Fantastic Letters
Writing in a Fictional World

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Abstract. This paper explores the concept of fictional writing systems over 500 years, from Thomas More's Utopia to modern examples such as J.R.R. Tolkien's Middle Earth and the Klingon script from *Star Trek*. Fictional writing systems are deliberately constructed to enhance world-building in fantasy and science fiction, creating a sense of "otherness" while reflecting familiar linguistic models. Case studies from European and Sino-Japanese traditions, including Ascendance of a Bookworm and video games like *Genshin Impact*, illustrate their role in shaping immersive narratives.

The study contrasts closed fictional systems—fixed symbol sets designed for specific worlds—with open systems, which evolve over time. Examples such as More's Utopian alphabet and Tolkien's Tengwar script show how authors use familiar models to give their worlds credibility. The analysis also touches on more abstract systems like the non-linear ideograms from the short story and film *Arrival*, discussing the challenges of creating open systems and exploring why authors rather opt for closed ones.

Some readers may recall from their teenage years the scene in the *Lord of the Rings* where Gandalf and his companions desperately try to solve a riddle to open the Doors of Durin in their wish to escape from howling wolfs and lurking monsters. They may remember how this riddle is written in mysterious but beautiful letters, shining in the moonlight (Fig. 1).

These intriguing, glittering letters were also my first encounter with a fictional writing system.

Fictional writing systems[1] are constructed writing systems[2] created deliberately for use in a fictional universe. Many writing systems are ultimately constructed, whether we know their creators as in the case of

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1. The terminology is adapted from the Omniglot online encyclopedia of writing systems & languages, cf. https://omniglot.com/conscripts/fictional.htm, consulted on 2022-01-16.

2. Cf. above.

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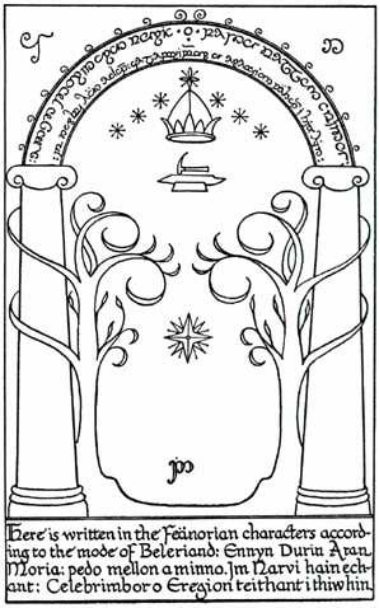


FIGURE 1. "An arch of interlacing letters in an Elvish character," (Tolkien, 2005, p. 305)

Hangul[3] or whether their names have been lost in the mists of time as it is likely the case with the Greek alphabet[4] and perhaps even the Proto-Sinaitic script[5]. Others still were meant by their creators for wider use in the real world, but have failed to catch on.

A fictional writing system on the other hand is intended for use in its fictional universe only. It may or may not be linked to fictional languages which are written in this writing system. This does not exclude that in a small number of cases such as Klingon the writing system has stepped out of its fictional universe and found users in the real world.[6]

3. Hankul / Hangul goes back to a reform initiated by King Seycong and announced in 1443/1444, cf. King (1996, 219ff).

4. Jefferey discusses the indications for the creation of the Greek alphabet around the middle of the 8th century BC, (Jeffery, 1990, 17ff).

5. Chesson et al. (2006, 90ff).

6. Klingon has now a language that you can actually learn on mainstream language learning platforms such as Duolingo, `https://www.duolingo.com/enroll/tlh/en/Learn-Klingon`, consulted on 2022-01-16. The other fictional language on that platform is High Valyrian from George R. R. Martin's *Game of Thrones*, but it actually seems to be written in the Latin script, cf. `https://dothraki.com/2013/05/gryves-se-rina-litse/`, consulted on 2023-06-11.

Cyphers such as the dancing men in Arthur Doyle's eponymous Sherlock Holmes story are even in their fictional universe recognized as such. Therefore, they do not count as fictional writing systems.

In this little study I plan to look at fictional writing systems over a period of roughly 500 years. In doing so I will build on reflections on *Open and closed writing systems*[7] and some musings on the *mystic messages—the magic of writing*[8].

