Stick to the Script

Orthographies, Fonts and Philosophy

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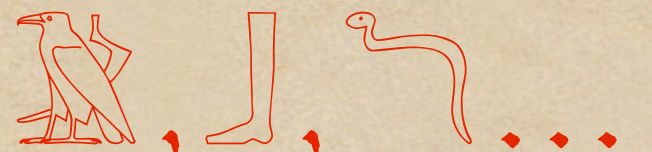
http://dedalvs.com/

A, b, c … 

- 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: تتكلم or تَتَكَلَّم ≈ /tatakalam/ "you say"

Alphasyllabaries

- In alphasyllabaries, consonants have basic forms, and vowel characters are added to them.
- Hindi: ग /ga/ ग् /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: 酉 “village” 金 “gold”

Complex Systems

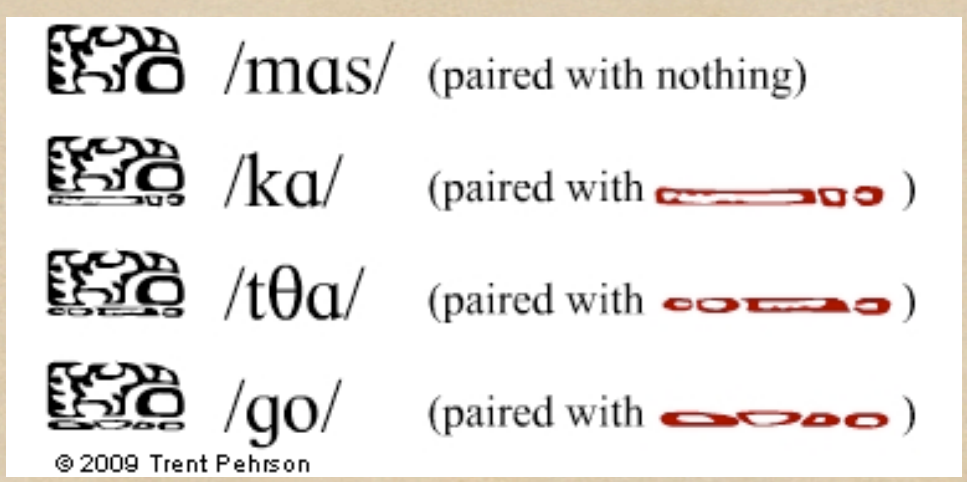
- A combination of previously listed elements.
- English: lol u r 2 much :) y u eat 7 hot doggz!?!1?!oneone!! lrn2eat n00b (>oo)==D<(><)>

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.



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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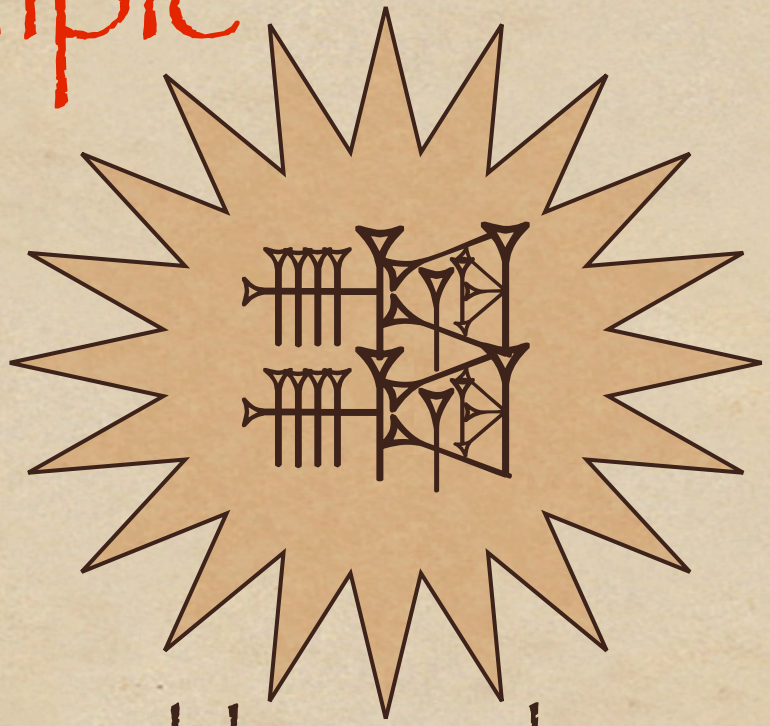
What to Do First

1. Create a language (or have one in mind).
2. Decide on a basic type (alphabetic, 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
- !!1!11!!!!oneone!1!!!
- 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], [ɑj]
- 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: أَ إِ أُ
- Ta da!

Impure Abjads

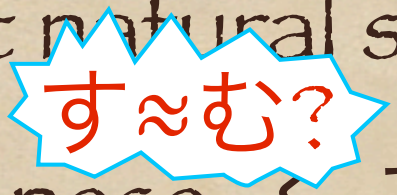
- A pure abjad has no vowel characters.
- All abjads used today have a way of disambiguating.
- Usually a secondary system.
- The consonants should be the main event.

