

# When explanations don't compete, or What we miss when we study writing through a single lens

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Two scholars of writing are talking:

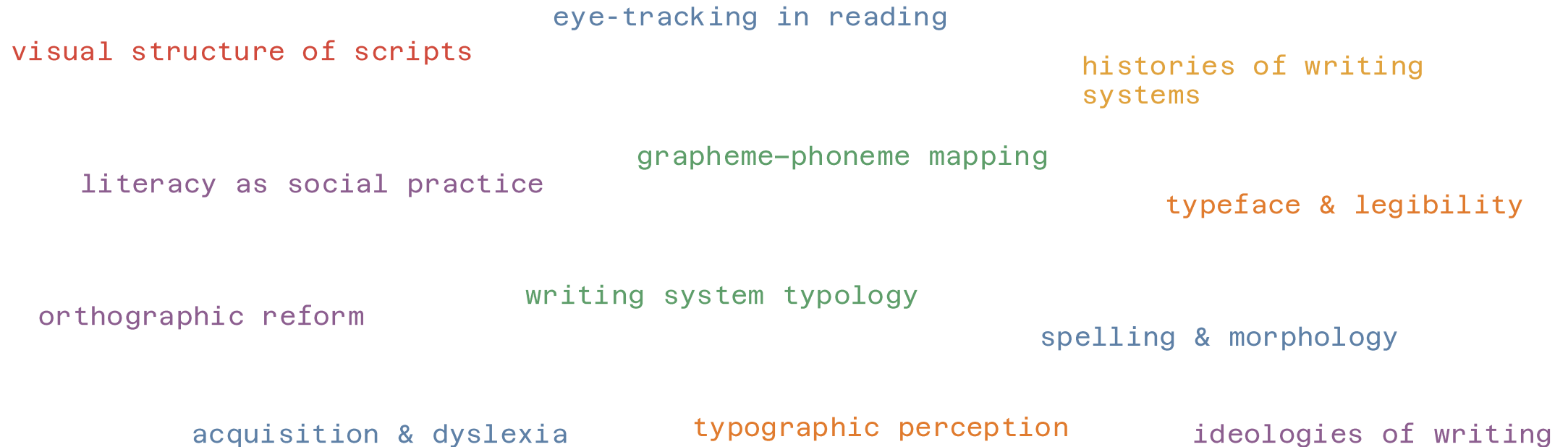
Within ten minutes they are clearly at odds.

“Writing is, at its core, **how it maps the sounds and structures of a language.**”

“Writing is, at its core, **a social practice — identity, power, who gets to be correct.**”

Both are right. Both have evidence. And the conversation goes nowhere — not because the evidence conflicts, but because they are **answering different questions and haven't noticed.**

# Decades of research on writing



We tell this plurality as a success story. It *is* one. But when a field gets this rich, findings start to **travel**.

# Two questions about any study of writing (Meletis 2020)

What part of writing is it  
**describing?** →

**DESCRIPTION**

And what kind of  
**question** is it  
answering? →

**EXPLANATION**


# Graphetics: the materiality of writing

Graphic substance. Scripts  
as inventories of shapes.  
Surfaces, tools,  
technologies of inscription.

The brute fact that writing  
has a **physical form at all** —  
before we say a word about  
function or meaning.

## GRAPHETICS

materiality

## GRAPHEMATICS

linguisticity

## ORTHOGRAPHY

normativity


# Graphematics: the 'linguisticity' of writing

The module that relates visual forms to language.

Which units of language do the units of writing map onto, and how do they combine? This is the level of the **grapheme** — where marks become a linguistic system.

**GRAPHETICS**

materiality

**GRAPHEMATICS**

linguisticity

**ORTHOGRAPHY**

normativity


# Orthography: the normativity of writing

Convention, codification, the machinery of correct and incorrect.

Graphematics is about what's **possible**.

Orthography is about what's **sanctioned** — a social fact, imposed from outside the system.

**GRAPHETICS**

materiality

**GRAPHEMATICS**

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normativity


# Descriptive underdifferentiation

## ✗ Row collapse.

When a fact about **material form** is treated as a fact about **linguistic structure** — or **graphematic possibility** silently becomes **orthographic correctness**.

Most talking-past starts here, before anyone has disagreed about a single fact.