This overview is naturally not complete, the number of fictional writing systems may well count into the hundreds or even thousands.[9] To give nevertheless an overview, I have selected for this abstract five initial examples both in the European and Sino-Japanese traditions, mostly taken from popular culture. I start from the hypothesis that authors may imagine fictional writing systems along the lines of models most familiar to them.

The choice of these books is no coincidence either. All of these examples fall into the categories of fantasy literature or science fiction. As Jameson specifically put it for Thomas More's masterpiece, the "travel narrative marks Utopia as irredeemably other," a conscious "withdrawal or 'delinking' from the empirical and historical world"[10]. All these works can be read as travel narratives—a departure from our day to day world to an imagined other. This other world may, indeed, be radically different, but it may also just be a slightly distorted mirror of our present. The writing systems that their creators give to their worlds are a puzzle piece to create this otherness, often in equal measure foreign and familiar.

1. Writing in Nowhere

The earliest example of a fictional writing system that I am aware of is More's alphabet for the Utopian language. For his groundbreaking *Utopia* More invented the *Utopiensium alphabetum*[11] which is supposed to give more credence to the fictional narrative of More's ideal world.

Having a script marks the Utopian society as a civilization more than on par with the European society of his day. He therefore adds this alphabet to the beginning of his oeuvre alongside a map of the island of

7. (Küster, 2019).

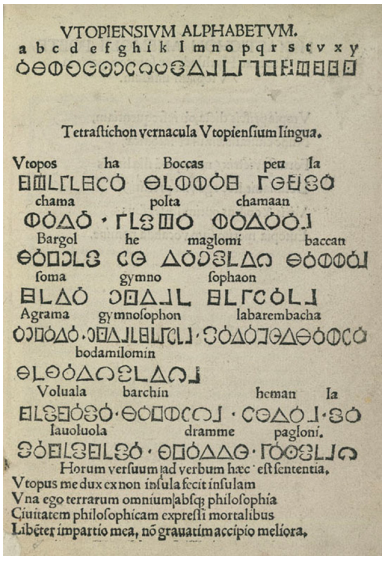
8. (Küster, 2020).

9. To date, to my knowledge no comprehensive overview of fictional writing systems has yet been attempted.

10. (Jameson, 2005, p. 23).

11. Utopia cited after More (2013).

Utopia, creating an unbroken tradition of maps that are associated with fantasy worlds.[12]


VTOPIENSIVM ALPHABETVM.

a b c d e f g h i k l m n o p q r s t v x y

Tetraſtichon vernacula Vtopienſium lingua.

Vtopos ha Boceas peu la

chama polta chamaan

Bargol he maglomi baccan

ſoma gymno ſophaon

Agrama gymnoſophon labarembacha

bodamilomin

Voluala barchin heman la

Iauoluola dramme pagloni.

Horum verſuum ad verbum hæc eſt ſententia,

Vtopus me dux ex non inſula fecit inſulam

Vna ego terrarum omnium abſq; philoſophia

Ciuitatem philoſophicam expreſſi mortalibus

Libẽter impartio mea, nõ grauatim accipio meliora,

FIGURE 2. (More, 2013, p. 5)

As this illustration shows, the Utopian alphabet is actually the Latin alphabet in disguise. Structurally it maps to the Latin alphabet as it was used in More's time. This is not necessarily a drawback in the humanist worldview, in which the Latin language was held up as an example to emulate. In the shapes of the letters, however, he opts for a logical geometric structure—first a circle with a stroke upwards which then turns by 90 degrees to create the elements of b etc. This is in line with More's idea of an alphabet that within his fictional world's chronology was given to the Utopian people by their first ruler, king Utopos.

2. Hebrew in Middle Earth

The next specimen follows well over four hundred years later, and it is the one we have already encountered at the beginning of this article. Perhaps the single person most famous for having invented writing systems is J.R.R. Tolkien. His fascination for writing systems long predates

12. Thomas More actually invented the rudiments of the language to go along with his fictional alphabet.

the *Lord of the Ring*, the work for which he is best known. However, it is the Lord of the Rings through which his writing systems gained fame.

Tolkien was a linguist and intimately aware of everything around real-life languages and writing systems with a specific focus on Germanic languages and writing systems. Also his fictional languages evolved over time, and hence he conceived various stages of development for their respective writing systems.

