

Easy decoding yet difficult encoding

**What does the asymmetry between reading and writing
in Korean Hangul mean for grapholinguistics?**

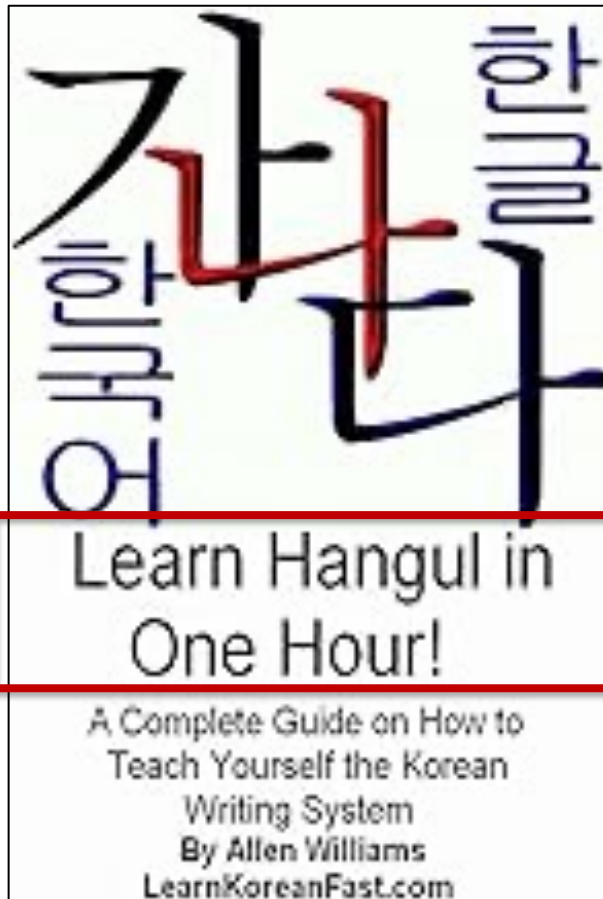
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University of Cincinnati

U.S.A

The Korean alphabet, **Hangul**

- “... one of the **most scientifically designed and efficient scripts** in the world” (King, 1996, p. 219).
- “The Korean script is a **true alphabet** in the Greek sense; the **simplest and most perfectly systematic** of all alphabets” (Hope, 1959, p. 158).
- “Hangul must surely rank as one of the **great intellectual achievements of Mankind**” (Sampson, 2015, p. 165).
- “[Hangul is] **simple, elegant** and more **systematically structured** than any other writing system” (Coulmas, 1996, p. 458).
- “In its **simplicity, efficiency and elegance**, this alphabet is **alphabet’s epitome**, a star among alphabets, a national treasure for Koreans...” (Man, 2000, p. 109).
- “...perhaps the most **scientific system** of writing in general use in any country” (Reischauer & Fairbank, 1969, p. 435, cited in Sampson, 2015, p. 143).
- “...the **world’s best alphabet**” (Vos, 1964, p. 31, cited in Sampson, 2015, p. 143).
- “... the transition from syllable to phoneme is [an] enormous feat of abstraction, which **may have been accomplished only once in history**” (Hannas, 1997, p. 57).



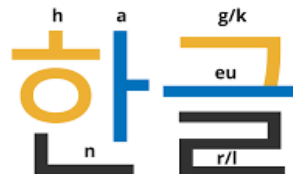
Allen Williams
(2000)

Errors made by a Former President

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 - 변영된 조국 [awkward expression], 평화통일을 이루는데 [이루는 데] 모든것을 [모든 것을] 받치겠습니다 [바치겠습니다] (June 6, 2007)
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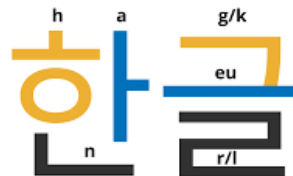
Outline

- The Korean alphabet
 - Phonography: [HunMinJeongEum](#)
 - Why is spelling difficult?
- Science of Writing: Grapholinguistics in Hangeul
- Future Directions of Korean Grapholinguistics




