Association for Written Language and Literacy
Ассоциация письменного языка и письменности
Ενωση για τη γραπτη γλωσσα και τη βασικη εκπαιδευση
书面语言和识字协会
Association for Written Language and Literacy

AWLL Newsletter: Number 17: 15 March 2026

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On distribution of the 17th AWLL newsletter [Terry Joyce (newsletter editor)]

After the AWLL15 conference in Pisa, Italy at the end of October 2025 (see conference report below), I had hoped to round out 2025 with the distribution of this 17th AWLL newsletter (NL17), but, regrettably, circumstances rather conspired against that (in retrospect, overly-optimistic!) plan. However, I earnestly hope that you will also consider NL17's extended content (the longest AWLL newsletter to date) to be a very positive sign of AWLL's vibrant core community that is steadily growing. Excluding this brief outline, NL17 consists of nine items; the first block of three items are AWLL-related matters, the second block of three pieces are all welcome contributions from core-community members, while the final three items fall under the general rubrics of previous newsletters.

As indicated, the first item is Vito Pirrelli's report of the AWLL15 conference that convened at the Italian National Research Council in Pisa at the end of October. In the second newsletter item, the AWLL board returns to two important topics discussed during the AWLL15 business meeting that warrant wider dissemination. In the third item, Dorit Ravid announces the recent launch of an Editorial Management (EM) system for the *Written Language & Literacy* (WLL) journal.

In contrast to these AWLL-related matters, the second block of three items are interesting contributions from core-community members. In the first, *Principles of spelling and speech: A*

commentary squib, AWLL's founding president Anneke Neijt continues to share her expertise about spelling with a detailed commentary on Te Winkel's (1863, 1865) spelling principles. In the next discursive piece, *Use and misuse of scriptural (and cultural) entanglement*, Yannis Haralambous muses over the biscriptal blending attested within the logo of a television series. In the next item, Arvind Iyengar briefly outlines a reference resource that he has developed, *International Phonetic Alphabet: in Braille and Latin scripts*.

The final three NL17 items are regular newsletter features, but with one being a greatly appreciated new addition. That is, NL17 features two *Introducing writing systems* serializations. In the 15th instalment of the Japanese series, I and Keisuke Honda attempt to summarize the various graphematic principles that govern the mixed-script nature of the Japanese writing system. The Brahmic and Arabic serializations are both taking a break in NL17, but I am delighted to hail a new serialization to this feature section on the Manchu writing system by Bai Li. NL17 concludes with the regular *Miscellaneous matters* section, with details for some recent publications by AWLL community members, including two book publications.

As always, all comments, including ideas or items for future newsletters, are most welcome; just email them to terry@tama.ac.jp.

Past newsletters are available at http://faculty-sgs.tama.ac.jp/terry/awll/newsletters.html

Conference report: AWLL15 [Vito Pirrelli (local organizer)]

Many of the AWLL15 onsite participants [taken on the final day]

With the theme of *Written Words: From graphematic forms to meaning*, the Association for Written Language and Literacy's (AWLL) 15th International Workshop on Writing Systems and Literacy (AWLL15), took place at the Pisa Research Area of the Italian National Research Council over 29-31 October 2025. Being the director of the hosting venue, the "Antonio Zampolli" Institute for Computational Linguistics, I acted as the local organizer.

The programme committee for the workshop consisted of Terry Joyce (Tama University, Japan), Lynne Cahill (University of Sussex, UK), Dorit Ravid (Tel Aviv University, Israel) and Vito Pirrelli (CNR Pisa, Italy). Extending AWLL's tradition of convening international conferences dedicated to research on writing systems, AWLL15 sought to facilitate interaction between researchers from various backgrounds in further exploring their mutual interest in written words; from their diverse graphematic forms to the different kinds of information evoked within the reciprocal processes of writing and reading. In that spirit, the programme committee was pleased to accept

submissions that addressed the following research questions:

- How do the different dimensions of graphematic complexity play out across different writing systems?
- How do various linguistic factors (i.e., phonological and/or morphological awareness, discursive style) interact in producing and comprehending written words?
- How can cross-linguistic studies elucidate the distinction between the language-universal and language-specific properties of written words?
- What are the cognitive and neurological mechanisms that mediate the processing from graphematic words to meaning?
- What historical practices, sociolinguistic tensions and/or technological shifts influence the realization of contemporary texts?

Two keynote speakers were invited to present on the second and third days of the workshop: Elinor Saiegh-Haddad (Bar-Illan University, Israel) *The triangulation of linguistic, orthographic, and diglossic factors in reading development in Arabic* and Alessandro Lenci (Pisa University, Italy) *How forms shape meaning: What distributional learning can and can't do in the era of LLMs*.

Over three days of intense and friendly discussion, the workshop offered 27 oral presentations over 11 oral sessions and 3 poster presentations. On the first day of the workshop, a small Symposium was devoted to *Reading, readability and online reading comprehension*. The event closed with a concluding panel discussion on the future perspectives of the field, led by Elinor Saiegh-Haddad, Sonali Nag and Vito Pirrelli. The workshop was attended by 69 participants (43 onsite and 26 online) from 21 countries. A selection of papers will be published as a two-part special issue of the *Written Language and Literacy* journal (Benjamins) to be guest edited by Vito Pirrelli and Sonali Nag (invitations to have already been sent to the conference participants to encourage them to submit manuscripts of their conference presentations). Materials from the conference, including PDF of the oral and poster presentations, recordings of the oral sessions and a selection of photographs from the conference, are gradually being uploaded to the AWLL15 website: http://faculty-sgs.tama.ac.jp/terry/awll/WS/15/2025-HP.html

AWLL core community + AWLL-CIC structure [AWLL board]

The AWLL board wishes to share our further deliberations concerning two items discussed during the AWLL15 business meeting [see AWLL15-BMMinutes]; namely, the introduction of a small subscription fee for core community membership and our aspiration to gradually expand the organizational structure for AWLL community interest company (AWLL-CIC).

Currently, membership of AWLL's core community is only open to the participants of recent AWLL conferences who explicitly communicate their wish to be part of the core community [now easier with an opt-in form at the community page]. Members are entitled to have a small profile on the AWLL community website (affiliation and research interests), to announce recent publications in AWLL newsletters, and to also contribute items to the newsletters.

However, as one measure towards defraying the ongoing costs associated with AWLL's recently

established legal status as a community interest company [as announced in newsletter 16], the board floated the proposal of introducing a nominal annual subscription fee for core community membership during the AWLL15 business meeting. Although the proposal was positively received, no consensus emerged during the meeting about what would be an appropriate amount.

As it is not feasible to leave the issue pending indefinitely (even until the next AWLL conference), after further consultation and discussions about appropriate amounts, the board has decided to introduce annual fees of £20 (GBP) for regular members and £5 (GBP) for student members of the core-community membership, effective from the beginning of September 2026 (when a revised community page will provide a payment link). Moreover, a current core-community subscription will be an eligibility criteria to participate at future AWLL conferences.

