Alternative Typographic #Histories

*Futures *Universe

A collection of research produced during the Alternative Typographic Histories course, conducted in the summer of 2023 @ the School for Poetic Computation. Edited by Hind Al Saad + Levi Hammett.

An xLab publication.

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Throughout its history the formal evolution of written language has been driven by the technolgy used to render that language, from cuneiform to stone-carved roman capitals, and up to letterpress and pixels. In the last century, this phenomenon has accelerated rapidly with typography adapting to new display possibilities, such as segmented LED displays in early electronics to more contemporary storage and rendering standards such as postscript.

The locality of these innovations have been primarily situated in the west where the Latin typographic script is the predominant form of written language. The opportunities presented by these technologies generated significant pressure for alternative scripts, such as written Arabic, to conform to the formal constraints of these Latin based technologies, which in some cases have undermined the traditional formal structures of the scripts.

This zine collects and archives the research and work produced by the participants of *Alternative Typographic Histories*, a 10-week class taught by *Levi Hammet* and *Hind Al Saad* at the *School for Poetic Computation*. The research investigates the relationship between technology and language by inverting the inherited constraints of Western centric technologies, re-examining the evolutionary paths non Latin scripts, like Arabic, could have taken to create new structures and machines that center these languages. The course imagines new forms and artifacts by speculating on alternative typographic histories and giving space for these connected scripts' diverse and rich forms and stories to emerge.

How Typographic Technology Evolved through Baybayin in a Parallel Universe

Diana Kris Navarro

A typewriter in an alternate universe. It is mechanically almost the same system as a Latin typewriter in our universe. With a couple of key differences:

Baybayin keys. Each key is stamped with a baybayin syllabic* character. Since baybayin has a smaller set of characters there is no need for "shift" key. **Baybayin is a syllabic script. Where each symbol represents a syllable. For example D represents the sound "da".*

Kudlits. Seen on the bottom row of this typewriter are the kudlits. Kudlits are symbols that represent what to do with the vowel of the syllabic character (fig 1). The mechanism of the kudlit keys are what we know in this universe as *dead letter keys*. These are keystrokes that do not advance the carriage as regular keystrokes do. So one would type the kudlit and then type one of the foundational characters.

Punctuation. A full stop is two straight lines. A brief pause is one straight line. Quotations are the same as in our world. But their question mark is said to have evolved from the word *tanong* meaning *question* in tagalog. Scholars believe that early scribes used the *ta* to denote a question. Thus taking it's shape from ᜆ to provide emphasis to a sentence.

Fig 1. Kudlits: Vowel Symbols.

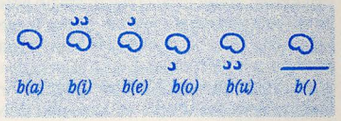
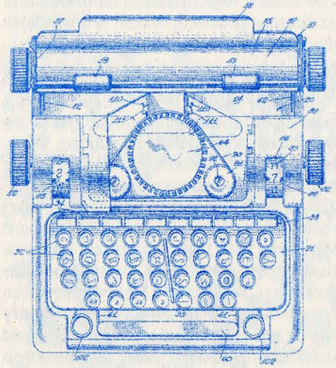


Fig 2. Speculative Baybayin Mechanical Keys on "Sweeney, J. L. Bates, Harry. (1941). Typewriting Machine. US Patent NO. 2,252,652."



A keyboard in an alternate universe. Vowels are modified by kudlits, so the typing flow is very different than in our world. In the context of Baybayin script, the mechanism for modifying vowel sounds on a keyboard is implemented using a *vowel modifier* key. This modifier key functions similarly to the *shift* key but is specific to vowel characters in Baybayin. When you hold down the *e* vowel key or the *i* vowel key in combination with a consonant, it would alter the pronunciation of the consonant vowel combination. For example: Holding down the *e* vowel key and pressing *ba* would result in *be*. Holding down the *i* vowel key and pressing *sa* would result in *si*.

Fig 3. Speculative Baybayin Keyboard on Apple Macintosh.

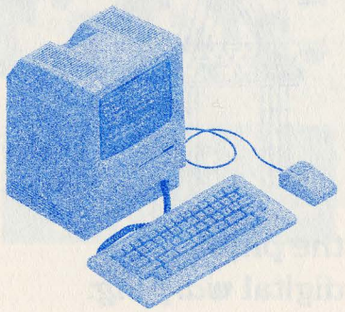
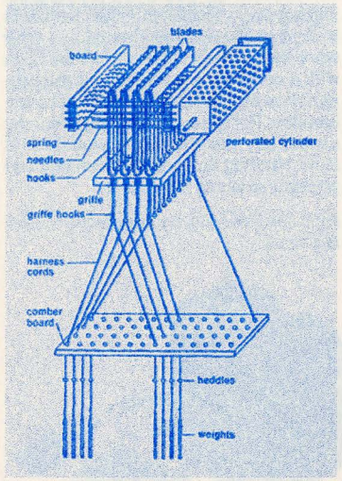


Fig 1. Diagram of the top attachment of the Jacquard Loom. Perforated cynlinder shows a stack of punch cards that are fed into the machine to automate the process. Image from The Project Gutenberg EBook of The Jacquard Machine Analyzed and Explained, by E.A. Posselt.



the physical + digital *warping*: parallels of poetics in *weaving* + computation

Eileen Ahn

Before typeface families were named on screens, scripts were woven, sewn, and embroidered for identification, storytelling, and artistic expression. A laborious and endearing practice, textile is a medium that offers an exceptionally honest output.

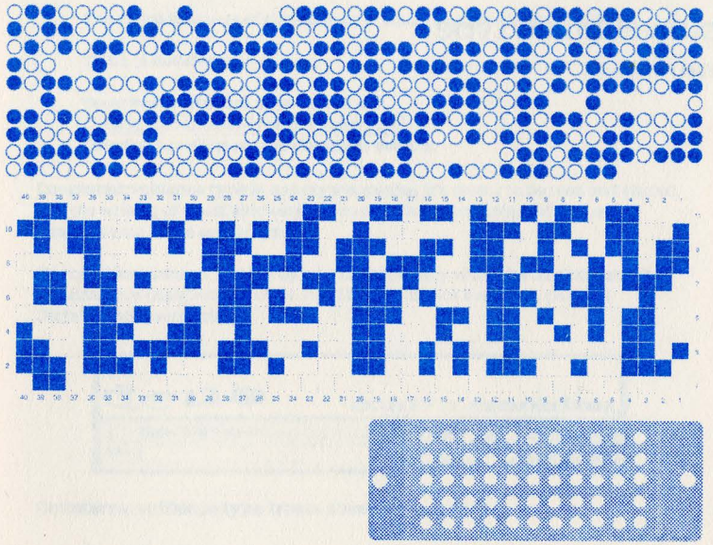
Modern day, working with digital patterns to map my textile projects, I wondered how digital media and computers revolutionized modern pattern making. While learning about text on textiles, I found close parallels between weaving and computation in their mechanics and poetics, even their skills and manual dexterity. Jacquard Weaving (1801) is a method on the loom that helps automate the weaving process through punch cards, a binary instruction on whether to lift or lower the keys. Binary inputs and punch card systems influenced the development of early computation to propel innovation towards complex modern machines as we know it — a bridge of unlikely dualities.