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The Korean Alphabet

- Purposely invented by King Sejong in 1443/1444
 - To **combat illiteracy**
 - To **standardize** the pronunciation of Chinese characters
- **Phonetic Alphabet** or **Shallow Phonography**
- *HunMinJeongEum*  **Hangul**
 - Literally meaning “the Standard **Sound** for Instructing the People”

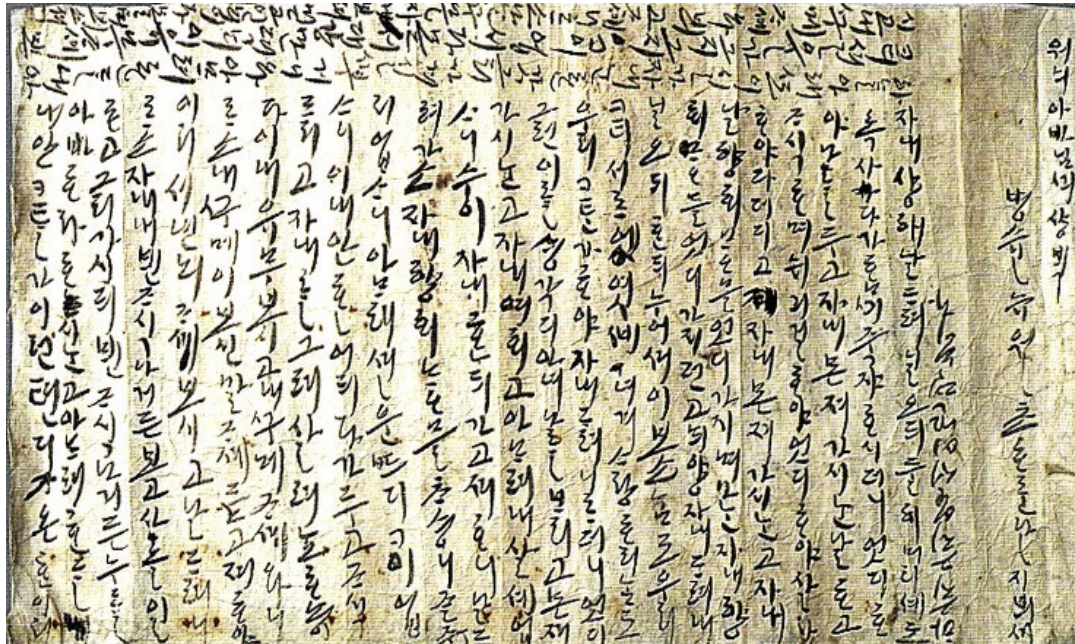
An Unwelcomed Script

- Was initially not dismissed by the ruling class because it was too easy to learn to read
 - “If it is so easy to learn to read, who is going to painstakingly learn the **true writing** [Chinese characters]?”
 - Threat to Knowledge Monopoly & the Status Quo
- Was called by elites
 - Vernacular Script
 - Women’s Script
 - Children’s Script