As another item of significance broached during the AWLL15 business meeting, the board wishes to iterate our aspirations to gradually expand the organizational structure of AWLL, moving forward as a community interest company. More specifically, the board would like to create some new roles, such as technical support, an AWLL secretary, as well as an editorial team to the newsletters. If you are interested in becoming more involved in any way, please contact Terry to explore the possibilities. As a recent addendum to this matter, we would also report that, for understandable reasons, Dorit has decided to resign as one of AWLL-CIC's directors. In accepting Dorit's resignation, Terry and Lynne, on behalf of the AWLL community, sincerely thank Dorit for her support in establishing AWLL-CIC. As this turn of events further accentuates the importance of this matter, please consider how you might contribute to AWLL-CIC going forward.

Editorial management (EM) system for WLL [Dorit Ravid (WLL general editor)]

I am pleased to announce that the *Written Language and Literacy* journal now offers online submission via an editorial management (EM) system. A *short guide to EM for authors* is available at WLL's website: https://benjamins.com/catalog/wll

The author information section also details the possibilities for articles accepted for WLL being Open Access.

Principles of spelling and speech: A commentary squib [Anneke Neijt]

Since the nineteenth century, Dutch has had an officially-regulated spelling system, strongly influenced by the spelling principles of Te Winkel (1863, 1865). These principles describe the unavoidable foundations of alphabetic writing – unavoidable, as this squib argues, because spelling principles ultimately derive from principles of speech.

Te Winkel (1865) emphasizes the role of principles as general guidelines for choosing among competing spelling options. Such principles foster understanding and acceptance among language users; both those who explain the spelling system and those who learn it. They may contribute to more effective education, and, for linguistic research, they help set the agenda: are

the Dutch principles relevant for all languages and all types of writing systems?

Seven principles in Te Winkel (1865), and their counterparts in speech

Pronunciation (1) and Uniformity (2) are the two principles that later became known as the Phonological and Morphological Principles of spelling. Te Winkel formulates them as follows:

(1) Pronunciation. In writing, represent the correct pronunciation; use letters to indicate all elements that can be heard in a word when it is correctly pronounced by civilized individuals; and when the correct pronunciation cannot be represented precisely, choose the closest available letter.

(2) Uniformity. As far as pronunciation permits, give the same form to each word and to all its component parts, whenever this promotes recognition and correct understanding.

Using modern terminology, these principles can be paraphrased as: 'represent phonemes with letters or combinations of letters (graphemes), and represent morphemes with a consistent spelling, disregarding context-sensitive pronunciation differences'.

These two principles correspond to what is known in spoken language as double articulation or duality of patterning (cf. Hockett 1960 and others). Te Winkel (1865: 7), taking the listener's perspective, referred to this as *dubbele apperceptie* 'double perception': "one must first recognize the sound, and then determine its meaning." Double articulation is a universal feature of human language. For speech, the two principles can be defined as: *express differences in meanings through differences in phonemes',* and *'pronounce morphemes as consistently as possible*.

Te Winkel's third principle, Distinction (3), is the counterpart of Uniformity (2). It requires differences in spelling for differences in meaning, e.g. the avoidance of homonymy. This principle applies equally to speech and writing, since language users tend to interpret formal contrast as semantic contrast and formal similarity as semantic similarity. Together, principles (2) and (3) are the ideal – though unattainable - of a one-to-one mapping between form and meaning.

Derivation or Older Form (4) concerns choices between alternative spellings for the same phonemes, such as *ij* or *ei* for the diphtong /ɛɪ/ in Dutch *hij* 'he' and *hei* 'heath'. Te Winkel formulates the principle as follows: "When selecting between different characters for the same sound, preference should be given to the older form from a the time when the sounds were still clearly distinct." A direct counterpart in spoken language is difficult to identify, since speech is transmitted through contemporary usage.

In cases of spelling variation, Te Winkel invokes Analogy (5) to increase regularity. An example from the nineteenth century is the choice between *ae* or *aa* for /a/ (*jaer* or *jaar* 'year'). Writers who opted for *ae* typically also used *ue* instead of *uu* for /y/ (*vuer* instead of *vuur* 'fire'). Analogy is equally active in speech, as illustrated by the generalization of regular past tense forms (*waaien–waaide* 'blow–blew' replacing *waaien–woei*), by analogy with *draaien–draaide* 'turn–turned'. Analogy thus gives rise to productive patterns in both speech and spelling, reinforcing regularity and increasing efficiency.

Euphony (6) is an unusual notion for a visual system, but it refers to the tendency to prefer

forms that 'look good', just as speakers prefer utterances that 'sound good' given the intended meaning. For example, the Dutch the diminutive of *haiku* /hajku/ could be *haikutje* or *haikoetje*, but these suggest undesirable associations with *kutje* 'little cunt' or *koetje* 'little cow'. The officially accepted form is therefore *haiku'tje*.

Finally, Usage (7) reflects how language users believe meaning ought to be expressed. Because both speech and spelling are governed by multiple, sometimes conflicting principles, actual usage must be taken seriously in both domains.

Five additional principles for spelling and speech

Not explicitly mentioned by Te Winkel (1865), but clearly relevant in the nineteenth-century context of nation-building in Europe, is the principle of Identity (8), which applies to both speech and writing. It may be defined as: *use linguistic form to identify groups or societal affiliation*. Language users express belonging, or non-belonging, through linguistic choices. Identity may stem from a desire for similarity or dissimilarity, cf. Geerts et al. (1977: 234) and Coulmas (2020). An extreme case of the latter is encryption, the deliberate use of coded speech or writing to exclude outsiders (Baker 2003).

Simplicity (9) limits the size of the symbol inventory. Alphabetic writing systems employ a small set of letters, just as spoken languages rely on a limited number of segmental and prosodic sounds. These combine into roughly 20,000 morphemes (estimate for Dutch; Heemskerk & Van Heuven 1993: 67), enabling the construction of an unlimited number of words, phrases, and sentences. Both the inventory of forms and their combinatory possibilities are simple in spelling and speech: either hierarchical combinations of unequal elements (for example, in *ie*, *i* is the core and *e* marks its quality) or coordinative combinations of equal elements (in *aa*, neither letter can be identified as the core). The drive toward Simplicity already motivated Spiegel (1584: 21) to reduce the number of letters in order to facilitate spelling acquisition.

Economy (10) manifests itself in both speech and writing through the shortening of frequent words and phrases: *bib*, *aso*, and *mkb* instead of *bibliotheek* 'library', *asociaal* 'antisocial', and *midden- en kleinbedrijf* 'small and medium-sized enterprises'. This principle aligns with what is known in generative syntax as Minimal Yield (Chomsky 2021: 19). Economy is explicitly mentioned in the *Woordenlijst* (1954), the spelling dictionary published after the 1947 Dutch spelling reform.

Freedom of Naming (11) may seem self-evident, but in a list of principles deserves explicit mention: the name-giver determines both spelling and pronunciation. Names may violate ordinary spelling conventions, as in *Connexxion*, the name of a transport company, with a double *xx*, which does not occur elsewhere in Dutch. The name-giver decides how a name is pronounced—*Robert* as [rɔbɘrt] or [robɛːr], with main stress on the first or final syllable. This principle is also mentioned in the *Woordenlijst* (1954).