### GRAPHETICS

materiality

### GRAPHEMATICS

linguisticality

### ORTHOGRAPHY

normativity

	"orthography"		
	(actually orthography, which remains a blind spot)		

# Four kinds of questions (that don't compete)

## systematic

fit

How coherent is the system on its own terms — independent of language, reader, society? (The only one assessed purely system-internally — and the emptiest column in our literature.)

## linguistic

fit

How well does it map the structure of its language — phonology, morphology? The semiotic question: transparency, uniformity, ...

## processing

fit

How well does it suit the human using it — eye, hand, brain, the child acquiring it? The psycholinguistic question.

## sociocultural

fit

How well does it serve a community's identity, values, practices? Writing as a social, political, ideological act.

Not four rival answers to one question — **four different questions**. A finding in one column can no more contradict one in another than “how heavy?” contradicts “what colour?”

# The grid as a cognitive tool

Example questions taken from the chapters of the *Handbook of Germanic Writing Systems and Literacies* (Meletis, Hartmann & Treiman forthc.)

		systematic	linguistic	processing	sociocultural
		fit	fit	fit	fit
<p><b>GRAPHETICS</b></p> <p>materiality</p>		How regular is the shape inventory of a script —are the basic shapes built and combined according to consistent formal principles? (12)	How did typesetters' practices influence spelling? (23)  How can the non-linearity of sign language be represented in notation/writing systems? (9)	How do different scripts used in literacy instruction influence the acquisition of handwriting? (24)  How did the adaptation of different media and writing tools influence the shapes of writing? (12)	How is (non-standard) typography used for auto- or hetero-references? (22)  What are the motivations for the creation of a new script? (11)
	<p><b>GRAPHEMATICS</b></p> <p>linguisticity</p>	How internally consistent is the writing system as a system —e.g., does German's stem constancy yield regular spellings across ~95% of the native vocabulary? (2)	How transparent are grapheme-phoneme correspondences? (1-8)  How is 'foreign' material (e.g., foreign words, loan words) integrated into the writing system? (1-8, 10)	How does orthographic depth influence the acquisition of literacy (14), spelling (16), reading (17), and disorders of reading and writing (18)?	How may an exoglossic standard influence the development of a writing system? (13)  Do minority languages create their own writing system from scratch or do they adopt existing graphematic principles from a dominating language – if so, which? (8)
	<p><b>ORTHOGRAPHY</b></p> <p>normativity</p>	How internally consistent is the orthographic norm itself —do its codified rules cohere, or do principles (e.g. phonological vs. morphological spelling) pull against one another? (20, 21)	What linguistic arguments are raised in the discussion of spelling reform proposals? (20)  How suitable are proposals of orthographic standards for the representation of a specific language? (21)	What role do education and educational reforms and discourses surrounding the acquisition of literacy play in the consolidation and dissemination of norms? (19)	How do language ideologies shape decision-making with respect to the orthographic standard? (20, 21)