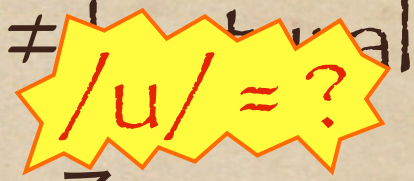
Adapting Abjads

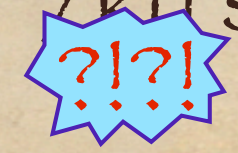
- Abjads have been adapted to languages that don't suit them (cf. Farsi).
- Clever tricks: Semi-vowel characters, or characters for foreign sounds = vowel characters in adaptation.

(Alpha)syllabaries

- Most highly specialized; tailor-made for the language.
- Most natural syllabaries ≠ [illegible]al.
- 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: ん)
  - Long Vowels (Tamil: ஒ>ஓ, 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: 丆 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

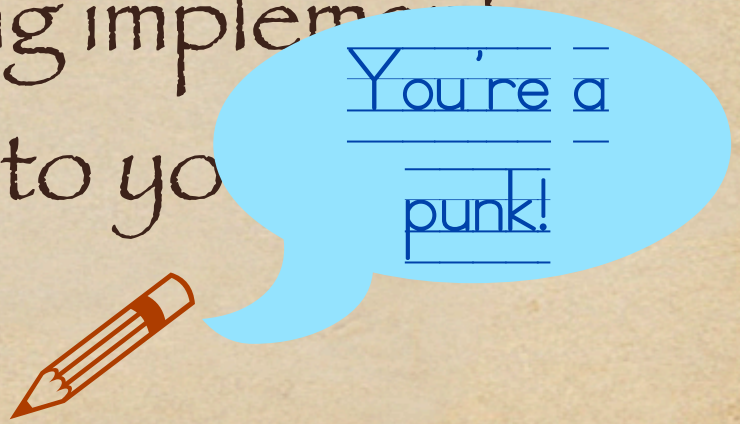
- Problem with some featural scripts:
  All characters look alike.
- Natural language scripts
  differentiate in specific ways.

Schreibgefühl

- Glyphs in a script look/feel like they belong together. How?
  - Line style/width: good; bad
  - Sizing: good; b^a_d
  - Familiar Pieces: good; b  d
- Example: o 0 ɔ ɔ ɔ o o o

Most Important

- Orthography design ≠ glyph design.
- The system > the glyphs.
- Remember your writing implem
  utilize it! Let it speak to yo



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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

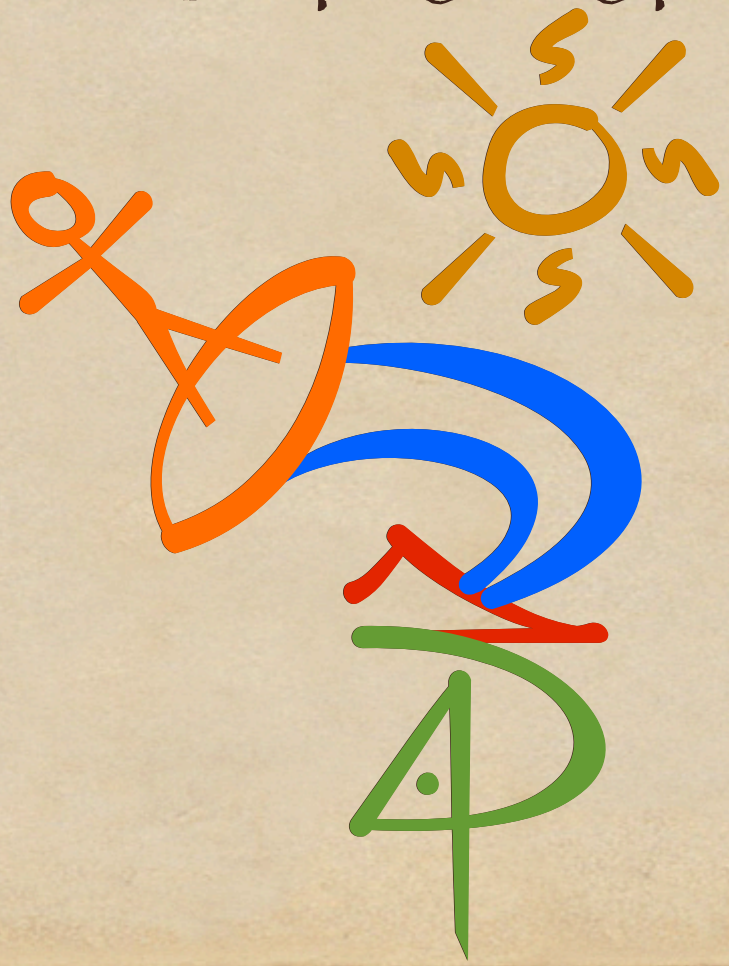
- Fonts are created using a Western framework.
- I.e. all fonts assume a basic, alphabetic script.
- Glyphs are I S O L A T A B L E.
- No secret: English > typesetting > typewriters > word processing…

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
  - Resize
  - 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.)

~:D

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