrase here: a typology could – and would – look different if its main target was psychological reality. This conclusion seems banal, but what is chosen as the underlying criterion of a typology boils down to

exactly that: a choice, which ought to be informed by the purpose the typology should serve. A linguistic typology that focuses on the dominant level of representational mapping in writing systems will exhibit considerable overlap – but, importantly, also divergence – with a psycholinguistic typology based on their basic processing units. Both are useful and needed in different contexts and can complement each other (see also below).

Frequency of occurrence: *Is it warranted to assume a type based on just a single writing system?* The main purpose of typologies is to find revelatory commonalities between systems for the sake of grapholinguistic knowledge generation, so the criterion underlying the assumption of types should be just broad enough (but not too broad) to allow for that (cf. Coulmas, 1996). However, this should not entail that important system-specific properties be swept under the rug. If a system actually functioned in a completely unique or different way, then this must be accounted for with the assumption of a distinct type – the key word here being 'completely'. In the case of Hangul, however, as the previous two criteria illustrated, this is not the case. In sum, Hangul's featurality is just an interesting property – that we partially (and fragmentarily) also observe in other writing systems like Japanese (see Gnanadesikan, 2017) – of an otherwise segmental phonographic writing system whose graphemes also happen to be arranged in syllable blocks and combined to represent underlying rather than surface (mor)phonological forms. The confusion surrounding the typological classification of 'unique' properties such as featurality stems from the fact that writing system typology – although the most prolific and developed subfield of a comparative grapholinguistics – has been operating very narrowly regarding the linguistically descriptive criterion on which it is based, which here was called 'dominant level of representational mapping'. There are, however, alternative linguistic criteria that could yield different typologies, such as spacing, focusing on different kinds and levels of demarcation in writing systems and distinguishing Hangul from systems like Chinese and Japanese (see Joyce &

Meletis, 2021). Furthermore, psycholinguistic and sociolinguistic criteria can also motivate their own typologies. Different typologies can, in a next step, be combined to generate new knowledge regarding the commonalities and differences shared by diverse writing systems, from which we can, in turn, accrue a holistic explanatory picture of writing (see Meletis, 2024b).

At a more concrete level, the two 'unique' properties of Hangul highlight important desiderata for grapholinguistics: to more systematically study diagrammatic iconicity, i.e., similar functions taking on similar forms, and to analyze the proliferation of syllabographic structures in all kinds of writing systems to explore the reason behind a possible primacy of the syllable in writing (cf. Daniels, 1992).

26.4 External Factors Relevant to Explanation

26.4.1 Manner of Inception and Duration of Existence and Use

One important aspect of explaining why writing systems are structured the way they are is understanding how they were originally conceived and how (and how long) they have since developed. The design of Hangul by King Sejong in the 15th century is well-documented and studied (see, for example, Kim-Renaud, 1997, or Pae, 2024, Chapters 2, 3) and shall not be discussed in detail here. What is worth stressing, however, is that as a "purposeful invention" (Pae et al., 2019, p. 226), it represents a rather special case. As artifacts springing from human thought and cognition, all writing systems are inventions; what sets Hangul apart from many of them is its 'purposefulness'. It is indeed often singled out and lauded for its sophistication (see also Section 5), not only for it being a full inventory inclusive of consonants and vowels straightaway but also for its *ab initio* inclusion of the above-discussed original properties of featurality and syllabic arrangement. By contrast, innovative grapholinguistic features have often materialized gradually and/or more or less by

accident (or at least not systematically and intentionally), an example being the representation of vowels using independent letters in Greek, widely regarded as the birth of the alphabet (Healey, 1994). In general, the prototypical situation is such that a writing system develops gradually, meaning some of its properties are not present from the beginning but rather carved out step by step along the way – an example being the syllabic/moraic kana inventories of Japanese (see Tsukimoto, 2011). This development of writing systems over hundreds or sometimes thousands of years may at first glance and in many ways appear haphazard but is critically influenced by the concurrent aspiration after the three (often competing) fits introduced above (see Section 2): A writing system should evolve to (better) fit its language but in doing so should not sacrifice its physiological and cognitive processability; all the while, sociocultural – including language political – considerations such as the wish for the writing system to resemble that of a dominant neighboring language community (see Unseth, 2005) can 'interfere' with or even override the linguistic and processing fits.