Combining the symbiotic relationship of textiles and computation, I wished to explore the data of language to create a physical output of the stored data that is not visible to the eye in the process of Jacquard Weaving. Here, I have written lines of poetry, then translated them into binary strings (in ASCII) representing each letter. The binary poem is rendered as a *punch card* pattern that can be used to produce a physical textile, a tangible manifestation of poetic verse. Data interwoven with physicality is a process that offers a nonlinear jump through time — warping the learnings of 19th-century methodology with modern computation, wefting how we read text on the screen or on paper as symbols, numbers, patterns, imagery, poetry, resistance, as creativity... all bringing new meaning and language to light.

Fig 2. Poem line: "a filled vessel nourishes its insides before others" with open circle as 0 and filled circle as 1. The missing gaps represent open circle to distinguish the space between words (space = 00100000).

Fig 3. Poem inputted as a pattern in stitchfiddle on a 40x11 grid.

Fig 4. Image of a Jacquard Loom punch card from the Science Museum



Possibilities of *+bs+nc+* and *3xc3$$* in counter - surveillance type

Ellen Perleberg

من يقرأ كلامك؟

Countersurveillance type is excessive.

The visual language of surveillance is banal, simplified, respectable :)

THUS (a manifesto)

Countersurveillance type stands out.
Countersurveillance type embraces noise.
Countersurveillance type threatens empire.

Countersurveillance type is not cryptography. It's meant to be read and shared. It is the writing of whistleblowers, of canaries in the coal mine, of the people already living in the apocalypse.

The question, instead, is "read by whom?" especially when the machine and the algorithm are designed by power. Read by whom? Not everyone, perhaps. Certainly not every thing.

Countersurveillance type trusts absence.

C0unters*rv**llance type r*members. It embr*ces m*tat*xtuality and r*f*r*nce.
كسنا ندون نعاط من هل. ممكننا أن نعمل دلك مره أحرى.
N0body asks y0u any qu*stions when y0u say y0u're an acc**ntant.

Countersurveillance type is made possible by its faith in the _____/reader. The writer/_____ does not run from a lacuna. The _____/reader stays one step ahead of the machine, as the surveilled always have. The writer/_____ becomes engineer, oracle, and archivist, all for the sake of the words.

أكتب للسماوات ولا للدنيا

Fig 1. A Manifesto.

Dotless Arabic was generated using dotless.app + the Captcha image was designed with fake-captcha.com

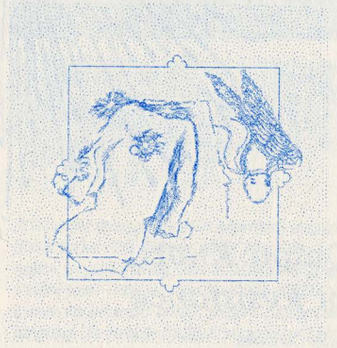
divine reality + *peri* + *dreams* = seyfulmaliq modular typeface

Haider Mukhit

Seyfulmaliq and Badrigüljamal is a love dastan (poem) that has an adaptation in Kazakh language (originating from Persianate folklore).

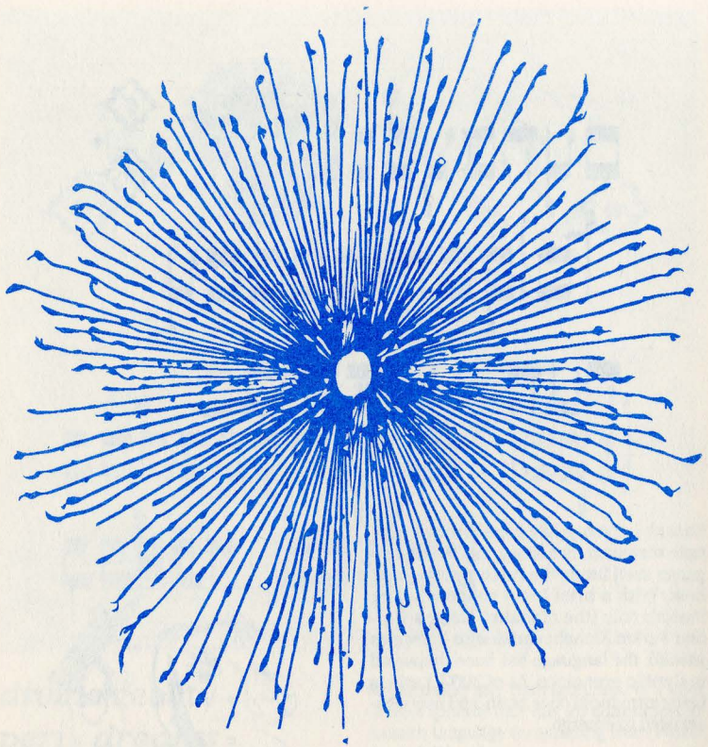
**translation of the sentence: 'the Prince's prattle smooth and sugar honey sweet, a light ray as if from full moon playing on his face'. This excerpt is from a stanza in the poem that talks about Seyfulmaliq's beauty.*

Kazakh language has gone through multiple scripts in its history, the Turkic language itself fitting the Perso-Arabic script best. With a brief Latin chapter before Stalin's rule (the alphabet being a Unified Turkic Alphabet otherwise known as *yanalif*), the language has been displayed in Cyrillic ever since. As of 2007, Latin is being introduced once again, and new visuals need to emerge.



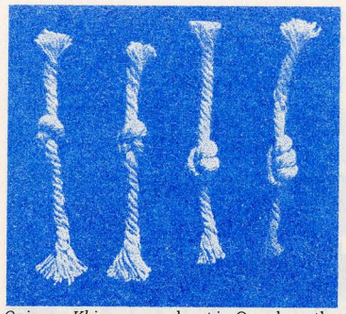
The excerpt from Seyfulmaliq below is presented with a segmented type design, the segments of which are meant to reflect the main premises of the story. Seyfulmaliq is primarily about the experience of falling in love with a Divine Creature, which then makes one closer to divinity as well.

This segmented type is meant to capture both Latin and Perso-Arabic scripts for Kazakh lan-guage and its digital design, something that is not yet explored or exists as majority of typefaces and keyboards only use Cyrillic for Kazakh. In the future I would like to add a Perso-Arabic version of this type using the script that Kazakh diasporas use in Central Asia called 'töte jazu' (developed by Ahmet Baytursınulı in the 1920s).