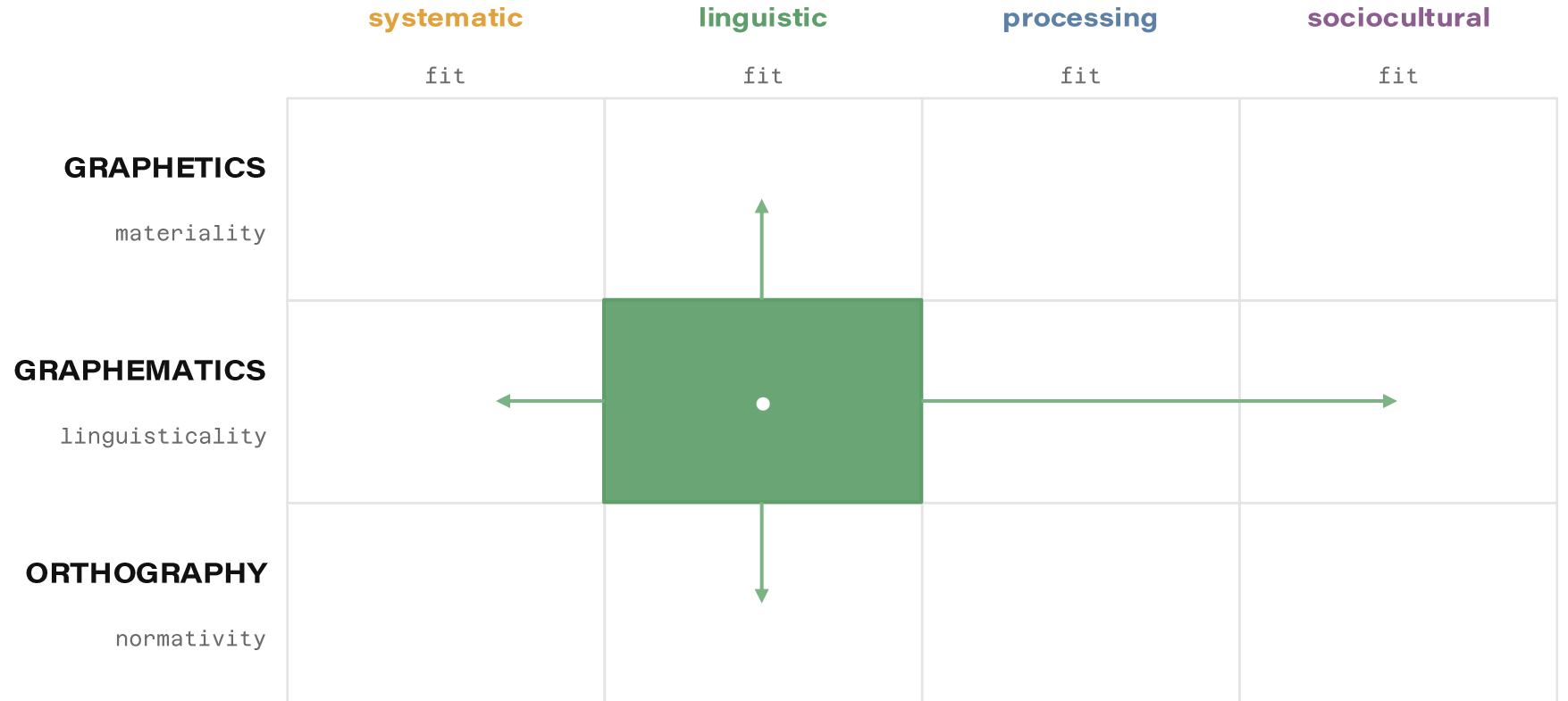
# Explanatory overreach

The second failure mode:

✗ **explanatory overreach.**

Underdifferentiation blurs **which row** you're in.  
Overreach inflates **which column** you speak for.

Most good studies sit in one cell. They cause trouble only when reach exceeds evidence.



# The orthographic depth hypothesis (Katz & Frost 1992)

How consistency in grapheme-to-phoneme mapping shapes reading routes.

Powerful, well-evidenced — and it lives in **one cell**: graphematic level, processing question.

	systematic fit	linguistic fit	processing fit	sociocultural fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticality			•	
<b>ORTHOGRAPHY</b> normativity				

# "Depth" becomes a global attribute

The tell that this is overreach, not discovery: people **inside** the paradigm show "depth" isn't even one construct — it's at least two, still not cleanly specified (Schmalz, Rueckl & Siegelman 2026).

"English takes two and a half years longer [to acquire]" (Seymour, Aro & Erskine 2003): *English is a hard orthography, English literacy instruction must compensate for a broken script* → **sociocultural and instructional ideologies** about school systems, teaching methods, expected timelines

	systematic fit	linguistic fit	processing fit	sociocultural fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticity			•	
<b>ORTHOGRAPHY</b> normativity				

# The New Literacy Studies

Literacy not as a neutral skill but as **social practice** — plural, situated, shot through with power.

Sociocultural question, often at the level of orthographic norms — where “correct” becomes a social object.

	systematic	linguistic	processing	sociocultural
	fit	fit	fit	fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticity				
<b>ORTHOGRAPHY</b> normativity				•

# The New Literacy Studies

But: norms being policed  
≠ the structure  
(graphematics) is merely  
ideology.

	systematic fit	linguistic fit	processing fit	sociocultural fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticality				
<b>ORTHOGRAPHY</b> normativity				

# Writing system typology

We sort systems by one criterion: the **dominant level of representational mapping** (Joyce & Meletis 2021).