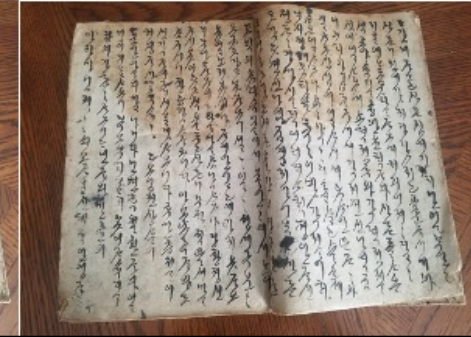
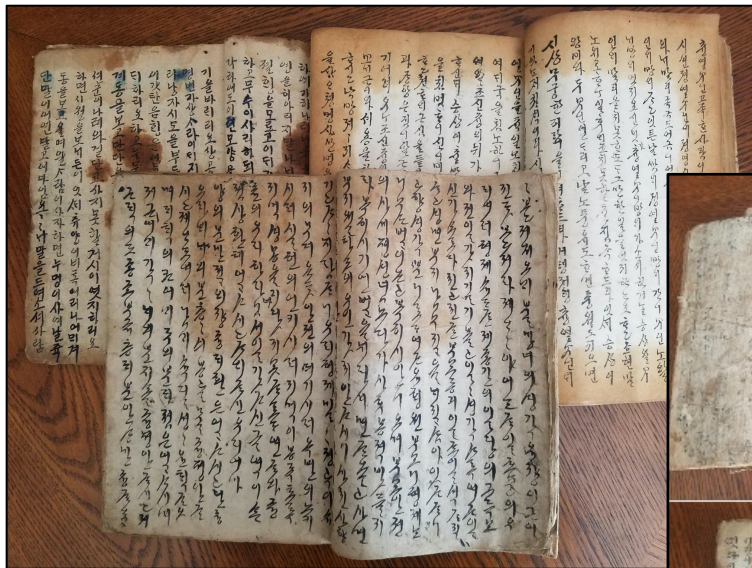
 Systematically ignored until the 20th century

Used by Women and Ordinary People

- A letter written by a women to a deceased husband on June 1, 1586 (found in 1998)



Women's Literacy

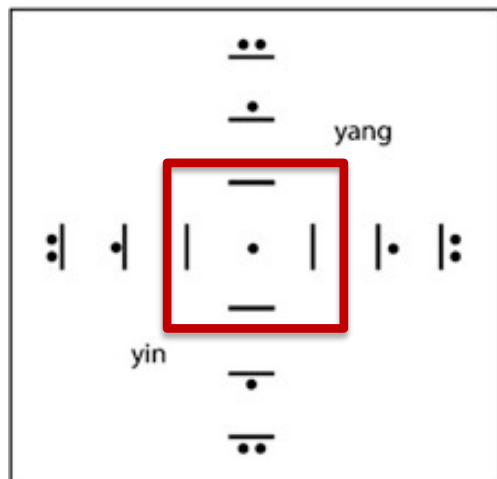
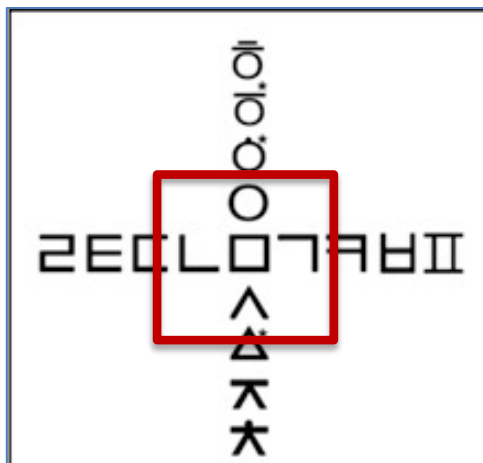


What makes Hangul easy to learn to read?

- Consistent sound-symbol correspondence
- Systematic C-V combination
- Syllabic block

→ { *Learnability* for emergent readers
Efficiency for skilled readers

Stroke Addition Rule



Place of Articulation

Velars:	ㄍ	ㅋ	ㆁ		
Alveolars:	ㄴ	ㄷ	ㄹ	ㄺ	ㄻ
Bilabials:	ㅍ	ㅂ	ㅃ	ㅆ	
Alveolar/Palatal:	ㄷ	ㄸ	ㅌ	ㅍ	ㅑ
Glottals:	ㅇ	ㆁ			