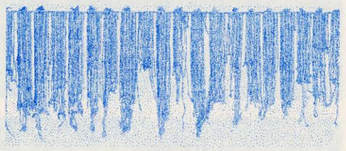
Quipu: *Knots of Resistance*

Hugo Gonzalez



Quipu or *Khipu* means knot in Quechua, the indigenous language of the Inca Civilization. Presently, Quechua has as many as 8.5 million speakers spreading from the Andes Region of Peru to Chile, and Argentina. Quipu is a series of ropes and knots used primarily to keep track of administrative information like populations, resources, and trade in the Inca's growing empire. But historians have reason to believe there also existed narrative quipu, which has been thought to include stories, historical events, and even poetry. Despite this, we have very little knowledge about this ancient writing system, due to the destruction brought by Spanish conquest. Contemporary artists like Cecilia Vicuña use quipu to tell stories of pain, migration, and personal genealogies. I'm interested in the potential quipu has as a tool in continuing a legacy of indigenous resistance, in subverting culturally dominant Latin based type by giving new life to a script lost to colonization.

Quipo images sourced from: Museo Nacional de Arqueología, Antropología e Historia del Perú, Centro Cultural Inca Garcilaso, AMANO Lima, Brooklyn Museum, The British Museum.



Within the context of Latin America's wrought history and rich culture, what place do alternative ways of writing have in acknowledging a violent past? How can we subvert the established hierarchy inherent in our present-day written language to include indigenous wisdom? How can we tie together our individual genealogies to imagine a collective future?

Majority < Minority: *individualized language for a modern world*

Jay Mahabal

In 2022 the New York City MTA (subway) released posters advertising a new payment system that automatically gave people free rides after a set number of paid rides. The branding was bold and had a distinctive brand. Most importantly, it was produced in languages other than English.

This inclusivity spoke to the incredible diversity of languages spoken in the New York City metro and yet still felt incomplete. These posters were printed. What if we weren't constrained by physical restrictions?

This project explores a speculative version of New York where these posters are designed for *smaller* languages. In this digital world why do we continue to only acknowledge *dominant* languages? What might the world look like if all languages were able to be supported?

All of these languages are spoken in New York according to the 2020 US Census but none of these languages are part of the 10 Designated Citywide Languages (Spanish, Chinese, Russian, Bengali, Haitian, Korean, Arabic, Urdu, French, and Polish) that signage and communication are required by law to be in.

Fig 1. This is the route of the F train, the train I take almost every day and where I first saw these posters. The train goes through three boroughs of New York, which have a combined population of six million people and where hundreds of languages are spoken."

Fig 2-9. Series of speculative subway posters designed for "smaller" languages spoken within New York: Tigrinya, Sinhala, Armenian, Marathi, Urdu, Lao, and Yiddish.

Fig 10. English version of the subway poster.

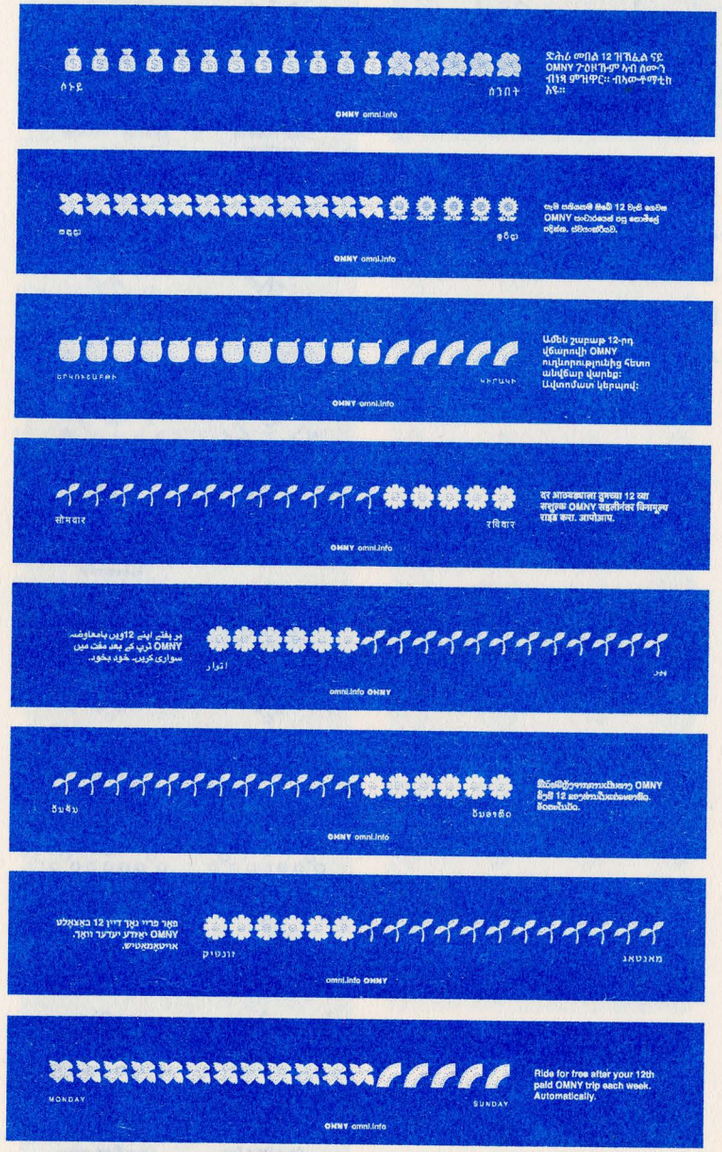
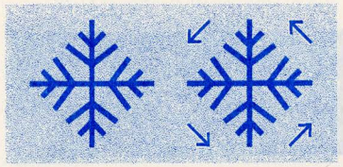


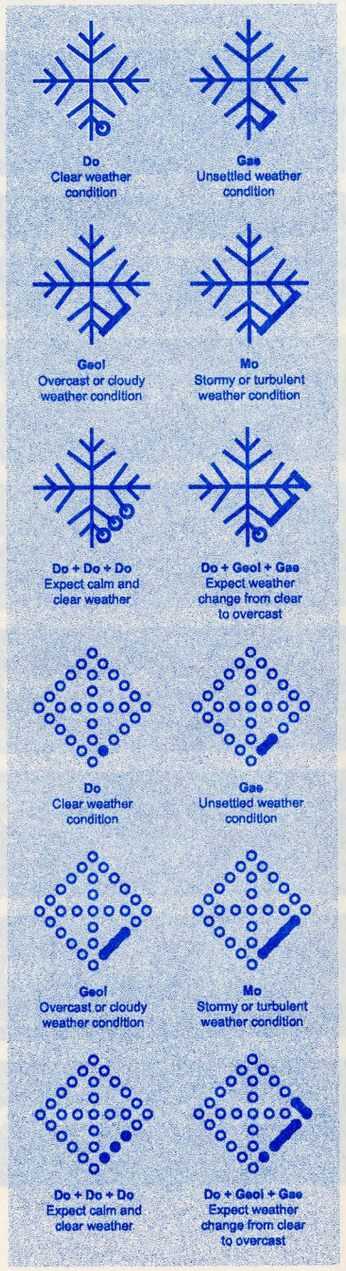
Fig 1. Mal starts from the bottom and rotates counterclockwise, except when it can take shortcuts at certain stations.