The controlled and conscious engineering of Hangul, now, is notable in that it was significantly informed by all three fits: it was made to fit the Korean language, be easy to learn, and give the Korean people their own writing system (but see the next section for Chinese influence). The remarkable (if delayed) success of Hangul can be attributed to the fact that it ticked all three boxes. And it did so right from the get-go, providing us with a blueprint – albeit one situated in a very specific historico-cultural context – for a successful design of a writing system from scratch.

At a metalevel, we can distill two important and interrelated factors for a comparative grapholinguistics: firstly, how a writing system initially emerged (**mode of inception**), i.e., whether it was more 'naturally' negotiated in a grassroots and trial-and-error manner among users or 'artificially' designed and implemented in a top-down manner by a language political

authority. Secondly, how long it has existed and been in use (**duration of existence and use**), which *can* in some circumstances be revelatory with respect to the development of certain features: the fact that the kana inventories developed in Japanese implies something about the (good) linguistic and processing fit of syllabography for the structure of Japanese as well as its processing by readers and writers. By contrast, Hangul's syllabic arrangement – as an arbitrary design feature decided on and implemented by an authority – is not telling in the same respect; while Hangul has existed for a (relatively) long time, it has not been in (wide) continuous use for all its time of existence (see Sampson, 2015, Chapter 8 for an overview). More importantly, the inventory was complete and stable right from its rollout, restricting (and not really necessitating) any bottom-up changes or development. This means that changes like the introduction of morphonography – i.e., the writing of underlying, morphophonological forms rather than surface phonological ones, the latter of which would reflect the manifold morphophonemic alternations of Korean – were also of an orthographic (i.e., prescriptive) and official nature.

26.4.2 Influence of Dominant Writing Systems

Although it was introduced as an important category in Section 2, so far in this paper, the sociocultural fit has been relegated to the background – reflecting, in a way, its often marginalized status in grapholinguistic research. However, as writing systems rarely if ever emerge in a vacuum, sociocultural factors prove especially paramount in the creation and subsequent development of a writing system. In the case of emerging literacy for Koreans, significant influence came from China and Chinese. As Sampson (1985, p. 121) notes (hyperbolically), for a peripheral East Asian nation like Korea, "everything came from China", and suggests that for much of Korea's history, "the aim of Korean education was quite explicitly to make Korea a *Sohwa*, a 'Small China'". Regardless of whether this truly applies to this degree, it highlights that generally, more often than not, existing writing

systems exert considerable influence, and that in such scenarios, we need to disentangle cultural and linguistic relations involving complex hierarchies and dependencies.

The purpose of this short section shall neither be to highlight early attempts to write Korean using the writing system of Chinese nor to address the concurrent use of Hangul and *Hanja* – i.e., Chinese characters – in South Korea and associated processes of de- and re-Sinicization (Haarmann, 1993). These phenomena are instances of a more direct incorporation of foreign elements and are evident also in other systems, with an obvious parallel being the Japanese writing system (see Handel, 2019 for a systematic overview of 'sinography' in different writing systems). What shall be spotlighted here instead is the above-discussed syllabic arrangement, for it underscores the influence of a dominant system at multiple – both concrete and more abstract/symbolic – levels. As Gottlieb (2021, p. 79) notes,

> Sejong's dilemma was that, although a vernacular Korean script introduced to the illiterate could probably be written linearly, for court Korean, containing a large number of Chinese-derived terms and concepts, a syllabic structure would be far more appropriate.

The main motivation, thus, was likely the wish or need to be able to adequately transcribe Chinese characters. By contrast, Sampson (1985, p. 131) mentions a more abstract and looser influence as contributing to the decision to arrange graphemes syllabically (see also Daniels, 2017, p. 83):

> Han'gŭl symbols are written grouped into syllables. The reason for this is no doubt historical, having to do with Koreans' familiarity with Chinese script: a syllable-sized grouping of Han'gŭl symbols looks somewhat like a Chinese graph, having a roughly comparable degree of visual complexity, and, since each Chinese graph is pronounced as one syllable, it seemed appropriate for Han'gŭl writing to be organized into similar-sized units.

Tranter (2002) likewise emphasizes the visuospatial aspects when analyzing the 'ideal square' that is not only found in Chinese but also other (partially) morphographic writing systems such as Egyptian and Mayan.