	Vowels	ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ
Consonants	Phon.	gash	yash	yashg	yashg	ash	Yogurt	pool	you	should	slip
ㄱ	G	가	가	게	게	고	교	구	규	그	기
ㄴ	N	나	나	네	네	노	노	누	뉴	느	니
ㄷ	D	다	다	디	디	도	도	두	듀	드	디
ㄹ	LR	라	라	러	러	로	료	루	류	르	리
ㅁ	M	마	마	머	머	모	모	무	뮤	므	미
ㅂ	B	바	바	버	버	보	보	부	뷰	브	비
ㅅ	S	사	사	서	서	소	소	수	슈	스	시
ㅇ	ing	아	아	어	어	오	오	우	유	으	이
ㅈ	J	자	자	저	저	조	조	주	जू	즈	지
ㅊ	Ch	차	차	처	처	초	초	추	츄	츠	치
ㅋ	K	카	커	케	케	코	코	쿠	큐	크	키
ㅌ	T	타	타	터	터	토	토	투	튜	트	티
ㅍ	P	파	파	피	피	포	포	푸	퓨	프	피
ㅎ	H	하	하	허	허	호	호	후	휴	흐	히

Loss of Historical Documents & Ban on the Korean Alphabet

- King YeonSanGun banned Hangeul use in 1504
 - A petition written in Hangeul criticizing the tyranny of the king
 - Incinerated all books written in Hangeul
- Japanese imperialism (1910 ~ 1945)
 - The public's name changes from Korean to Japanese
 - Textbooks written and instruction delivered in Japanese

Necessity of Orthographic Reform

16C ~ 20C

Phonological Drift ↔ Orthographic Inertia

Orthographic

Discrepancy between
Decoding & Spelling

- From Sound-Based to **Morpheme** Economy of Pronunciation

15C → 16C → 17C ~ 19C

Noun + Particle
(**Sound Linking**)

사름미

사름미

사름이

사람이

Purely
Phonetic

Morpheme-Addressed for
Morphosemantic Transparency

The Use of **Space** in Hangul

- In the original alphabet, **no space** was used
- Several experiments:
 - 쥐가.마당에서.돌아.다니면서.씨.가.크어진.쌀을.주어.먹소
(Song, 2014, p. 127)
 - 그. 다음에. 기결에의. 난틀을. 말하겟노라 (Song, 2014, p. 128)
 - 흘°로. 나°는. 소리°를. 이름°이니라 (Song, 2014, p. 128)
- First introduced in the *Independent Newspaper* on April 7, 1896

Debate: Block Writing vs. Linear Writing

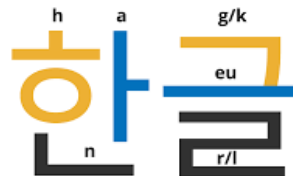
- Examples:
 - 우리 나라가 밝고 곱다
 - ㅇㅈㄹㅣ ㄴㅈㄹㅈ ㄱㅈ ㅅㅈㄹㄱ ㄱㅈ ㄱㅈㅅㅈ ㄷㅈ
- Western Influences
- Typewriters

Mixed Scripts within a sentence

- Hangul Only
 - 유구한 역사와 전통에 빛나는 우리 대한민국
- Mixed Scripts
 - 悠久한 歷史와 傳統에 빛나는 우리 大韓民國

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The Science of Writing: Grapholinguistics