Yut-jeom + *Hangeul* principles = a modular system for *Jeju-sareum*

Ji Woo Kim

Fig 2. Modular system that has distinct markings that adjust based on the mal's movement.

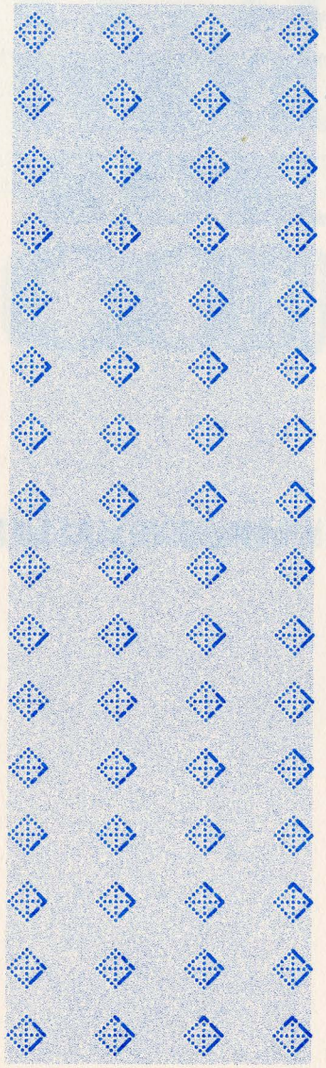


This project draws inspiration from exploring Jeju Island's cultural heritage and the resilience of *Jeju-sareum*, who have confronted and overcome the challenges of natural disasters.

It all began with research into Jeju's culture, focusing on the distinctive practice of *yutnori*. This practice sets itself apart from mainland Korea's traditions due to the unique design of the *malpan* and its significant role in funerals and *janchi*. It hints at a connection between shamanism and the practice of *yutnori* on the island. This intriguing link, coupled with the limited context surrounding its origin, sparked the development of a hypothetical scenario where Jeju's *yut-jeom*, a divination practice, could have been utilized by *haenyeo* or sailors to predict weather patterns and provide precautionary insights.

Taking this hypothetical scenario back to the mid-15th century Korea, a question emerges: How might the principles of Hangeul have influenced the recording of *yut-jeom* if it were documented? The project introduces a modular system combining concepts from *yutnori* with Hangeul's syllable block, incorporating distinct markings (dots and lines) that adjust based on the movement of the *mal*. The dot draws visual inspiration from *arae-a*, a vowel sound lost in standard Korean but exists in *Jejueo*. Each outcome corresponds to a specific weather condition, revealing a divination when three outcomes are combined.

Fig 3. Sixty-four possible divinations.



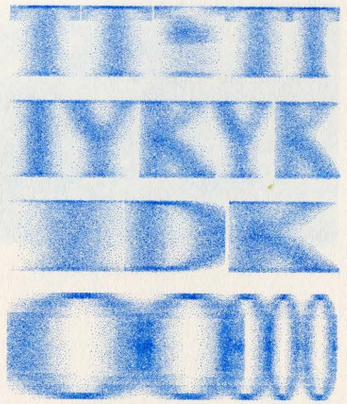
Stretch *Marks*

Heya Kwon

Our words, *like everything else in the world*, are impermanent. Spoken words vanish into the air as they are uttered, oral stories change with each retelling. Hand written words bear the weight of ephemerality as ink fades, handwriting becomes messy, or the writing's medium – paper, stone, et cetera – naturally degrades over time.

This transient nature of words may seem less obvious in digital writing. Typed words appear eternal, with each letter seemingly identical to the last. However, the cyber domain, too, is not immune to decay. Computer hardwares can fail, softwares can become obsolete, and data storage can run out, leaving once-meaningful sentences lost in a sea of obsolescence. Furthermore, cultural context continuously reshapes the meanings of *words* – slangs, acronyms, and even official vocabularies, adopting and stretching them to accommodate new nuances. Afterall, digital space is an extension of the physical space, and neither can escape the marks of time and entropy.

"Stretch Marks" is a series of typographic designs that explores the materiality of digitally typed texts and their gradual degradation. The designs are a result of an interactive p5.js code where letters are stretched and thus distorted according to the duration of the key press. Additionally, as the code uses the previous iteration of that letter as the new source, each repetition of a key causes the letter to further lose resolution and clarity. The texts that result from this process have been heavily disfigured and pixelated almost to – but not quite yet at – the point of illegibility.



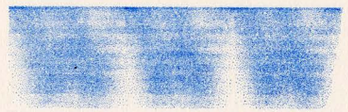
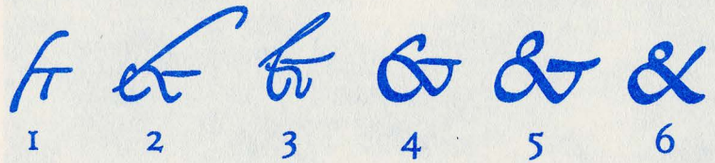


Fig 1. Evolution of the ampersand. Alatius, CC BY-SA 3.0 via Wikimedia Commons.



Is *lyricism* possible in a letter?

Keith S. Wilson

One common definition of a poem is the fewest words with the most meaning. This privileges a certain kind of poem, but even as a poet who can sometimes be very long-winded, it feels right to me. It reminds me of my favorite book title: Gwendolyn Brooks' Blacks, which is perfect. It's beautiful, succinct, and tells you both who she is writing about and who she is writing for—it is the first poem of the book, and colors the cover and everything inside. It is not only a monostich (a single line poem), it is also a poem consisting of just a single word.

Maybe all my work is a kind of ongoing pursuit I have of wonder. Here, I wondered if poetry was possible with just a single character.

The ligature feels to me poetic, perhaps because they're often so concerned with beauty and with brevity. See how the a and e become the æ. But are they meaningful?

I think that they are. Æ doesn't necessarily have any particular meaning—not in English—but the evolution of the word et (Latin for *and*) became the ampersand, & poets love the ampersand.

But beyond that, there are other histories of meaningful ligatures. My favorite is the way in Chinese writing, since many written words contain repeated characters within themselves, ligatures of entire sayings (chéngyu) can be created by overlapping those repeated characters. These ligatures are not readable as the entire saying entirely on their own, but are a kind of reference to that saying through brevity and a shared cultural understanding—that, I think, is another definition of a poem.