Gottlieb (2021, p. 79) additionally mentions Korea's functional and political ties to the Chinese language and culture when stating that by writing Hangul linearly, "thousands of years' of tradition of Chinese-derived scholarship would be seriously disrupted by flattening out the syllabic Chinese sound-meaning units into lines of uniform phonetic glyphs". In short, much like the entire design of Hangul itself, this property of syllabic arrangement reflects a consideration of all three fits – linguistic, processing, and sociocultural. It thus represents a structural and political balancing act between, on the one hand, not wanting to break ties with a dominant – but foreign – tradition and, on the other, risking sophisticated linguistic and cultural innovation, rendering the motivation behind syllabic arrangement a candidate for an illuminating grapholinguistic case study to identify and dissect the different facets of a dominant writing system's influence.

26.5 Ideologies of Supremacy and Uniqueness: Hangul Pride

One rarely finds a treatment of Hangul in which it is not in some way lauded. Indeed, many scholars – who one would generally think are committed to an objective and sober rendering of facts – use superlatives when describing Hangul, calling it the best of all writing systems. This is evident in the following passage, which was taken from the (both promotional and informative) book *Hangeul: Korea's Unique Alphabet* published by the

Korea Foundation[10] (for another collection of citations hailing Hangul, see S.-D. Kim, 2011, pp. 179f.):

> Werner Sasse, a German linguist and former professor at the Universität Hamburg, called the Korean writing system of Hangeul 한글 "the world's greatest writing system, devised on a foundation of traditional philosophical principles and scientific theories." Indeed, Sasse is just one of many scholars who have praised Korea's unique writing system. British linguist Geoffrey Sampson declared Hangeul to be a featural system and the most scientifically based of all writing systems. Dutch linguist Howard F. Vos also lauded Hangeul as the finest writing system in the world. […] Why is so much praise heaped upon an alphabet created six centuries ago in a small East Asian kingdom? (Korea Foundation, 2010, p. 10)

The question of why "so much praise [is] heaped upon" Hangul is subsequently answered with the features that are also discussed in the present paper in the context of 'uniqueness': it is purpose-built, linguistically scientific, and easy to learn (Korea Foundation, 2010, pp. 14–20). The book dedicates an entire page to praise; it carries the heading "What Scholars Say About Hangeul" (Korea Foundation, 2010, p. 21) and is notable for the fact that all scholars cited there are foreign, i.e., not Korean. Hangul is, of course, also celebrated within the Korean linguistic community, an example being Sang-Oak Lee (2009, p. 210), who – in an English-language article, i.e., aimed at a broader audience – proclaims that "Hangeul is not just another intelligently constructed featural alphabet, but the optimal featural system".

This academic praise for Hangul translates to pride among Koreans. "To outsiders," E.-Y. Kim (2020, p. 1) notes, "such pride may appear somewhat overblown, but Koreans do

[10] The Korea Foundation is "a non-profit public diplomacy organization established in 1991 to promote a better understanding of Korea and strengthen friendships in the international community". (https://en.wikipedia.org/wiki/Korea_Foundation, 19 July 2024).

take great pride in Hangul". This pride is already foreshadowed in the script's name: while initially it was "disparagingly"[11] called *ŏnmun* (언문) 'vernacular writing' (Sampson, 1985, p. 123), in the beginning of the 20th century, Ju Sigyeong, one of the founders of Korean linguistics, coined the name *Hangul*, translated as 'great script'. Hangul eventually – especially following the end of the Japanese occupation in 1945 – developed into a symbol of Korean identity (see Haarmann, 1993), so much so that in South Korea, October 9 is *Hangulnal*, or 'Hangul Day',[12] a national holiday honoring the Korean alphabet. Traulsen (2019) even speaks of a Hangul 'nationalism' in the 20th century.

The conviction that Hangul is not only a great writing system but superior to other systems has occasionally been termed 'Hangul supremacy' (Ding et al., 2020, p. 3). A noteworthy project arguably rooted in this belief is the attempt to promote Hangul – and, in a next step, arguably the Korean language and culture – to write languages other than Korean, such as (since 2009) the Austronesian language Cia-Cia in Baubau, Indonesia (Choe, 2009; Anya, 2023; Pae, 2024, pp. 90f.). This has been reported with skepticism and concern by the media, which is hypocritical considering the ongoing and widespread promotion of literacy (and often religion) through the dissemination of Roman script, which is not scrutinized in the same way (see Piller, 2010). The reason for that may be that Hangul supremacy is not directly related to alphabetocentrism.[13]

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[11] These days, it is mostly accepted that the use of this term in the 15th century was not derogatory (Hye K. Pae, personal communication, September 2, 2024).

[12] In North Korea, it is called *Chosŏn'gŭl Day* and celebrated on January 15.