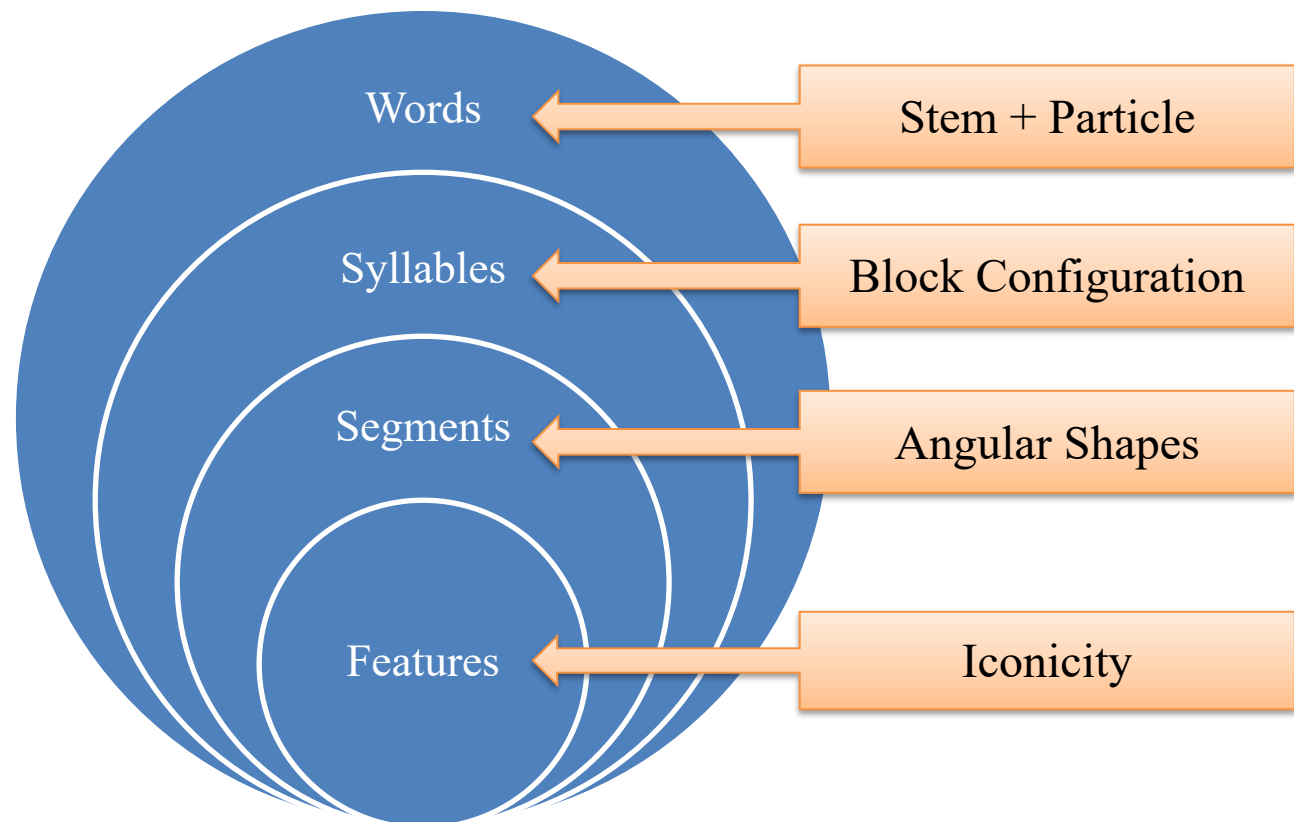
- “Grapholinguistics is young, and it is in a state of flux” (Meletis, 2020, p. 403)
- “... the linguistic sub discipline dealing with the scientific study of all aspects of written language” (Neef, 2015, p. 711)
- “... the interdisciplinary field focused on the study of all aspects of writing” (Meletis & Dürscheid, 2022, p. 2)



Grapholinguistics

- The study of the **relationship** between **writing systems** and **the languages they represent**

Graphematic Functions of Hangul



Optimal Orthography

- “An efficient writing system must do two things simultaneously: represent **sound** and **meaning**”
(Share, 2014, p. 3).

➔ *Decipherability* for emergent readers

Automatizability/Unitizability for skilled readers

Hangul

Learnability for emergent readers

Efficiency for skilled readers

Typology of Writing Systems

- “... a short list of simple one-word names, like *alphabet*, *abjad* and *abugida*, does not capture the full range of segmental scripts or the relationships between them” (Gnanadesikan, 2017, p. 14, emphasis in original)

Hangul: A Multifaceted Script

- **Alphabet: Alphabetic Principle**
- **Featural script** (Sampson, 2015)
 - “an ugly term, but no better alternative is available” (p. 33)
- A “**fully vowelled syllabically arranged featural segmentary**” (Meletis & Dürscheid, 2020, p. 224)
- **Alphasyllabary** (Taylor & Taylor, 2014)
- **Alphabetic Syllabary** (Pae, 2011)
- **Morphosyllabic Alphabet** (Pae, Bae, & Yi, 2020; Pae, 2023)
 - Both inflectional and derivational morphemes are represented at the **syllable** level
 - Alphabetic Principle