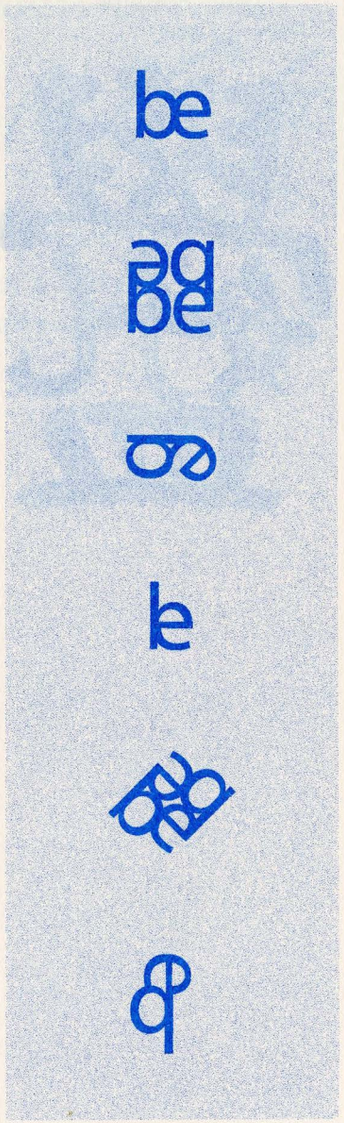
I experimented by creating my own ligatures of the most repeated words in the English language, words which tend to be important and abundant and yet which are often ironically difficult to define. Take the top 10 most used words: the, of, and, a, to, in, is, you, that, it.

Since many of these words have only two letters, they make for easy ligatures (ligatures are often of two letters). I was inspired by the ampersand, and chose to create versions of each ligature that became expressive in their own right so that each word I made a ligature from had multiple versions.

This might be an exercise in design but not poetry, or meaning, or history. For a ligature to really be born, there needs to be a reason for it to be born. So I imagined an alternate history, a kind of reversal of Afrofuturism, in which poems existed in the past that used these ligatures in much the same ways as chéngyu. I imagined what would happen if, over time, these ligatures were all that remained of those poems. Something like the shorthand people who love each other have in which simple words, or no words at all, express entire lived worlds of meaning. That too is poetry.

Fig 2. A Chinese chéngyu that reads: "to be as studious as Confucius and Mencius." Public domain, via Wikimedia Commons.

Fig 3. Ligature: be (on existence)



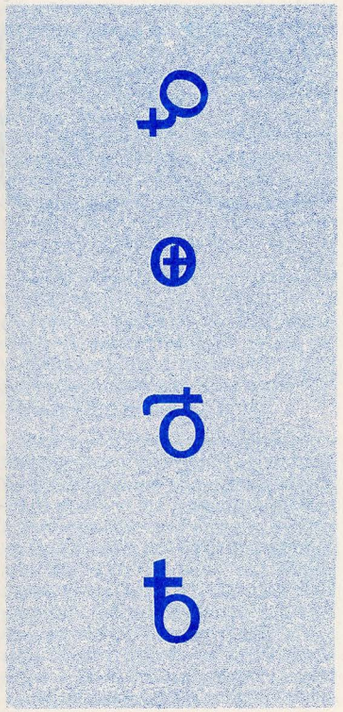
if i am weak let me be
the sand that abets exhaustion

let me become the sky that has been
through it all: every color

i am saying i want to remember you
without remembering—the way the forest

depends on the trees

Fig 4. Ligature: to (to toasts)



to pac:
rose & concrete

to whom it may concern
(am i my brother's keeper)

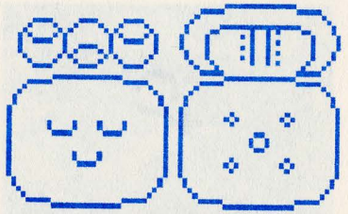
to spiggots
(bad luck)

to humor
(black comedy)

chan tz'ihb *(tiny writing)*: a font for re-encoding written mayan histories

Nick S

Fig 1. chan tz'ihb (tiny writing) in Mayan.



In the late 20th century, in the early days of computing, many writing systems – from Latin to Chinese – went through a process of forced simplification. Through this process, the fundamental characteristics of type in each language were questioned in order to reduce their respective characters to their minimum identifiable traits. Languages with the greatest complexity, such as Chinese and Arabic under-went the greatest scrutiny in order to fit their complex forms into limited spaces with small memory footprints (fig 2).

Mayan is a family of languages spoken by 7 million people today. However, in the mid 16th century, a library of 27 mayan works were put to the torch, ending the widespread usage of the mayan writing system as it was known - and largely limiting the language to Latin writing.

Around the time that most contemporary languages were undergoing digitization, Written Mayan was undergoing rebirth. While much of the language's printed matter were destroyed, an influx of interest from Russian and German academics after World War II, paired with fundamental knowledge from indigenous Maya people sparked a nearly complete, revived understanding of the writing system. Many material survived in the form of thousands of stone, wood, and some paper artifacts - giving the language a large body of work to draw from.

Fig 2. Example of an early Arabic pixel font developed in the 80s. Screenshot of the "Horizons" introductory program running on an Arabic ROM on a Sinclair ZX Spectrum.

Chan Tz'ihb (lit. *tiny writing-thing* or *tiny*

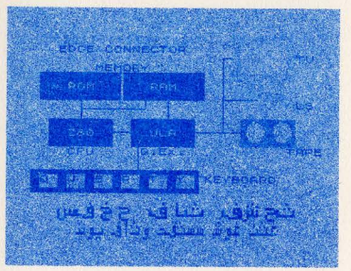
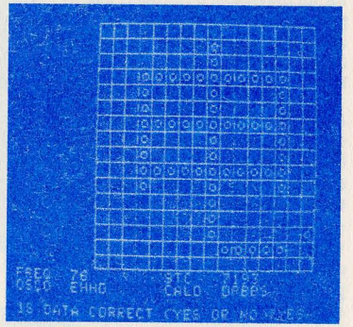


Fig 2. Early Chinese pixel fonts developed in the 70s and 80s. A photograph of the Sinotype III monitor shows the Gridmaster program and the digitization process of the Chinese character 电 (dian, electricity). From the Louis Rosenblum collection, Stanford University library special collections.



text) attempts to imagine an alternate history where Written Mayan prevailed through the centuries, and had to undergo a sort of forced simplification to meet the computational limits of the mid to late 20th century. It aims not to only imagine a fictional Mayan past, but to draw a roadmap for its inevitable continued use by Maya people in the future. It is a pixel font that aims to fit all Mayan glyphs into a less than 32x32 pixel frame, which are then combined into larger compound glyphs.