Retrievability (12) in spelling, the requirement that sufficient information be provided for readers to recover the intended sounds, corresponds to Intelligibility in pronunciation, the requirement of clear articulation. Although this principle follows from the Phonological Principle,

it is useful to highlight it separately to foreground the needs of readers and listeners. Retrievability is mentioned in the most recent official description of Dutch orthography (Spellingcommissie 2016).

This overview shows that Dutch spelling principles are general not only because they abstract away from specific rules, but also because they apply to both spelling and speech, with the likely exception of principle (4), Derivation or Older Form. *Verba volent*, *scripta manent*.

Universality?

The principles discussed above guided the design and reforms of Dutch orthography. Pronunciation (1) and Uniformity (2), better known as the Phonological and Morphological Principles, are widely assumed to be universally relevant, for all kinds of writing systems. Whether the other principles are equally applicable to other languages and to non-alphabetic writing systems remains an open question. Likewise, it is unclear whether the present list is exhaustive. These questions call for further research.

Baker, Mark C. (2003). Linguistic differences and language design. *Trends in Cognitive Science* 7, 349-353.

Chomsky, Noam (2021). Minimalism: Where are we now, and where can we hope to go. *言語研究* (Gengo Kenkyu) 160: 1–41. https://www.ls-japan.org/modules/documents/LSJpapers/journals/160_chomsky.pdf

Coulmas, Florian (2020). Writing and identity. *Written language and literacy* 23, 180-193.

Geerts, Guido, J. van den Broeck & Albert Verdoodt (1977). Successes and failures in Dutch spelling reform. In: J. A. Fishman (ed.), *Advances in the creation and revision of writing systems*. Den Haag & Parijs: De Gruyter Mouton, 179-245.

Heemskerk, Josée & Vincent van Heuven (1993). MORPA, a morpheme lexicon based morphological parser. In: V. van Heuven & L. Pols (red.) *Analysis and synthesis of speech*. Berlijn & New York: De Gruyter Mouton, 67-86. https://scholarlypublications.universiteitleiden.nl/access/item%3A2732921/view

Hockett, Charles (1960). The origin of speech. *Scientific American* 203, 88-97. https://web.stanford.edu/class/linguist197a/hockett60sciam.pdf

Spellingcommissie (2016). *Technische Handleiding. Regels voor de officiële spelling van het Nederlands.* https://woordenlijst.org/th.php

Spiegel, Hendrick L. (1584). *Twe-spraack. Ruygh-bewerp. Kort begrip. Rederijck-kunst.* Ed. W.J.H. Caron. Groningen: J.B. Wolters, 1962. https://www.dbnl.org/tekst/spie001wjhc01_01/

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Winkel, Lamert A. te (1865). *De grondbeginselen der Nederlandsche spelling. Regeling der spelling voor het aanstaande Nederlandsch woordenboek.* Leiden: D. Noothoven van Goor. https://www.dbnl.org/tekst/wink003gron02_01/

Woordenlijst (1954). *Woordenlijst van de Nederlandse taal. Samengesteld in opdracht van de Nederlandse en de Belgische regering*. 's Gravenhage: Martinus Nijhoff.

[Editor note: Dutch readers may also be interested to read Anneke's commentary, (see listing of recent publications by AWLL core community members below), about the descriptions of the learning objectives for reading, writing, and the Dutch language in primary education (pupils aged 4 to 12), including criticism of the proposal to adopt these objectives almost unchanged from secondary education (ages 12 to 14), as well as her commentary on simplifications of Dutch verb spellings at https://neerlandistiek.nl/2021/05/de-monsterlijke-werkwoordspelling-wat-kan-ervoor-in-de-plaats-komen/]

Use and misuse of scriptural (and cultural) entanglement [Yannis Haralambous]

As the theme of this year's *Grapholinguistics in the 21st Century* conference is script entanglement, here is a small curiosum that recently caught my attention. One of the most acclaimed television series of recent seasons is Tehran, an Israeli espionage thriller in which Mossad agents operate undercover in the Iranian capital. Several of the agents are themselves Iranians or of Iranian origin, and the psychological and affective dimensions of their bicultural identity — suspended between two civilizations in profound conflict — constitute one of the series' most compelling dramatic threads. The original Hebrew logo of the series captures this entanglement with striking economy:

What we see is the name Tehran in Hebrew script טהרן, where the Hebrew tet (ט) carries the two superscript dots of the Arabic letter tāʾ (ت), and the Hebrew final nun (ן) — somewhat infelicitously kerned in the logo — carries the single dot of the Arabic nūn (ن). Such biscriptal visual conflation is not without precedent: a celebrated example is Liron Lavi Turkenich's Aravrit project. The Hebrew logo maintains an admirably coherent phonological logic: the two dots are superimposed on the letter representing /t/, and the single dot on the letter representing /n/, so that the entangled graphemes correspond to the same consonantal phonemes across both scripts. The visual conflation is also a linguistic one.

As the series became an international success, the logo had to be adapted for the Latin script. Wishing to preserve the double-dot/single-dot motif, the designers faced a choice between two options:

On the left, there is a phonological correspondence: the superimposed dots evoke the same Arabic letters as in the Hebrew logo, and these correspond to the actual phonemes of the Latin letters they decorate (/t/ and /n/). On the right, there is instead a purely graphic correspondence with the Hebrew logo: the double dots appear on the right-hand letter and the single dot on the

left — mirroring the visual layout of the Hebrew rather than its phonological logic.

The producers opted for the right-hand version (in the series credits, at least; the poster version of the logo dispenses with the dots entirely). Was this a matter of the graphic designer's oversight? A deliberate desire to remain visually faithful to the Hebrew version, even at the cost of a phonological inconsistency? Or perhaps a subtler reluctance—that relocating the dots would have presented the Hebrew logo, and by extension Israeli culture, as a mere mirror image of the Western world as represented by the Latin alphabet? We may never know. One further question presents itself: should the series ever be broadcast in Iran or in Arabic-speaking markets, how will the designers handle an Arabic-script version of the logo? In Persian, Tehran is already written تهران, a word whose own letters naturally carry the very diacritics the logo deploys as a conceit—the two dots of ت and the dot of ن are already there, inherent to the script. Will the "cinematic" dots simply collapse back into the "linguistic" ones, dissolving the biscriptal artifice altogether?

A final observation: the series entangles not only Israeli and Persian cultures, but fortuitously—and entirely without intent—Greek culture as well, for it is filmed entirely in Athens, which stands in for Tehran throughout. This is a fact that cannot leave a member of the Athenian diaspora quite indifferent: what a quiet, singular pleasure it is to recognize a familiar street corner, a drone passing over Kaniggos Square, the balcony of an apartment building in Kypseli, all lurking beneath the guise of an Iranian espionage thriller.