Tolkien described the most important aspects of the writing and spelling of the languages of Middle Earth—the core of his fictional universe—in an annex to his *Lord of the Rings* trilogy.[13] All of Tolkien's writing systems are closed, but not all of them are alphabets. The Fëanorian letters of the Tengwar script are descripted as "a system of consonantal signs, of similar shapes and style, which could be adapted at choice or convenience to represent the consonants of languages observed"[14]. They are essentially ordered phonetically, much like Japanese kana. In contrast to More's Latin based alphabet, however, Tolkien chose a much more sophisticated approach, making the Elves write in an abjad[15] built around a rigorous phonetic model (Fig. 3).

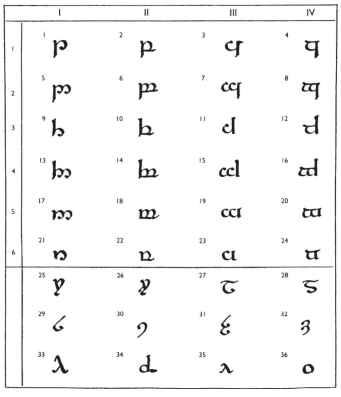


FIGURE 3. "The Tengwar," (Tolkien, 2005, p. 1119)

On the substance, Tolkien's motivation for his choices were likely similar to that of More, though. The also deeply Catholic Tolkien envisaged his Elves to be pupils of the gods, angel-like beings. Hebrew is in

13. (Tolkien, 2005, Annex E).
14. (ibid., p. 1117).
15. (Daniels and Bright, 1996, p. xxxix).

the Kabbalah the language and the writing system of God and angels.[16] Giving the Elves a structurally similar writing system thus transports the same sublime message as More's Latin-inspired alphabet—a writing system close to perfection.

This model could, as Tolkien notes, be adapted to any target language that is being written in the Tengwar writing systems. Much like vocalisation marks in Hebrew and Arabic, so-called tehtar could be used to express vowels in Tengwar if needed. The following extract gives an idea of Tolkien's level of precision:

> *The vowels* were in many modes represented by *tehtar*, usually set above a consonantal letter. In languages such as Quenya, in which most words ended in a vowel, the *tehta* was placed above the preceding consonant; in those such as Sindarin, in which most words ended in a consonant, it was placed above the following consonant [...] (Tolkien, 2005, p. 1120)

For the purposes of this abstract I will not deal with the other writing systems that Tolkien has invented, e.g., Cirth, the alphabet of the Dwarves, clearly inspired by runes and as such also containing letters for vowels.

3. Closed Writing Among the Stars

The next writing system follows just a good decade later, though it may feel much longer—the Klingon language and writing system that was invented for the Star Trek franchise. It is the fictional language that has probably passed furthest into real life.

Klingon is both the language and the script used by one of the main races in the Star Trek universe. The canonical definition of Klingon is Marc Okrand's *Klingon Dictionary*.[17] The language of this warlike people is said to be highly guttural, designed to sound rough and unfriendly.

Strangely, no official version of the complete writing system exists, though fans have constructed one based on footing shown in the various films of the Star Trek franchise (Fig. 4).

Each character represents exactly one sound, making this an example of a perfectly phonetic writing system. This equally applies to its canonical transcription into Latin letters, which also the Klingon Dictionary applies.

16. Cf. Küster (2020) for a more detailed discussion.
17. (Okrand, 1992).

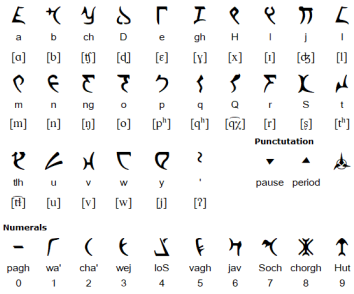


FIGURE 4. https://www.omniglot.com/conscripts/klingon.htm, consulted on 2022-01-15.

4. A Novel All About Writing

The three examples so far are all closed writing systems, but they also all stem from the Angloamerican sphere. To broaden this picture, the paper will now look into examples from Eastern modern popular culture. Miya Kazuki's Japanese light novel series 本好きの下剋上～ 司書になるためには手段を選んでいられません～, translated into English as *Ascendance of a Bookworm*, is probably as close to an grammatological novel as one could imagine.[18] The heroine of the story, Urano Motosu, is an obsessive book lover—that is actually the literal meaning of 本好き—about to realise her life's dream to become a librarian.