As Mayan is a 3,000 year old language, its style varies widely from dynasty to dynasty. Chan Tz'ihb doesn't attempt to recreate exact texts as they were written, but rather to encode distilled versions of a few of the approximately 1,200 logograms used in Written Mayan into their core ideographic concepts. Chan Tz'ihb features columnar, partial, and full-width glyphs with 2 pixels of tracking between each major glyph. It features multiple rotations of each glyph which can be composed to form words.

Fig 3. The sample below is a transcription tracing of the vessel in Fig 4, and below it, the same text written in the Chan Tz'ihb font.

Original chili sauce translation by David Stuart:
"... utz'ihbnajala ... ichil jaya (?) tikuy ..."

"... It was written ... Tikuy's Chili Sauce Container ..."

Fig 4. Late Classic Period Mayan Vessel A.D. 700-800.

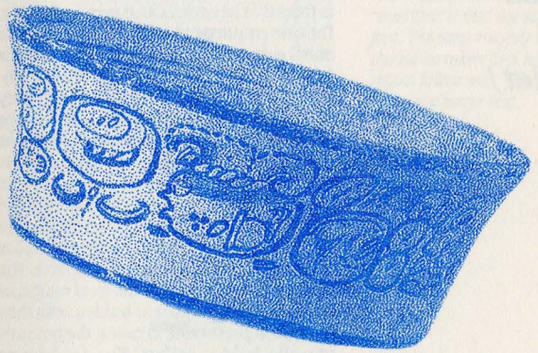
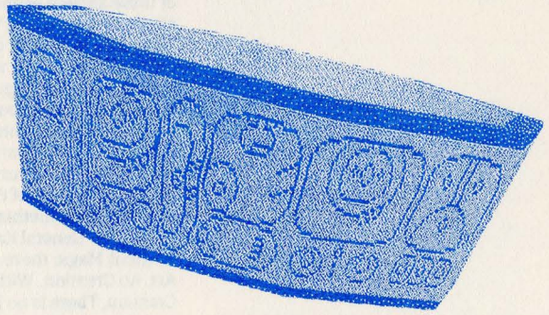


Fig 5. Low poly reproduction of the 1,400-year old vessel.



The General Katadesmos *(a Digital Curse Tablet)*

Primrose Berglund

The relationship between writing and magic is as old as the mechanism itself. To spell, to ensorcel, to curse. The partnership is truly that between Language and Magic, for one requires the other. To speak, to enact communication outside of oneself is to create something (meaning) out of nothing (silence). To write is simply to quantify that relationship into the real. In our age of enlightenment and industrialization we have pushed away from the magical, it is no wonder many anti-capitalists are drawn against this age of "reason" we are forced to inhabit, participate within, and consume the flesh of. Some of the only examples of writing created by a woman from the ancient Greek period is those of magic, of curses. By their inherent hiddenness they have been preserved, in caves, the bottoms of wells, hidden cellars. The experience of these ancient women as an underclass rings through today, we are still fighting "women's work". In digitizing the curse tablet (katadesmos) we may reconstruct those ancient feelings—magic carved into stone—and remind ourselves that there is an inherent enchantment to writing. To segmentize, to industrialize for mass display is to pull the curse into the modern realm, into our age of Production. To create is to invoke Something out of Nothing, a lesson the "General Katadesmos" teaches. Without Magic there is no Language, no Art, no Creation. Without Language, Art, Creation, There is no Humanity.

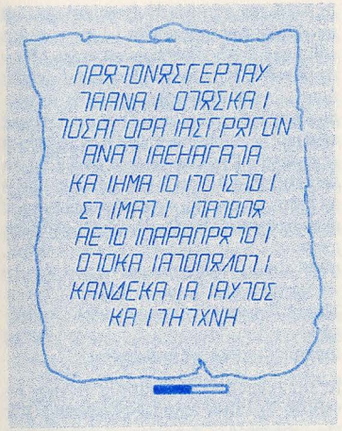
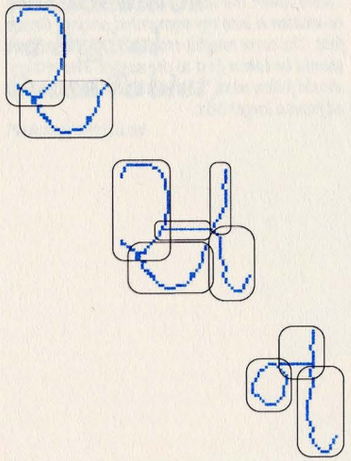


Fig 1. This image contains a flattening of a printing of a curse tablet found in a well in Attica. I have taken the text of this curse tablet, and re-written it into my segmented ancient Greek font. The curse roughly translates to "These men should be taken first to the eagles. The settlers should follow next." I believe this to be fragmented from a larger text.

Fig 1. Gujarati R, S, and N character stylized based on the figures in the paper.



Improvisatory Gujarati: *Reading Forward*

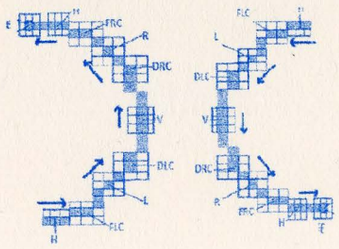
Sarah Zarina Hakani

In 2018, my granddad left us and also left us a post-it note that was to serve as his will. On it, he had misspelled many of our names, left 'worthless' objects for us that none of us knew existed, and most humorously, included only one of his five kids and seven of his eighteen grandkids and great grandkids. I've always wondered when he wrote it and if he expected us to find it as funny as we did, even during a time of immense grief. In a family whose archives are as unkempt as the departures of elders, playfulness is a generative gift where what was doesn't need to be all of what is. There's freedom in these imperfect, incomplete written remnants that leave (almost too much) room for imagination.

In Tim Ingold's The textility of making, he writes, "[painter Paul Klee] insisted that the processes of genesis and growth that give rise to forms... are more important than the forms themselves. 'Form is the end, death', [Paul] wrote. 'Form-giving is life'." My granddad wrote his will when he existed. We encountered it once he didn't. Maybe he laughed when he wrote it. We momentarily broke out of our mourning when we read it. The post-it didn't die with him.

After my granddad passed, I began to learn Gujarati script to continue to engage in *form-giving* with artifacts that he created/consumed and left behind. While doing so, I found a legal document from when my illiterate grandma was alive where she wrote her name, and I noticed that she spelled it wrong. I laughed again. She set me free from ever thinking about her as one concrete thing who was represented in one concrete manner. Finding this felt like the post-it note all over again and solidified my quest of looking beyond the role of (textual) accuracy in remembrance.

Fig 2-3. from High-Level Shape Representation in Printed Gujarati (2017) by Mukesh M. Goswami and Suman K. Mitra.