International Phonetic Alphabet: in Braille and Latin scripts [Arvind Iyengar]

The ipa.bhasha.net website brings together the two standard manifestations of the IPA in the Latin (Roman) and Braille scripts. It aims to serve as a reference resource for students and researchers in phonetics, grapholinguistics and related disciplines.

The Braille version of the IPA has been devised by Robert Englebretson (2009, 2025).

I was motivated to create this resource after a Blind student signed up for my phonetics class, and I was forced to reckon with the glaring lack of IPA-related resources accessible to Blind and Visually Impaired (BVI) users (Iyengar, forthcoming). While the IPA's Latin-script avatar has a wealth of interactive and static charts available, it struck me that there were few high-quality reference materials focusing on the IPA's Braille version, aside from Englebretson's own works. More importantly, many of these resources were squarely targeted at sighted students and researchers; in several cases, the underlying design (e.g., untagged PDF files, or image-based resources) effectively precluded BVI users from accessing and benefiting from them.

Working with my phonetics student, I learnt how certain desktop screenreader apps such as NVDA and JAWS were able to transliterate IPA-in-Latin content into IPA-in-Braille on the fly, and offer a theoretical solution to the problem of accessibility. In practice, however, such apps typically require installing dedicated plugins or addons to enable IPA recognition and transliteration. Moreover, using these apps effectively necessitates a certain level of baseline

proficiency, which comes with a learning curve. These factors cumulatively contributed to the paucity of accessible IPA resources, and hindered the learning, teaching and awareness of IPA-in-Braille.

To address the situation for my phonetics student, I created a facsimile of the official IPA chart, supplementing each Latin-script symbol with its Braille equivalent. The chart was intentionally modest in structure and presentation. I compiled it using basic HTML and minimal CSS, and set it to employ system-default fonts. This ensured the site would load quickly, even on slow connections or older devices. More importantly, the site's lightweight design allowed screenreader apps to parse it easily and seamlessly render the content as tactile symbols on a refreshable braille display or as automated text-to-speech audio.

In light of the increasing attention Braille was receiving in grapholinguistic circles (Fetnaci et al., 2022; Iyengar, 2023; Honda, 2025), it became evident that a chart that juxtaposed and presented IPA symbols in their Latin and Braille versions could serve as a useful grapholinguistic resource — one that fit right into the ongoing discussions on the topic, and hopefully provide impetus for further ideas and research.

With this in mind, I have extended the dual-script IPA chart into a public-facing website open to all, titled *IPA (Braille & Latin)* and accessible at ipa.bhasha.net. Besides having multi-modal navigability built in, the site's responsive design automatically adapts content to your screen size, from desktop monitors to mobile phones. The site also features a dedicated dark mode function tailored to the content. To encourage user interaction, each Braille and Latin IPA symbol pair is presented on a dedicated button, which reveals additional details when clicked. Figures 1 and 2 illustrate these features.

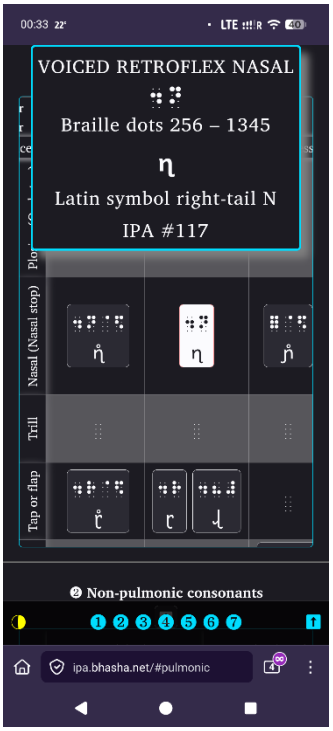

Figure 1. Mobile view in dark mode

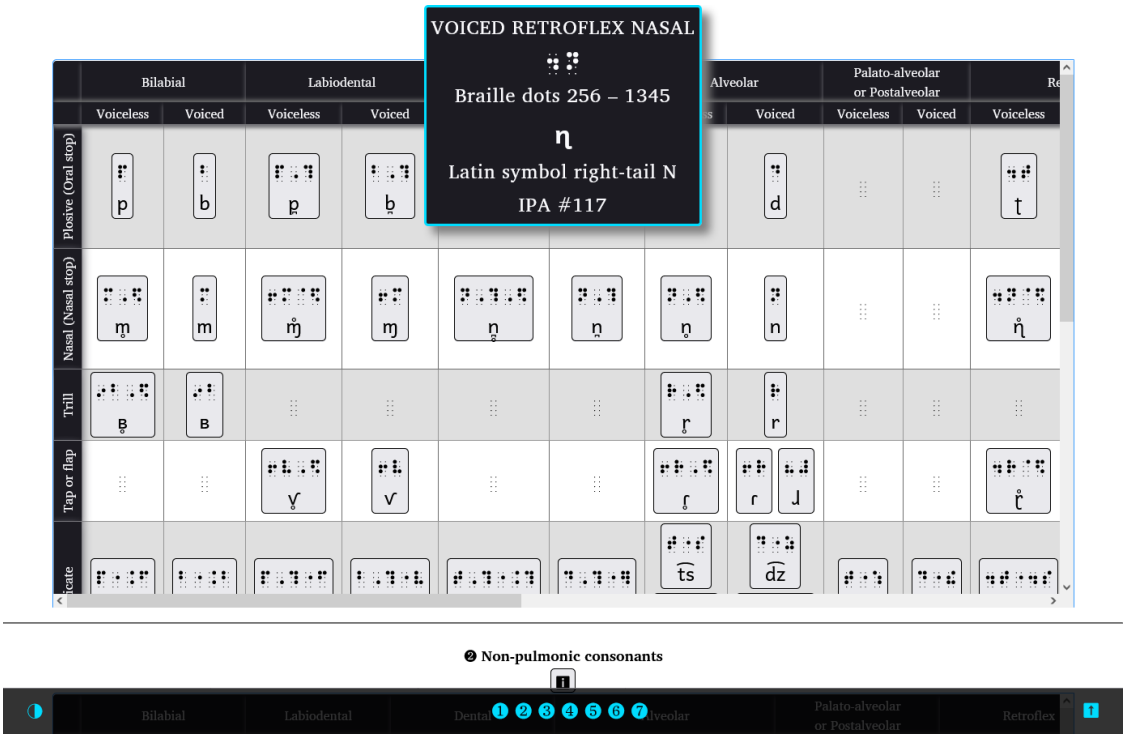

Figure 2. Desktop view in light mode

By displaying symbols in related pairs, the site aims to promote knowledge of inter-script correspondences, as well as awareness of IPA-in-Braille as an equal and parallel system to IPA-in-Latin.

For visual clarity, Latin-script IPA symbols are displayed in the literacy-oriented Andika font, whereas Braille symbols appear in the 'simbraille' style with placeholders for empty dot positions. For aural clarity via screenreader apps, additional information is embedded using the standards-track `aria-description` attribute. Overall, though, the site adheres to its original design principle of simplicity, and is written in pure HTML and CSS (no JavaScript). You can download it as a standalone webpage, and/or use it offline without an internet connection.