Urano dies in an earthquake when she's crushed to death by her own immense collection of books, and then finds herself reincarnated as Myne, a sickly five-year old girl, with her memories of her past life intact. However, her family in this late mediaeval, vaguely European fantasy setting lives very much down the social ladder. While her parents deeply care for her, books are out of their reach, both economically and educationally. Writing is something her father, a town guard, only masters to a quite limited degree.

Our heroine is thereby put into a difficult position. Her one passion in life, books, is inaccessible to her. She attempts techniques she remembers from her voracious reading in her past life—she tries her hand at fashioning papyrus, clay tablets and mokkan (with an explicit reference to the Chinese Yellow River culture) as she has remembered from her lessons about the origins of writing. However neither of these approaches flies. Her next attempt—not evident for a 5 year old girl—aims even higher: recreating paper to make writing generally more accessi-

18. Since Kazuki's novel is not as widely known as the previous examples, I will go in a bit more detail here already in the abstract.

ble to the populace. She deliberately wants to usher in the Gutenberg revolution (下剋上 could be translated as insurrection).

While this may be interesting for the series' reader, and a good introduction for children on the origins of writing, none of this is directly relevant to this study. However, another aspect is: Myne remembers the Japanese writing system with which she has grown up in her previous life, but as a five-year-old girl she obviously does not yet know the writing system used in her new fictional world. Fortunately for her, one of her father's comrades also works as the guard's scribe and volunteers to teach her the letters using a stone slate, the only writing material accessible to a normal citizen in this world.

We never see the full writing system in action, but the illustrated light novel gives us a clear idea of how this writing system is supposed to work. The girl's first encounter with writing is actually her own name: "Otto wrote my name, Myne, at the top of the slate before setting down the slate pen and a cloth"[19].

Myne's name in the Katakana spelling of the original Japanese edition, マイン (ma-i-n), has just three characters, whereas the illustration clearly shows four as you would expect for phonetic writing (though the letters seem to correspond to the phonetic rendering m-a-i-n rather than to the English spelling). In other words, the author imagines her heroine's name to be spelled alphabetically. Myne herself muses on the nature of the alphabet which Otto is teaching her:

> This world's writing system was similar to the English alphabet. There were no syllabaries like hiragana, nor logograms like kanji. The letters themselves determined the sound and meaning of words. Spelling was everything[20].

So even though the author is perfectly aware of the nature of writing systems and writes herself in Japanese, she still chooses to give this world a closed, alphabetic writing system. On one hand, this may seem natural, given the story's late medieval, European setting. On the other hand, she would have been free to fashion any writing system had she wanted.

5. Minting Money

The second case pivots to the gaming world, focusing on a commercially successful computer game created by the Chinese company miHoYo. Computer games, and in particular role playing games, live of

19. (Kazuki, 2019, p. 88).
20. (ibid., 113f).

FIGURE 5. Myne writing her name, (Kazuki, 2019, p. 89).

the player's immersion into the fictional universe they are supposed to inhabit. Players should navigate the world, interact with people and possibly other players and for this they need a believable description of the world. In Mèmeteau's words, they need "cette dimension mythologique exportable à tout jeu qui implique un personnage"[21].

There are many computer games to choose from for this study—the Hylian scripts from *The Legend of Zelda* would come to mind, as would be Dovahzul from *The Elder Scrolls*. I want to look here specifically at a fictional universe from a Chinese creator that is still easily accessible and popular in the West. Genshin impact, which came out first in 2020 and has grossed $2 billion in its first year, is such an example.

The game incorporates multiple writing systems, with one being particularly prominent. It features so far imagined regions, loosely modelled on a medieval Germany, China, Japan, and the orient, with plans for additional countries in development.

21. (Mèmeteau, 2014, p. 165).

The one figured in the first screenshot is supposed to be the one of Khaenri'ah, a civilisation that was said to be destroyed five hundred years prior to this fictional universe's present—ever since Tolkien, at least, fictional writing systems can also help to evoke an (equally invented) past, giving further depth to the universe (Fig. 6).

FIGURE 6. Screenshot taken from the gameplay.

While miHoYo, the Chinese company behind the game, has to my knowledge not released a comprehensive documentation on the Teyvat language and its writing system, the community has reconstituted the underlying alphabet from the many text samples shown in the gameplay (Fig. 7).

FIGURE 7. https://genshin-impact.fandom.com/wiki/Teyvat_Language, consulted on 2022-01-15.