In Alternative Typographic Histories, we learned how scripts have evolved through the materials and forms that they are constructed and communicated in. From stone-carving to letterpress to monospace and beyond, what was asked of letters continued to shift, and they morphed to adapt. Learning about this, I felt energized by the possibility and knew I wanted to find pockets where language could still grow. I started my research with Gujarati and Arabic since I learned both scripts as an adult (Gujarati because I could previously only speak it, and Arabic because I learned to read the Qur'an). I came across handwritten character recognition (HCR) research and similar frameworks of pattern-matching using neural networks as a potential framework for their evolution.

For the record, I am not interested in AI. However, the metaphors present in training large language models and character recognition research, specifically by Gujarati scholars, has been a salient entry-point in extending the form itself of Gujarati characters to their various components. I am not interested in AI potentially being able to infinitely generate things from partial archives in the ways that imagination might. I am not interested in letters or words evolving as a result of AI, but rather as an input. Most specifically, I wondered if and how letters would need to morph to adapt, once again, to be usable and legible to a computer.

In my research of how a letter may need to evolve in order to denote a pattern and serve as an input, I came across High-Level Shape Representation in Printed Gujarati Characters by Goswami and Mitra. I was moved by the care granted to every element of each character and I thought it was worth exploring. It led me to more questions than anything else, so to answer them, I went to a place that was ripe for emergent discovery, my grandma's 'misspelled' name and put those characters through the steps they describe to make it computer-readable.

Ingold writes, "It may look as though the carpenter is merely reproducing the same gesture, over and over again, or that sawing is just the repetitive execution of a single step in the operational sequence... For the carpenter, [following] the material and [responding] to its singularities, sawing is a matter of engaging in a continuous variation of variables, instead of extracting constants from them." With handwritten character recognition research, I worried what the desire to distill into a pattern might do to erase the *continuous variation of variables* that serves as the foundation to my curiosities. What might computer vision might render lifeless through extraction that human vision might have animated?

The weight of this question became evident when I interviewed Beth Fileti, a type designer and overall stellar thinker, human, mother, teacher, and friend. She told me about a project she did for Mallory's Army, a foundation in New Jersey started by parents of an eleven year old named Mallory who took her own life after being bullied. Beth was tasked with digitizing her handwriting and creating a font. In the process of doing so, she observed that Mallory gave a back-slant to some of the characters, but inconsistently. When Beth pointed out this discrepancy and asked Mallory's parents about it, she gestured and asked, "Did she sometimes write from this angle?" Her mother remembered this detail about Mallory that was forgotten, which was only apparent because there was an irregularity. But this 'error' could have very easily been lost in translation between human and computer, through embarking on a journey of standardization required to create a font.

I find myself at a standstill with these curiosities. On one hand, I am intrigued by the possibility of characters being morphed through being so carefully investigated by handwritten character recognition algorithms. Alternatively, I'm terrified of what computer vision may render lifeless. But Tim Ingold writes, "The last line to have been drawn is never the last line that could have been drawn: even that final line is in itself open to a present that bars the act of closure." With that in mind, I think back to the post-it note, and the gravity of the standstill shifts from quicksand to a brief, proceed-with-caution light.

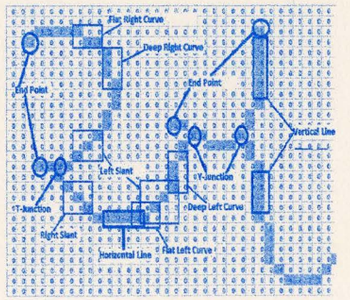
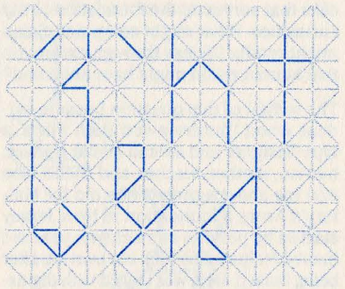


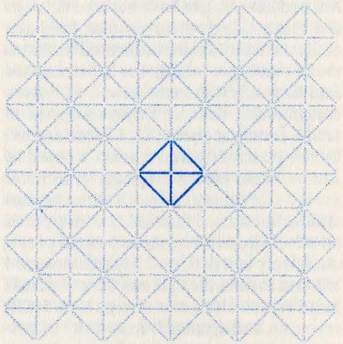
fig 1. "t'lete fidel", translates to alphabet pattern.



ጥለት-ፊደል:
a tessellated web for *digital ge'ez*

thummim mekuria

fig 2. the underlying structure of the web.



ጥለት-ፊደል (romanized: t'lete fidel // loosely means *alphabet pattern*) is a modular web display for ge'ez *(the writing system used for several languages in ethiopia and eritrea, such amharic, tigrinya, and guraginya).*

the basis for ጥለት-ፊደል is a unit of 8 strokes–and when this unit is tessellated, the web emerges (fig.2). this web is complex enough to allow writing all of the ge'ez consonants (fig.3) and their corresponding vowel families (fig.4).

the letters written on this web aren't necessarily monospaced, nor do they always line up neatly with each other (fig.5). this intentionally destructs the notion of what written language 'should' look like and frees the fidel to play across the screen.

fig 3. the consonants in ge'ez.

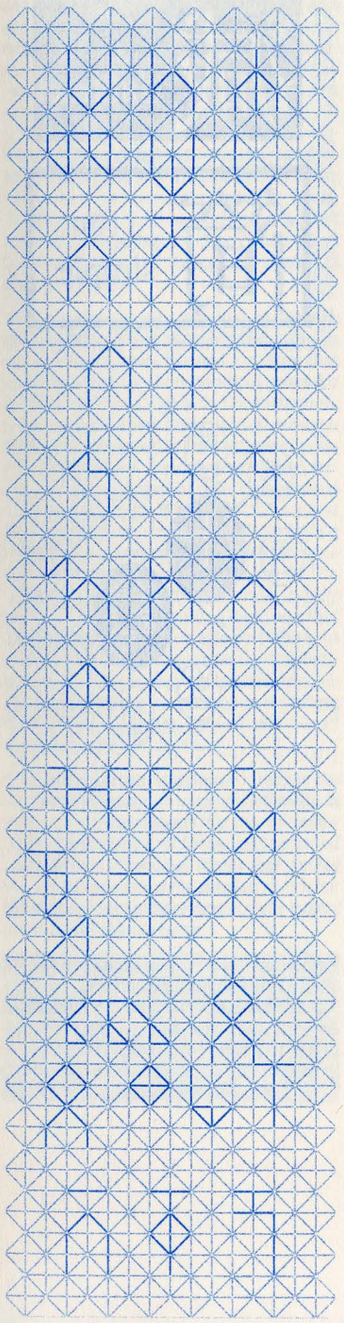
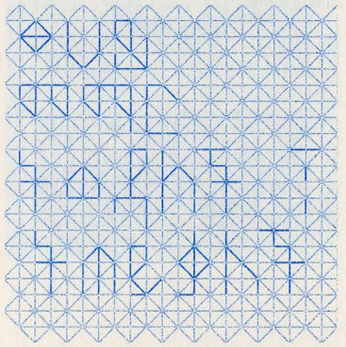


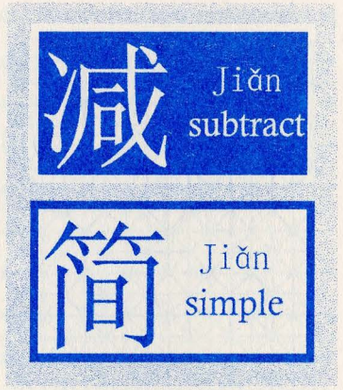
fig 4. vowel family of U, first consonant in ge'ez.