Besides phoneticians and phonologists, grapholinguists of various stripes should find the consolidated presentation of Braille and Latin-script IPA symbols useful. For instance, spoken English transcribed in Braille and Latin-script IPA symbols can be notationally represented as `en-Latn-fonipa` and `en-Brai-fonipa`, respectively, where:

`en` is the ISO 639 code for spoken English

`Brai` and `Latn` are the ISO 15924 codes for the scripts in question

`fonipa` is the IETF-mandated subtag for IPA transcriptions

This framework applies likewise to any spoken language transcribed in the IPA, using Braille or Latin-script symbols. Among other things, such an approach helps shed light on a longstanding existential question in grapholinguistics: Do IPA symbols constitute a standalone script (Neef, 2015) or merely a subset of an existing script?

In this regard, my hope is the *IPA (Braille & Latin)* website underscores and reaffirms recent arguments that Braille is indisputably a script in the grapholinguistic sense and, as such, is as

adaptable and versatile as Latin and other 'print' scripts (Englebretson et al, 2023).

Englebretson, R. (2009). An overview of IPA Braille: An updated tactile representation of the International Phonetic Alphabet. *Journal of the International Phonetic Association*, *39*, 67–86. https://doi.org/10.1017/S0025100308003691

Englebretson, R. (editor) (2025). *IPA Braille: An updated tactile representation of the International Phonetic Alphabet (second edition).* International Council on English Braille. https://iceb.org/publications/ipabraille/

Englebretson, R., Holbrook, M. C. & Fischer-Baum, S. (2023). A position paper on researching braille in the cognitive sciences: decentering the sighted norm. *Applied Psycholinguistics*, *44*, 400–415. https://doi.org/10.1017/S0142716423000061

Fetnaci, N., Haralambous, Y., & Varin, M. (2022, June 10). On Arabic braille [Conference poster]. *Grapholinguistics in the 21st Century,* Paris. http://www.fluxus-editions.fr/grafematik2022-files/FETNACI-poster.pdf

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Iyengar, A. (2023). More matters of typology: Alphasyllabaries, abugidas and related vowelled segmentaries. *Written Language & Literacy*, 26(1), 30–56. https://doi.org/10.1075/wll.00072.iye

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Introducing writing systems: Japanese [15] [Terry Joyce & Keisuke Honda]

Intending to signal a major transition point within this *Introducing writing systems* serialization on the Japanese writing system (JWS), the previous instalment attempted to briefly summarize the initial block of 13 instalments. The initial block sought to provide succinct introductions to each of the JWS's component scripts: with Instalments 1-8 on the principal component of morphographic 漢字 /KAN-JI/ 'kanji'; Instalments 9-11 on the two syllabographic 平仮名 /HIRA-GA-NA/ 'hiragana' and 片仮名 /KATA-KA-NA/ 'katakana'; and Instalments 12-13 on the segmental ローマ字 /rōma.JI/ 'Latin script'.

As we embark on a second block of instalments, our overarching aspiration is to further explicate the different graphematic principles that guide how the various scripts are combined to visually represent the written Japanese language, in both conventional and innovatively creative ways. In the first of the initial block of instalments, we acknowledged that the JWS has a singular reputation amongst scholars of writing systems for, arguably, being the most complex writing systems in contemporary use (Honda, 2011; Joyce, 2013, 2016; Joyce & Masuda, 2023). Given that one of the main factors that contributes to such assessments is the fact that the JWS consists of multiple scripts that are employed together as complementary components of an overall system, it is most germane to start the second block of instalments by partially analyzing a short text that serves to exemplify that mixing of scripts. We would, however, immediately acknowledge using a

ChatGPT prompt to generate the following paragraph to include the four component scripts within a short description of the JWS (that simultaneously echoes the core observations about the JWS within the first block after a longer-than-anticipated hiatus!). Although each component script is visually distinctive, for the benefit of all readers, we are also applying a color coding to the Japanese text, with kanji in green, hiragana in blue, katakana in red and rōmaji in purple (and punctuation in black). The accompanying translation is an edited version of the output from Google translate.

現代日本語の表記体系は、漢字・平仮名・片仮名を併用する漢字仮名交じり文を基本とする。漢字は主に自立語や語幹などを構成する形態素を（例：日本、行く）、平仮名は助詞や活用語尾などの文法的形態素を（例：を、行く）、片仮名は外来語やオノマトペなどを（例：アルファベット、ワンワン）表記する。このように、各文字種は異なる語種・形態素と対応する。近年ではローマ字表記（例：Nihon、Tokyo）や外来語の原綴（例：LIVE、WC）にラテン文字も広く用いられる。類型論的には、漢字は表形態素文字、平仮名・片仮名は表音節文字、ローマ字は表音素文字といえる。

The contemporary Japanese writing system is based on a mixture of kanji and kana that uses a combination of kanji, hiragana, and katakana. Kanji primarily represent morphemes that are either independent words or stems (e.g., 日本 /nihon/ *Japan*, 行く /iku/ *go*), hiragana represent grammatical morphemes, such as particles and inflections (e.g., を /wo/ *object marker*, 行く /iku/ *go*), and katakana represent loanwords and onomatopoeia (e.g., アルファベット /arufabetto/ *alphabet*, ワンワン /wanwan/ *woof*). In this way, each script type corresponds to a different type of word or morpheme. In recent years, the Latin script has also become widely used for romanization (e.g., *Nihon*, *Tokyo*) and the original spellings of loanwords (e.g., LIVE, WC). Typologically, kanji are morphographic, hiragana and katakana are syllabographic, and the Latin script are segmental characters.

Even though this specific paragraph was deliberately generated with AI to feature all four scripts within a particular context, the ratios of script mixing are generally consistent with the academic nature and style of the paragraph (Joyce & Masuda, 2019); we will return to the topic of script ratios in the next instalment. Of the 270 characters in total, 127 (47%) are kanji, 66 (24%) are hiragana, 25 (9%) are katakana, 36 (6%) are rōmaji, with the remaining 36 (13%) being punctuation marks.

Although the first block of instalments introduced various aspects in the past and the Japanese text in this instalment accurately describes the mixed-script nature of the JWS, albeit of necessity very briefly, the key points warrant recapping to unpack some of the self-referential parts of these sentences. At the risk of overstating matters, in terms of the size of its character inventory, the major component script of the JWS—commonly referred to as 漢字仮名交じり文

/KAN-JI-KA-NA-MA.jiri.BUN/ *mixed kanji-kana writing*—is 漢字 /KAN-JI/ *kanji.* As a 表形態素文字 /HYŌ-KEI-TAI-SŌ-MO-JI/ *morphographic script*, kanji graphematically represent Sino-Japanese content words—as in 表記体系 /HYŌ-KI-TAI-KEI/ *writing system*—native-Japanese content words and the stem morphemes of verbs—as in 行 of 行く /i.ku/ *go*—as well stem morphemes of adjectives and adverbs—as in 主に /omo.ni/ *primarily*.