[13] Another reason could be that precisely because it has been adapted for so many genetically and typologically diverse writing systems, any original cultural connotation of the Roman script may have faded; in other words, it has shed its cultural specificity and become more culturally and linguistically 'neutral', unlike Hangul, which is perceived as intimately tied to Korean culture. However, given the fact that it is frequently missionaries who propagate the spread of Roman script for religious reasons, one could wonder whether Roman script – although it is also being used by language communities of many diverse confessions – has been (partially) reassociated with Christianity (see, e.g., Pasch, 2008).

As established above, despite its unique features, it is uncontroversial to classify Hangul as an alphabet, which justifies asking why it is not being thought of in the context of the *Alphabet Effect* (see Logan, [1986] 2004), a Eurocentric and techno-deterministic belief system that considers the alphabet the most superior and advanced type of writing system for having yielded profound cognitive benefits and significantly shaping the trajectory of Western civilization. Gottlieb (2021, p. 77) theorizes that it is due to Hangul's syllabic arrangement (Section 3.2): in saliently mapping segmental blocks onto syllables, Hangul is not as divorced from spoken language and thus not as 'abstract' as other linearly written alphabets such as Greek or Roman, impeding the alleged cognitive benefits of the alphabet (or the abstraction it affords). Other, more general reasons could be that Hangul is simply not a 'Western' invention and that its 'unique' features, although praised, keep it from being perceived as a prototypical alphabet.

What these abridged remarks highlight is that ideologies are relevant not only in how a writing system is perceived and negotiated by scholars and users but also in the consequences that this can have for the study and use of writing systems.

26.6 Conclusion

> The scholarship on Korean script involves so many points of discussion – origins, graphic and phonological structure, orthography, mixed-script, literacy, politics, philosophical and cosmological foundations – that it deserves broad and interdisciplinary attention. (S.-D. Kim, 2011, p. 171)

This brief foray into studying the 'uniqueness' of Hangul – and indeed any writing system – attempted to prove that in comparative grapholinguistics, much like in almost any discipline, looking at the specific is worthwhile in trying to abstract the general. The exploration of Hangul through the lenses of its structural properties, historical development, sociocultural influences, and ideologies of supremacy reveals a rich tapestry of factors

contributing to its distinctiveness and significance and can be used as an example for studying other writing systems.

Hangul stands out as a rare example of a writing system born out of deliberate and purposeful design. Its development under King Sejong, with a clear aim to create a system that fits the Korean language, was marked by a careful consideration of linguistic, cognitive, and sociocultural factors. This intentional design contrasts sharply with the gradual development of many other writing systems that evolved through more organic, trial-and-error processes. As a consequence, Hangul's sophistication and efficiency in mapping the Korean language to written symbols at various levels reflect its unique genesis, which was both strategic and innovative. The influence of external factors, particularly the longstanding dominance of the Chinese writing system, is also evident in Hangul's structure: Its syllabic arrangement and visual organization echo the Chinese model, reflecting both a blend of respect for but also divergence from the dominant tradition. The complex layers of this adaptation underscore the interplay between preserving cultural continuity and fostering linguistic innovation.

Sociocultural factors, particularly the ideological and nationalistic pride associated with Hangul, have played a significant role in its perception and global reception. The system's promotion as a symbol of Korean identity and its celebrated status within Korea reflect a broader ideological framework that values Hangul not only for its functional merits but also for its cultural importance. This pride is rooted in a historical context where Hangul emerged as a powerful symbol of national identity and resistance against foreign dominance. Moreover, the exceptional praise that Hangul receives from scholars worldwide – not for being an alphabet, which is usually touted as the most important achievement of humankind, but for being so 'unique' – suggests a singular ideological stance. The emphasis on its scientific and linguistic merits points to a broader narrative where Hangul, as a non-

prototypical member of the alphabetic type that has long been claimed to be superior to all others, is regarded the pinnacle of writing system design.

In conclusion, Hangul's design and evolution encapsulate a multifaceted interplay of deliberate innovation, external influence, sociocultural dynamics, and ideological pride. Understanding these elements not only sheds light on Hangul's unique position among writing systems but also provides insights into the broader processes that shape the development and perception of writing systems globally. The case of Hangul clearly illustrates how writing systems are not just functional tools but also cultural artifacts embedded with historical, social, and ideological significance. This, as the quote at the beginning of this conclusion stresses, requires interdisciplinarity in studying it, which in turn emphasizes the breadth of topics and perspectives a comparative grapholinguistics must cover.

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