New Perspectives on Hangul

(Gnanadesikan, 2017; Meletis, 2020;
Meletis & Dürscheid, 2022)

“Korean graphemes are not segmental but subsegmental as they are combined with other graphemes to form combinations of graphemes, combinations which then occupy a segmental space and correspond with phonological syllables” (Meletis & Dürscheid, 2022, p. 132)

- Syllabic Blocks: graphetically **segmental**
 - Graphemes: **subsegmental**

Syllabic Block in Hangul

Why did King Sejong adopt syllabic blocks?

The syllabic block was to be “in accord with the appearance of the **prestigious Chinese script**” (Daniels, 2017, p. 83, emphasis added)

“The organizational principle of the frame in Chinese is so strong that all other East Asian writing systems that have been influenced by Chinese... make script use of an **idealized square**” (Tranter, 2013, p. 5, emphasis added)

Decoding vs. Encoding

Decoding ↔ Encoding in Hangul

Segmental Level

- Letter - Sound Mapping → Shallow
- Sound - Letter Mapping → Shallow

Lexical Level

- Word - Speech Mapping → Shallow
- Speech - Word Mapping → ≠ Shallow

Morpheme



“Thus, **the analysis of mistakes** or, less prescriptively phrased, users’ deviance from prevalent orthographic norms, **is an important part of graphematic research**” (Meletis & Dürscheid, 2022, p. 119)

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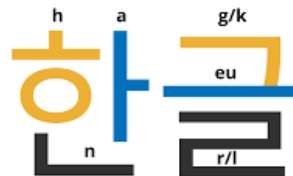
A Korean linguist's bemoaning

현행 形態表記를 一般用으로 계속 밀고 나아간다면, 一般은 제 國語조차 옳게 쓰는 사람이 별로 없다는 아주 심각한 상태에 직면하지 않겠는가?”

(translation: If you keep moving forward with the current morphemic notations for general use, aren't you going to encounter a somber reality that only a few people can spell their own native language accurately?) (M.S. Kim, 1987, p. 13).

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Grapholinguistics

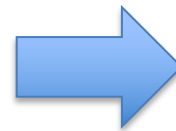
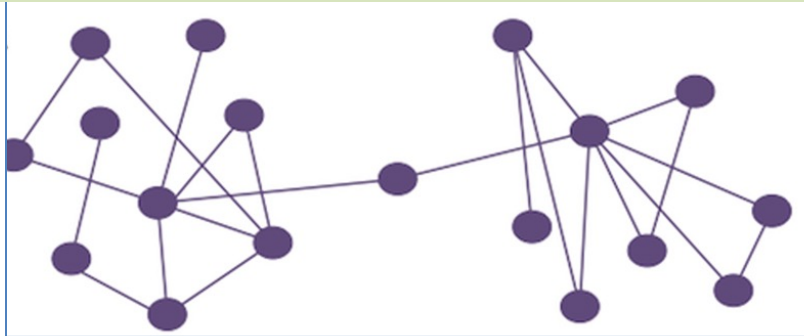
- A reassessment of the existing taxonomy

Scientific Modularity

- The **science of reading** and the **science of writing** are considered two distinct and separable research areas.
- Even **reading** and **spelling** have been studied independently

From Scientific Modularity to Scientific Integration

Independence & Interdependence



Questions to be addressed

- Is a **universal** science of psycholinguistics and grapholinguistics possible?
- How do we address the discrepancy between decoding (reading) and encoding (spelling)?
- What is the proper way to test the universal validity of models established in each domain?

Conclusion

- Hanguk has the potential to serve as a tool for studying **script-universals** and **script-particulars** in grapholinguistics
- We still know little about the internal **integration** of decoding and spelling in Hanguk
- **Systematic grapholinguistic research** is needed

Selected References

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