As one of the two 表音節文字 /HYŌ-ON-SETSU-MO-JI/ *syllabographic scripts*, 平仮名 /HIRA-GA-NA/ *hiragana* is strongly associated with native-Japanese functional morphemes, including grammatical case markers—as in の /no/ *possessive* and は /wa/ *topic*—and the inflections of verbs—as in く of 行く /i.ku/ *go* and いられる of 用いられる /mochi.irareru/ *are used*—as well of the inflectional endings of adjective and adverbs—as in 広く /hiro.ku/ *widely*. As the second syllabographic script, 片仮名 /KATA-KA-NA/ *katakana* is mainly associated with the loanwords of foreign-Japanese—as in アルファベット /arufabetto/ *alphabet*—and native-Japanese mimetic words, which include onomatopoeia—as in ワンワン /wanwan/ *woof*.

As a 表音素文字 /HYŌ-ON-SŌ-MO-JI/ *segmental script*, ローマ字 /rōma.JI/ *Latin script* is increasingly becoming widely used for the ローマ字表記 /rōma.JI-HYŌ-KI/ *romanization* of Japanese words—as in Nihon *Japan* and Tokyo—and for the graphematic representation of certain 外来語 /GAI-RAI-GO/ *loanwords*—as in LIVE /raibu/ *live broadcast/performance* and WC /toire/ *toilet*.

Whilst it is undeniably true that the JWS's co-existence of the multiple scripts fosters considerable degrees of graphematic variation (also a topic for subsequent instalments), as this sketch has sought to convey, the different scripts are employed together in largely complementary words in graphematically representing written Japanese. The conventional principles effectively function to visually differentiate between content lexemes, which are represented mainly by kanji but also at lower frequencies by both katakana and rōmaji, and grammatical morphemes that are typically represented by hiragana. To a lesser degree, the multiple scripts also serve to distinguish between the lexical strata of Japanese, with kanji for Sino-Japanese and native-Japanese, hiragana for native-Japanese, and both katakana and rōmaji for foreign-Japanese.

As already noted, in the next instalment, we will continue to focus on the mixed-script nature of the JWS looking at how the ratios of script-mixing are highly dependent on context; yet another factor that illustrates the multi-dimensionality of written language.

Honda, Keisuke. (2011). *The relation of orthographic units to linguistic units in the Japanese writing system: An analysis of kanji, kana and kanji-okurigana writing*. Unpublished doctoral thesis. University of Tsukuba, Japan.

Joyce, Terry. (2013). The significance of the morphographic principle for the classification of writing systems. In Susanne R. Borgwaldt & Terry Joyce (Eds.), *Typology of writing systems* (pp. 61–84). Amsterdam: John Benjamins.

Joyce, Terry. (2016). Writing systems and scripts. In Andrea Rocci & Louis de Saussure (Eds.), *Verbal communication* (pp. 287–308). Berlin; Boston: De Gruyter Mouton. https://doi.org/10.1515/9783110255478-016

Joyce, Terry, & Masuda, Hisashi. (2019). On the notions of graphematic representation and orthography from the perspective of the Japanese writing system. *Written Language & Literacy*, 22(2), 247–279. https://doi.org/10.1075/wll.00028.joy

Joyce, Terry, & Masuda, Hisashi. (2023). Chaos or system? Reassessing the unique case of the Japanese writing system. *Written Language & Literacy*, 26(1), 57–75. https://doi.org/10.1075/wll.00073.joy

Introducing writing systems: Manchu [1] [Bai Li]

The critically endangered Manchu language

Manchu was once a language of empire, yet today it survives in only a small number of communities with fewer than 100 users. This new *Introducing writing systems* series offers an accessible introduction to the Manchu language for readers interested in written language and literacy. This instalment begins with a brief historical overview of the Manchu people and introduces key features of the Manchu writing system. Subsequent instalments will turn to more theoretical accounts of how readers process the Manchu symbol blocks characterised by visual complexity and symbol–sound mapping complexity, as well as highlighting contemporary revitalisation efforts through pedagogical practices in a Manchu course.

1. Manchu people and language

The Manchu people originated in Northeast China and their earliest ancestry can be traced back to the Qin dynasty (221–206 BC). In 1616, Nurhaci unified three local Jurchen tribes into a single group, which his son, Hong Taiji, later renamed the Manchu. In 1644, the Manchu forces occupied Beijing and overthrew the Ming dynasty. They subsequently ruled China—a country with a Han-majority population—until 1911 when Puyi, its last emperor, abdicated following the Xinhai Revolution. Today, the Manchu group is the second largest among China's 55 minority ethnic groups. Although Manchu held prestigious status of being the national language during the Qing dynasty, its position declined dramatically following the Xinhai Revolution. The Manchu language is now classified as 'critically endangered', with fewer than 99 users (UNESCO, 2025). The language is reported to be mainly preserved as a cultural heritage in villages in northeastern China's Heilongjiang Province rather than used in everyday life, facing a precarious future due to the passing of elderly speakers and limited growth in proficient users over recent decades. Nevertheless, there are grassroots interest groups, student associations in high schools, and universities in China offering Manchu courses.

2. The Manchu writing system

The Manchu writing system has been in use for over four centuries. Traditionally, Manchu is written vertically, with lines running from top to bottom and progressing from left to right across the page. Before the 1600s, Manchu did not have its own script but instead used the Mongolian script. As a result, Nurhaci commissioned two Manchu officials to develop a script to represent spoken Manchu. According to the *Manzhou Shilu* (*Veritable Records*), Nurhaci gave the following suggestion:

但以蒙古字合我国之语音，联缀成句，即可因文见义矣。例如阿字下合一妈字，非阿妈乎?恶字下合一摸字非恶摸乎?

Just use Mongolian letters to denote the spoken language of our state [to obtain the words], and combine the words into sentences, so that the meaning can be seen from the text. For example, isn't it *ama* if the character of *ma* is connected below *a*? Isn't it *eme* if the character of *me* is connected below *e*?"

This account introduces the mapping principle underpinning the Manchu orthography. For instance, the Mongolian written symbol <*a*> corresponds to the phonological syllable /ɑ/ in Manchu, and similarly, the symbol <*ma*> maps onto /mɑ/. By combining the symbols of <*a*> and <*ma*>, the Manchu word *ama* 'father' is formed [Note: uppercase letters are used for annotating the traditional Manchu script and italicised lowercase letters for transliteration (e.g., KA and ka)].

<A-> – /ɑ/

<-MA> – /mɑ/

Figure 1. Uju symbol blocks within the Manchu word *ama* 'father'

As shown in Figure 1, the word *ama* is written using two symbols. In Manchu, such symbols are called *uju hergen*, which are traditionally defined orthographic units representing one of the six phonological syllables of V, VV, VC, CV, CVV, and CVC. Traditionally, there are around 1,400 *uju hergen* grouped into 12 divisions known as *manju hergen i juwan juwe uju* (满文十二字头, literally 'the twelve character headings of Manchu', meaning 'the Twelve Sections of Manchu Syllabary').

