Stick to the Script

Orthographies, Fonts and Philosophy

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Most of us create languages for fun.

Few things are more fun than creating a new writing system (Peterson, 2009).

Today: What writing systems exist; how to create them; how to create fonts; other more exciting things.
Some Definitions

- **Orthography**: A language’s writing system (includes punctuation, numbers, etc.).

- **Script**: The system of characters/marks used in an orthography (e.g. the Roman script is used to write English).

- **Romanization**: How one uses the Roman script to write a language whose orthography does not typically use the Roman script.
More Definitions...

- **Phoneme**: A sonic unit utilized by languages, e.g. /x/.
- **Phonetic Symbol**: The phonetic value of a given phoneme, e.g. [x].
- **Grapheme**: A symbol used in an orthography, e.g. <x> or ξ.
Schedule

- Types of Writing Systems
- Orthography Creation
- Font Creation
- Final Thoughts
Writing Systems

- In English, we learn our A, B, C’s.
- In Chinese, a special secondary script is used to teach children how to use the actual Chinese script.
- Why doesn’t everyone just use the Roman alphabet?
Alphabetic Systems

- An alphabetic system assigns glyphs to sounds. In such systems, vowels and consonants are treated equally.
- Spanish: \(<A, a> = /a/, <T, t> = /t/>\)
Abjads

- In abjads, consonants are prominent, and vowels have a somewhat inferior role and are often omitted.

- Arabic: تَتَكَلَّم or تَتَكَلَّم = /tatakalam/
  “you say”
Alphasyllabaries

- In alphasyllabaries, consonants have basic forms, and vowel characters are added to them.

- Hindi: ग /ga/  गू /g/  गी /gi:/  गु /gu/
True Syllabaries

- A true syllabary uses a separate grapheme for each syllable found in the language.

- Japanese: かけきこく
  /ka ke ki ko ku/
Logographic Systems

- A grapheme in a logographic system stands for a word, part of a word, an affix, a concept, or a phoneme string—or a combination of the above.

- Chinese: 西 “village” 金 “gold”
Complex Systems

- A combination of previously listed elements.
- English: lol u r 2 much :) y u eat 7 hot doggz?!?!?!oneoneone!! lrn2eat n00b (>oo)==D<(><)>
Non-Natural Systems

- Why stop there? These are conlangs, after all.

- Sample: \(*$ = /p/; @* = /t/; @$ = /k/; ** = /q/; @@ = /s/; *@ = /z/\.

- Question: * = ? @ = ? $ = ?
Non-Natural Systems 2

- Here’s a graphic example from Trent Pehrson’s Idrani.

- /mas/ (paired with nothing)
- /ka/ (paired with  )
- /tθa/ (paired with  )
- /go/ (paired with  )

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Orthography’s Purpose

- An orthography represents a language graphically, not necessarily a phoneme inventory.
- An orthography is a separate entity.
- Orthography:Language::Language:Thought
Always Remember

“...no writing system is ‘pure’ in the sense that its units are interpreted as linguistic units of one type only: words...syllables or phonemes.” (Coulmas, 2003)
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What to Do First

1. Create a language (or have one in mind).
2. Decide on a basic type (alphabetical, syllabic, abjad, etc.).
3. Decide on a writing implement.
4. Obtain said implement.
What? Why?

- Written scripts weren’t created with computers.
- The writing utensil and the medium (paper, clay, etc.) will shape the system’s creation and its evolution.
A 1337 Example

- teh
- pwn
- !!!111111!oneone1111!

- These examples could never have come to exist without a QWERTY keyboard.
Natural = Simple, Right?

- NO!
- Vietnamese = intolerable. Chinese = insane. Egyptian Hieroglyphic = #@$??%
- Scripts are often simplified over time, but that makes them simpler, NOT simple.
Alphabetic Concerns

- Some writing systems progressive; some frozen.
- English: $<y> = [i], [ɪ], [j], [ə], [æj]$
- Spanish: Spellings change with pronunciation. Yet $[an] = <an>$ or $<han>$ (or $<án>$ or $<hán>$)?
Decisions

- Best Alphabet A: one phonetic feature = one element. (Unnatural.)
- Best Alphabet B: one phonetic sound = one letter. (Unnatural.)
- Best Alphabet C: one phoneme = one letter. (Unnatural [closer].)
What to Do?