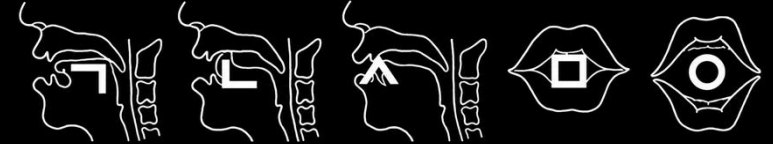
And it feels like it tells you what a system simply *is*.

	systematic	linguistic	processing	sociocultural
	fit	fit	fit	fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticity		•		
<b>ORTHOGRAPHY</b> normativity				

HANGUL: ONE OBJECT, THREE MAPPINGS AT ONCE

람

- the whole block  
→ a syllable
- its parts ≡ . | . □  
→ phonemes /r/ /a/ /m/
- the shapes themselves  
→ phonological features



the syllable /ram/

So which is it — alphabet? syllabically-arranged? featural? The question has no answer until you say what the typology is *for*.

# Each "type" sits in a different cell

dominant mapping:  
graphematics x  
linguistic fit →  
**alphabet**

spatial arrangement,  
featural features:  
graphematics x linguistic  
fit → **syllable block**

processing unit:  
graphematics/graphematics  
x linguistic fit →  
**syllable**

Decades of dispute about  
"what Hangul really is" was  
never empirical. It was  
people standing in different  
cells.

	systematic	linguistic	processing	sociocultural
	fit	fit	fit	fit
<b>GRAPHETICS</b> materiality		arrangement, featural features	syllable	
<b>GRAPHEMATICS</b> linguisticity		alphabet	syllable	linguists' infatuation with features
<b>ORTHOGRAPHY</b> normativity		(morphographic orthography)		

# Filling in the other cells: a holistic view

Run Hangul through linguistic *and* processing *and* sociocultural fit — its featural design, the cognitive reality of the syllable, the pride and ideology bound up in it (Meletis 2025b).

**You don't lose the alphabet answer.  
You gain many more — and a far richer object.**

		systematic	linguistic	processing	sociocultural
		fit	fit	fit	fit
<b>GRAPHETICS</b> materiality	<b>GRAPHETICS</b> materiality	Are the shape-derivation rules regular (stroke = aspiration, doubling = tenseness), with no exceptions?	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?
	<b>GRAPHEMATICS</b> linguisticality	Is the featural principle applied consistently — or are there systematic gaps in the grapheme inventory?	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 socio-cultural repercussions that Hangul is alphabetic and has word spacing when writing systems in contact (Chinese, Japanese) are of different types and unspaced?
	<b>ORTHOGRAPHY</b> normativity	Are the orthographic rules internally consistent?	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?

# Unger vs. Handel (Meletis 2025a)

The question of Chinese.

Unger: **no** — same neural machinery, every script.

Handel: **yes** — the reading region sits millimetres apart.

Same evidence. Opposite conclusions.

Two cells, one label. Pull them apart and the fight dissolves.

	systematic	linguistic	processing	sociocultural
	fit	fit	fit	fit
<b>GRAPHETICS</b> materiality				
<b>GRAPHEMATICS</b> linguisticity		Is Chinese logographic?	Do Chinese brains read differently?	
<b>ORTHOGRAPHY</b> normativity				

# Look where the keynotes (primarily, presumably) sit

## Sculptural place names

materiality serving identity & distinction

graphetic · sociocultural

## Missionary books

knowledge shaped by its physical medium

graphetic · sociocultural

## Writing & language

expresses · fossilises · analyses · influences

linguistic fit

Two clustered in materiality and the sociocultural; one in linguistic fit.

# What the empty cells are for

## **01** your blind spots

Absence is silent — omission neglect means you won't feel the empty cells. The grid's job is to make the silence visible.

## **02** somebody else

The person you keep talking past is standing in the cell you left dark. That makes them your most useful collaborator.

## **03** a seating chart

Not for the field as it is, but for the collaborations that haven't happened yet.

# Integrative pluralism (Mitchell 2003)

Not "anything goes."

within a cell

evidence competes, standards are strict

across cells

keep the plural models — then actively integrate them to explain concrete cases of writing

The grid is the instrument for doing that integration — without smuggling one cell's answer into the others.

Every one of us is working in a cell of this grid (or multiple) —

and the whole point of the word **grapholinguistics** is that the cells add up.



**Thank you for your attention!**

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