Orthographically, Manchu words are generally formed by vertically connecting individual uju symbol blocks into strings (e.g., *ama* = <A-> + <-MA>), except for monosyllabic vowel.[1] In addition, the Manchu orthography displays positional allography. Constituent uju hergen in a word take different forms depending on their position in the beginning, middle or end of the word. For instance, in Figure 1, the top part <A-> is in the initial form and bottom part <-MA> the final form. Manchu is therefore an orthography full of allographs, which means that a four-to-one symbol-sound mapping is common. Moreover, European scholars who travelled to China during the Qing dynasty noted that uju symbol blocks can be further divided into sub-syllabic written symbols corresponding to vowels and consonants (see Figure 2). We refer to these sub-syllabic symbols as *Manchu phoneme markers*. A total of 83 graphically distinct phoneme markers were identified (see Li & Nag, in press). Latin-script transliteration produced by European scholars in the Qing dynasty shows these as six vowel letters (*a, e, i, o, u, ū*) and 18 consonant letters (*n, k, g, h, b, p, s, š, t, d, l, m, c, j, y, r, f, w*).

[1] For annotation purpose, the independent, initial, medial, and final forms of an uju hergen are denoted by (null) hyphens respectively (e.g., <MA>, <MA->, <-MA->, and <-MA>). Similarly, the initial, medial, and final positions of a phoneme marker within an uju hergen are denoted by hyphens too (e.g., <A->, <-A->, and <-A>).

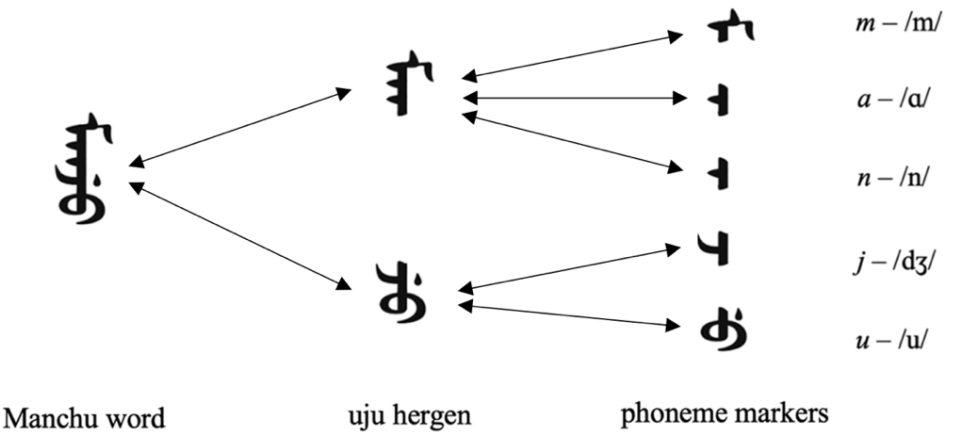

Figure 2. The word *manju* 'Manchu' divided into uju hergen and further into phoneme markers (adapted from Li & Nag, in press)

In terms of symbol–sound mapping in Manchu, there is both syllabic and phonemic conceptualisation. Chinese scholars argued that uju hergen are the basic orthographic units of Manchu, whereas European took a phonemic position, regarding phoneme markers as the basic written symbols. As described above, many uju hergen have four positional forms, making a four-to-one mapping between a symbol block and a syllable. At the level of the phoneme marker, however, mapping is more complex. Six out of the 83 phoneme markers correspond to two sounds, two to three sounds, and the remaining 75 to one sound (see Table 1 for examples of one-to-multiple symbol–to–sound mappings).

Table 1. Phoneme markers mapped onto two and three sounds

One-to-two mapping	- /ɑ/, /ə/
	- /ɔ/, /u/
	- /ɔ/, /u/
	- /ɔ/, /u/
	- /f/, /w/
	- /f/, /w/
One-to-three mapping	- /ɑ/, /ə/, /n/
	- /ɑ/, /ə/, /n/

The next instalment will focus on the role of visual features and phonological representations in learning the Manchu symbol set. Specifically, it will illustrate how reading Manchu symbol blocks requires processing at the interlinked sub-symbol and symbol levels.

Li, B., & Nag, S. (in press). Learning to read the Manchu writing system. In H. Winskel & H. K. Pae (Eds.), *Springer handbook of nonlinear writing systems: Complex processes and learning challenges*. Springer Nature.

Li, B., Murphy, V., & Nag, S. (2025). Exploring pedagogical strategies for developing orthographic knowledge: A case study of the critically endangered Manchu language. International Journal of *Applied Linguistics*. https://doi.org/10.1111/ijal.12839

United Nations Educational, Scientific and Cultural Organization. (2025, February 20). The *world atlas of languages* (beta version). https://en.wal.unesco.org/languages/manchu

Miscellaneous matters

Sundry information about related conferences, projects, etc.

WAVE 2: Writing As Visual Engagement

Cambridge, UK; 26-29 March (hybrid) + 11 April (online) [NB: In person registration has now closed]

https://viewsproject.wordpress.com/writing-as-visual-engagement/

Third Workshop on Computation and Written Language (CAWL 2026)

Palma, Spain, 12 May 2026

https://sigwrit.org/workshops/cawl2026/

Grapholinguistics in the 21st Century 2026

Reading, UK; 24-26 June 2026

https://grafematik2026.sciencesconf.org/

Conveying Meaning through Iconic Visual Languages: Theory, Practice, and Didactics – An Interdisciplinary Exchange

Postdam, Germany; 1-3 July 2026

Contact email: saghie.sharifzadeh@sorbonne-universite.fr

Survey participation request: Legibility research in Latin script languages

Marta Guidotti, PhD candidate at READSEARCH (PXL-MAD School of Arts & Hasselt University, Belgium)

https://comfortread.framer.ai/

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Recent publications by AWLL core community members

As customary, the *Miscellaneous matters* section concludes with a list of recent publications (i.e., since the last newsletter) by AWLL community members, which is followed by 'mini-flyers' for 2 recent books.

AWLL mailing list is open to anyone interested in receiving occasional information emails, but the core community is based primarily on participation at AWLL workshops (see proposal outline above). Participants at the AWLL workshops are eligible to have a brief member profile at the community page of the AWLL website and to also have recent publications included under this section of future newsletters (for further information, go to http://faculty-sgs.tama.ac.jp/terry/awll/community.html).
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Fuhrhop, Nanna, Reinken, Niklas, & Romstadt, Jonas. (2026). Modalisierende Anführungszeichen in Zeitungstexten. In Nanna Fuhrhop & Laura Scholübbers (Eds.), Interpunktion im Korpus (pp. 105-136). Berlin, Boston: de Gruyter. https://doi.org/10.1515/9783111333977-004

Fuhrhop, Nanna, & Scholübbers, Laura (Eds.). (2026). *Interpunktion im Korpus* (Reihe Germanistische Linguistik 333). Berlin; Boston: Walter de Gruyter. https://doi.org/10.1515/9783111333977

Gnanadesikan, Amalia E. (2025). *The Writing Revolution: Cuneiform to the Internet* (2nd edition). Hoboken, NJ: Wiley-Blackwell. https://doi.org/10.1002/9781394218226

Li, Bai, Murphy, Victoria, & Nag, Sonali. (2025). Exploring pedagogical strategies for developing orthographic knowledge: A case study of the critically endangered Manchu language. *International Journal of Applied Linguistics*. https://doi.org/10.1111/ijal.12839; https://ora.ox.ac.uk/objects/uuid:9b944859-d5bd-4e71-ae51-37f6a2082865

Li, Bai, & Nag, Sonali. (2025). Learning to read the Manchu writing system. In Heather Winskel & Hye K. Pae (Eds), *Handbook of nonlinear writing systems: Complex processes and learning challenges*. Springer Nature.