- Develop History: More conservative = more English-like alphabet; more innovative = more Spanish-like.
- Borrow an Alphabet: English, Spanish, etc., took and modified the Roman alphabet. Create A for B, use it for C.
Abjadic Concerns

- Words can begin with a vowel in every natural language.
- Arabic solution: Every V-initial word (with a couple narrow exceptions) begins with a glottal stop: `ً ٍ ء`
- Ta da!
Impure Abjads

- A pure abjad has no vowel characters.
- All abjads used today have a way of disambiguating.
- Usually a secondary system.
- The consonants should be the main event.
Adapting Abjads

- Abjads have been adapted to languages that don’t suit them (cf. Farsi).
- Clever tricks: Semi-vowel characters, or characters for foreign sounds = vowel characters in adaptation.
(Alpha)syllabaries

- Most highly specialized; tailor-made for the language.
- Most natural syllabaries ≠ featural.
- Japanese: くすつむふる
  /ku su tu mu hu ru/
Adapting Syllabaries

- Few languages are actually (C)V maximally (even Hawaiian has long vowels).

- Syllabaries may need to handle:
  - Codas (Japanese: ｎ)
  - Long Vowels (Tamil: ொ>ோ, அ>ஆ)
  - Clusters (Hindi: क्+र=क्र)
Logographic Concerns

- Natural Logographic Systems: NOT picture = word.

- Pictures:
  - Can look like things: 🐘 田
  - Can look like nothing: 日 两
  - Can be combinations: 鬼
A Typical Evolution

- Stage 1: Pictures for concrete nouns.
- Stage 2: Combinations/metaphorical extensions for abstract concepts.
- Stage 3: Glyphs reanalyzed; glyphs (or parts of them) stand for sounds or sound sequences.
- Stage 4: No more new glyphs; new words/concepts all combinations of old ones.
- Stage 5: A permanent move away from the logographic system.
Adapting Logographies

- Unless stems are limited, impossible to create a glyph for every word.
- How to handle borrowings?
- Most have “spelling” alphabet.
- Glyphs can be reanalyzed.
Style?

- Good orthography ≠ pretty glyphs.
Nota Bene

- Glyph art less important than the system.
- If the system is interesting, the orthography will look good.
Design Concerns

- Problem with some featural scripts: All characters look alike.
- Natural language scripts differentiate in specific ways.
Schreibgefühl

- Glyphs in a script look/feel like they belong together. How?
  - Line style/width: good; bad
  - Sizing: good; bad
  - Familiar Pieces: good; bad
  - Example: 0 0 Ṣ Ṣ Ṣ 0 0 0
Most Important

- Orthography design ≠ glyph design.
- The system > the glyphs.
- Remember your writing implement, utilize it! Let it speak to you.  
  You’re a punk!
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Not Easy

- And not for everyone.
- Plenty of programs out there: the free, the limited, the ridiculous expensive (cf. FontLab Studio: $649.00!).
- Some basic advice; generally useful.
Some Background

- `.ttf` = TrueType Font (now fairly universal).
- Italics and bold are separate associated fonts; not processes.
- Important: Knowing whether or not one’s program supports Unicode.
Fonts and the West

- Fonts are created using a Western framework.
- I.e. all fonts assume a basic, alphabetic script.
- Glyphs are ISO LATABLE.
- No secret: English > typesetting > typewriters > word processing…
So...Just Alphabets...?

- No!
- The trick: hammering non-linear elements into a linear framework.
- It can be done!
¿Por Ejemplo?

- Toy orthography. Typed: David
How?!

- Your new friends:
  - Copy
  - Paste
  - Empty Color
  - L/R Margins
  - Ascender/Descender
Low Tech

- This all can be done without a lot of font-making knowledge.
- With a little more, all this gets even easier; more precise.
- Lot of other technical issues; come see me later for specific project questions.
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Ideating

- Misconception: Good scripts come from good artists.
- Conlangers are experts at creating systems.
- A good orthography is nothing more than a good system.
Practice Makes Perfect

- Practice!
- (More fun than figuring out relative and subordinate clauses.)

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References