Much like More's *Utopiensium alphabetum*, the denizens of Teyvat write in an alphabet that reflects the English one, this time in a quite literal

sense. The shapes of its letters seem inspired by a mirrored version of Fraktur. Structurally, it is a full bijection to the English alphabet.

Again, like Miya Kazuki, miHoYo, though being Chinese, chose to make the characters of their world write in a number of closed writing systems.

6. Open Writing From Outer Space?[22]

The linguistic and graphematic conceptualisation presented in the film "Arrival" explores language and writing systems. It dissects the intriguing idea of a simultaneous, non-linear form of communication, while acknowledging its impracticality in real or imagined writing systems.

The exploration of cinematic and literary narrative through the lens of linguistics reveals novel perspectives and potential challenges to conventional understanding. The film was directed by Denis Villeneuve and premiered in Cannes in 2016.

The protagonist, Louise, is a linguist and (much like Myne in Kazuki's light novel) very much aware of the theory of writing systems, offering a self-referential element to the discourse. Louise, along with a physicist companion, encounters extraterrestrial lifeforms in a tightly controlled setting. These alien beings exhibit symmetry, bearing seven limbs, and they evidently occupy a non-linear, non-sequential reality.

The alien creatures use a distinct mode of communication, composed of circular sentences, which are true ideograms or semasiograms. Each ideogram, symmetrically arranged, forms an integral part of a larger whole, analyzed extensively by Louise and her associates (Fig. 8).

For the film only about forty such logograms were actually produced. This highly constrained grammar can hardly express the full gamut of human—or alien—language.

"Arrival" is based on the short story "Story of Your Life"[23], authored by second-generation American writer Ted Chiang. It showcases the profound possibilities of literature, as evidenced by its Nebula Award in 2000. Chiang's Chinese heritage, apparent in his name, lends an intriguing backdrop to the narrative. The story is actually more explicit in the theory of writing. The heptapods are said to utilize a semasiographic writing system. This system imparts meaning independently of speech and is adapted for species possessing simultaneous modes of consciousness, in which the concepts of past, present, and future are synchronous.

22. I would like to thank the anonymous reviewer for directing me to 'Arrival', which I had not been aware of before.

23. (Chiang, 2016).

FIGURE 8. https://www.youtube.com/watch?v=r8nTifCIr0c, position 7:24, consulted on 2023-06-23.

This groundbreaking idea, while fascinating, is a "linguistic warp drive". Warp drives, which are a common trope in science fiction and theoretically enable spacecraft to exceed the speed of light, provide a convenient literary device, but unfortunately clash with the known laws of physics. Similarly, the writing system presented in these narratives, despite its conceptual intrigue, is not realistically plausible, either in real or speculative linguistics. Nonetheless, it serves as an engaging model, forcing us to question and reflect upon the fundamental nature of writing. Despite its inherent implausibility, the concept and its resultant discussion enrich our understanding of language and writing.

7. Conclusions

Except for Chiang's semasiograms all examples of created writing systems that we have seen are closed. I am inclined to think that this is not a coincidence. There is certainly a pragmatic aspect to this decision—conceiving a writing system that is essentially a mirror of the Latin or English one is by far the easiest way forward, and for the shallow methodology of Genshin impact it realises just that right mix of slightly obscured familiarity that can capture its players.

However, such an argument does not apply in equal measure to a erudite linguist such as Tolkien nor to a very self-aware author like Kazuki. I believe that there is a more fundamental reason: Open writing systems cannot be created, they can only evolve.

Whereas a closed writing system has a limited number of signs—even if, as in the case of Hangul, this number may be quite significant —, an open writing system can and must be extended by its users over time. Even the open writing system that is growing under our very eyes—a writing system based on emojis[24]—is not a constructed writing system. It brings together in one place—Unicode/ISO/IEC 10646—characters from many different sources that can be used to encode even complex full literary works[25].

For closed writing systems these observations put a question mark behind Daniels' apodictic statement that the "normal way for a society to acquire its own script is by evolving, adopting, or adopting an existing writing system"[26]. Constructed closed writing systems are a fixture in fantasy—but many closed writing systems now in use were likely equally constructed at one point in time. Open writing systems, instead, have their own temporality inscribed into them.

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24. (Benenson, 2015).
25. (Melville, 2010).
26. (Daniels, 1996, p. 579).

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