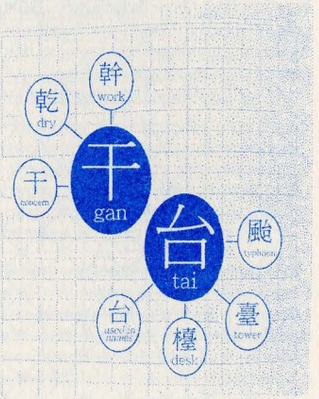
fig 5. a line from the theme song of a children's tv show; about a puppet giraffe who loves to learn the alphabet.



Whxt kxnf xf *xnfxrmxtxxn* xs *lxst* whxn yxx *sxmplxfy* lxngxxgx?

Tinhua Hsia



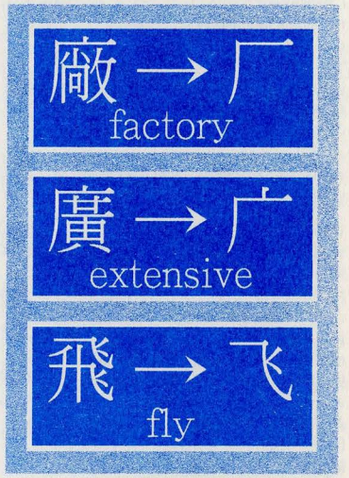


The start of the 20th Century was a turbulent time in China. The corrupted and collapsing Qing Dynasty had presided over nearly 100 years of defeats by industrialized Western nations and Japan. Territory was ceded to foreign powers, and the rest of the country was subject to famines and power struggles between regional strongmen. Chinese people assessed the desperate scenario and saw a feudal society being consumed by powerful outsiders. These frustrations would explode into armed revolution, toppling the Qing Dynasty and followed by a brutal struggle for control of a unified China.

The movement was not just to restore sovereignty, but to save a civilization in crisis. Progressives blamed a culture that had persisted for thou-sands of years for suffocating China's growth. Confucianism, patriarchal values, and colonial concessions were attacked in the burgeoning dissident movement. Among their chosen targets, few were larger than the complicated Chinese language. When the Communist Party declared victory over the Kuomintang in 1949, language reform quickly became the most important discussion in the country. China was 80% illiterate, mostly the poor, and the prevailing logic was that monopolizing literacy allowed elites to control cultural and economic establishments. This atmosphere of massive change allowed proposals as extreme as replacing the Chinese language with a Latin-based system to be considered.

Simplification was systematic - reduce the number of characters in use and total strokes in writing. Some components that shared similar shapes were substituted for one another based on their ease of writing. Words that shared one sound were to use the simplest character, effectively abbreviating or removing the history recorded in each character.

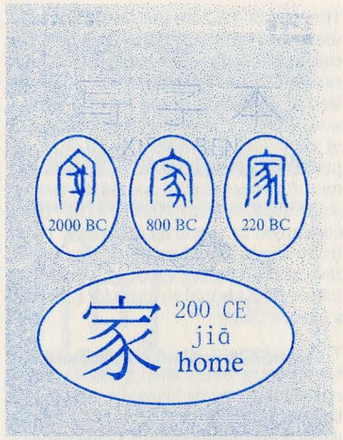
Simpliriction ws systcmtic - rcducc thc numbcr cr chrctcrs in usc nd tctl strckcs in writing. Scmc ccmpcncnts tht shrcd similr shpcs wcrc substitutcd rcr cnc ncthcr bscd cn thcir csc cr writing. Wcrds tht shrcd cnc scund wcrc tc usc thc simplcst chrctcr, crrcctivcly bbrcviting cr rcmcving thc histcry rccrdcd in ccch chcrcctcr.



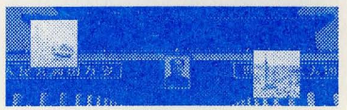
Chinese script is built off of pictograms that first appeared in 2000 BC - it is the oldest writing system still in use today. The script itself has been revered as telling China's history - the character for *home* from before, is a pig under a roof, providing a glimpse into the experiences of the early Chinese. The simplification process removed hundreds of these parts in their pursuit of efficiency.

When the first set of simplified characters was standardized in 1955, the People's Republic of China celebrated victory over expired tradition, while Mao's enemies railed against its desecration. It's easy to follow their argument - the bedrock of Chinese identity was being dismantled by hot-headed revolutionaries who had lost their respect for history. A friend of my mother's said, "In that time, you'd meet people in school whose last name had not been simplified, we envied them."

It's worth noting now that not every simplification was a novel creation. One of the committee's directives was "to find, not make." The majority of simplified characters are derived from the cursive Chinese taught in calligraphy. Many simplified characters actually predated their later, traditional forms, and others were shorthand glyphs in use for thousands of years as well. In this way, the simplified set provides a new record of natural writing evolution that had already taken place.



'Losing' information wasn't an unfortunate consequence for the language reformers, it was basically one of their goals. The impact is tangible. By 1960 China had reached 67% literacy - even with an unprecedented population boom. The use of simplified characters now ends at China's borders, which are in flux again - this time due to an ambitious policy of expansion. Hong Kong and Taiwan retain use of traditional characters, and are aware of their precarious situation. If China was to bring these two territories under complete control, traditional characters could join their predecessors as an obsolete milestone in the development of Chinese script.



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***Hind Al Saad**, a principal of xLab, is a computational artist exploring automation systems within digital code and analog printmaking to generate emergent graphical forms.*

*Part of the Institute for Creative Research @ VCUArts Qatar, **xLab (studio for) {new = making + computation}** conducts research converging art → culture ← science. xLab operates as an agile studio incl. artists + designers + technologists, developing systems, machines & artifacts that integrate computation w/ craft. Works range from electronic art → curricula → theory → typefaces → fabrication techniques → hardware & software based tools to extend creative practice. xLab's mission = advancing the discourse between culture ⇄ technology.*

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