Meletis, Dimitrios. (2025). Grapholinguistic wars: Negotiating disciplinary identity through scholarly disagreement. *Language & History*. https://doi.org/10.1080/17597536.2025.2556549

Meletis, Dimitrios. (2025). What Hangul means for grapholinguistics: Theoretical implications of a unique writing system. In Heather Winskel, Say Young Kim, and Hye Pae (Eds.), *Handbook on the Korean language and literacy: Insights into hangul and text processing* (pp. 519–537). Berlin: Springer. https://doi.org/10.1007/978-3-031-88087-2_26

Meletis, Dimitrios. (2026). Phonographic writing systems. In Olga C. M. Fischer, Pamela Perniss & Kimi Akita (Eds.), *Oxford handbook of iconicity in language* (pp. 273–288). Oxford: Oxford University Press. https://doi.org/10.1093/oxfordhb/9780192849489.013.0018

Nag, Sonali. (2025). *Benchmarking by language groups framework. Working Group, Global Alliance for Monitoring Learning (GAML)*, 11/2.2. UNESCO Institute of Statistics (UIS) and Education Data and Statistics Commission (EDSC).

Nag, Sonali. (2025). Literacy and its acquisition in Kannada. In R. Amritavalli & Bhuvana Narasimhan (Eds.), *The Oxford handbook of Dravidian languages*. Oxford University Press. https://doi.org/10.1093/oxfordhb/9780197610411.013.29; https://ora.ox.ac.uk/objects/uuid:0a329a71-94c5-4986-b49a-8c804dda4eb0

Neijt, Anneke (2026, February 2). Kerndoelen voor po en vo: zoek de verschillen [Commentary]. *Didactiek Nederlands*. https://didactieknederlands.nl/2026/02/kerndoelen-voor-po-en-vo-zoek-de-verschillen/

Roberts, David, & Anam, Medjamna. (2025). Actes du 2e colloque 2024 sur l'orthographe du lama. *Série électronique de documents de travail, 22*. SIL Togo-Bénin.

Steele, Philippa M. (2026). [Book review: Dimitrios Meletis & Christa Dürscheid: *Writing systems and their use. An overview of grapholinguistics*]. *Kratylos*, 70(1), 36-48. https://doi.org/10.29091/KRATYLOS/2025/1/5

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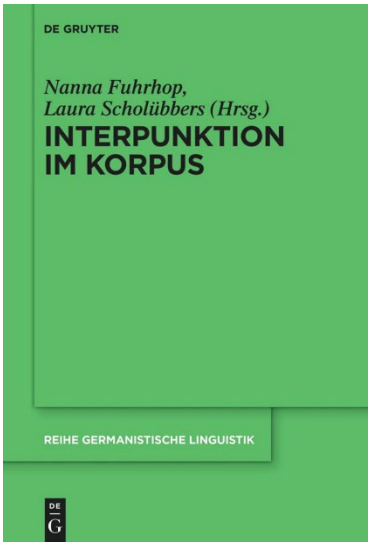

Fuhrhop, Nanna, & Scholübbers, Laura (Eds.). (2026). Interpunktion im Korpus (Reihe Germanistische Linguistik 333). Berlin; Boston: Walter de Gruyter. https://doi.org/10.1515/9783111333977

Publisher's website: https://www.degruyterbrill.com/document/doi/10.1515/9783111333977/html?lang=de

It is surprising that relatively little is known about punctuation marks from a linguistic point of view, given that we produce and receive them on a daily basis and that, at least in German, they are regulated by orthography.

This volume provides a corpus-linguistic analysis and description of all twelve punctuation marks used in German. Most punctuation marks are examined in newspaper corpora, with the initial focus being to establish the current usage, including a description of their form and an analysis of their function. Generally, this analysis adheres to Bredel's assumption that punctuation marks are unambiguous, consistent, and discrete. Therefore, the function of each punctuation mark must be described in a way that fulfils this assumption.

Although the present research focuses on the punctuation system of German, the methods employed here are designed to be applicable to the investigation of other writing systems and to comparative research.
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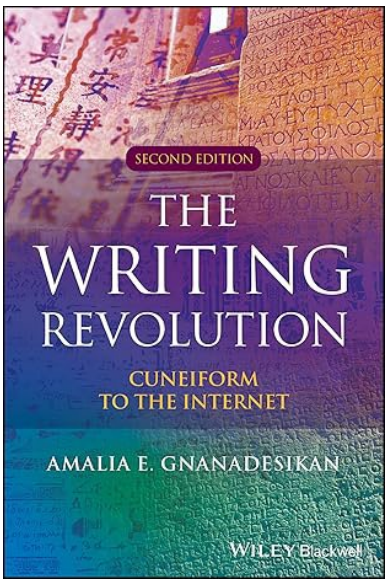

Gnanadesikan, Amalia E. (2025). *The Writing Revolution: Cuneiform to the Internet* (2nd edition). Hoboken, NJ: Wiley-Blackwell. https://doi.org/10.1002/9781394218226

Publisher's website:

https://onlinelibrary.wiley.com/doi/book/10.1002/9781394218226

An exploration of the original Information Technology – the writing systems of history

The Writing Revolution: Cuneiform to the Internet explores the origins, historical development, adaptations, linguistic properties, cultural context, and social impact of one of humankind's greatest inventions: writing systems. Now in its second edition, this popular book traces the history of writing from the earliest proto-cuneiform tablet to the latest AI-generated text. Author Amalia E. Gnanadesikan offers an engaging, highly readable narrative account of how different writing systems originated, how they evolved over time, and how they have represented languages around the world.

Concise, easy-to-digest chapters cover each of the world's major written traditions across time and space, including Egyptian hieroglyphs, Chinese characters, Bronze-Age Linear B, New World writing systems, the Roman alphabet, and many others. Updated throughout, *The Writing Revolution* features new and expanded coverage of the Digital Age, including Unicode, the World Wide Web, emojis, generative AI, and more.

Investigating how the creation of writing made the modern world possible, *The Writing Revolution:*

- Covers the world's major writing systems as well as a selection of lesser-known scripts
- Discusses papyrus, paper, the printing press, digital writing, and other associated technologies
- Features engaging examples throughout, including Egyptian funerary texts, Maya calendars, Arabic calligraphy, Morse code, and modern text messaging
- Interweaves ideas from cultural studies, archaeology, linguistics, literature, anthropology, and information science

The Writing Revolution is a must-read for students of writing systems, linguistics, information science, and intellectual history, as well as general readers with an interest in the history of written language.