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TuTh 9:00–10:00 AM
TBD

Writing Systems and Language Conservation

Week 2: The History of Writing, Part 2: The Evolution of Writing

1 Goals for this Week

Here is what we will learn today:

- (1)
 - a. The evolution of the Egyptian Script into the multitude of writing systems we see today
 - b. An overview of the structure of abjads, alphabets, and abugidas.
 - c. The costs and benefits of each of these systems and how they represent language.

2 Abjads: Phoenician, Aramaic, Arabic, and Hebrew

Egyptian Hieroglyphs were unweildy to write, given their intricacy. Many workers in Egypt were familiar with the script enough to recognize some characters, but were not given a formal education. In order to communicate and leave notes regarding construction, many workers would use an informal system, in which a simple to write, or abstracted version of a hieroglyph would represent a single consonantal sound. This allowed easy memorization (fewer consonants than words) and quick writing.

Due to trade between Egypt and Phoenicia (Levant, concentrated in modern day Lebanon), Phoenician traders had contact with this rudimentary version of the hieroglyphs. They were then adopted and changed to fit the Phoenician language (also a Semitic language) by 1050 BCE.

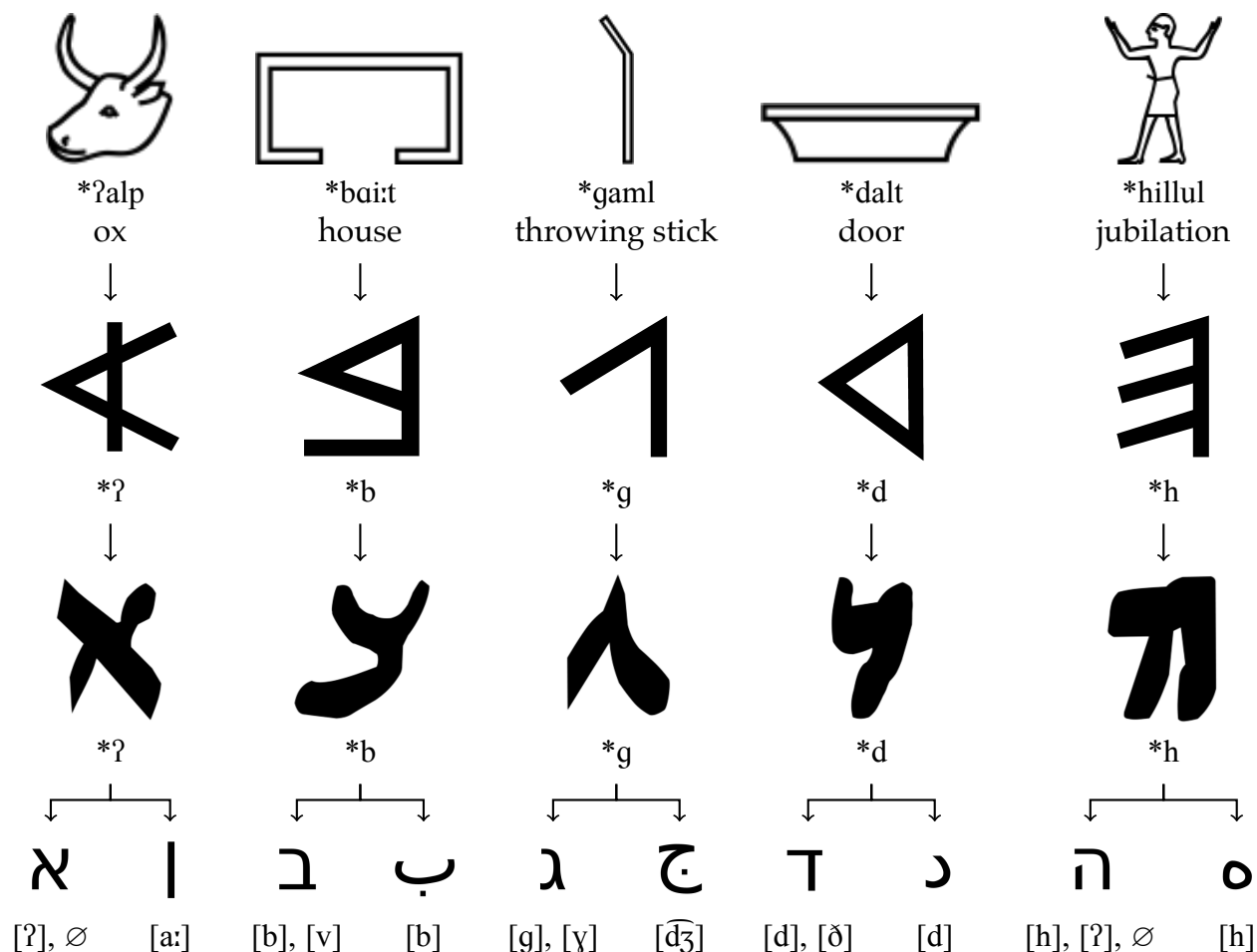


Figure 1: The first five letters of the Phoenician abjad (second row), it's origin in Hieroglyphs (first row), and its adjad descendents in Aramaic (third row), Hebrew (left of last row pairs), and Arabic (right of last row pairs)

All of these scripts constitute instances of an **Abjad**: a writing system in which only consonants are represented, and vowels must be inferred from context.

Abjads are commonly used natively by Semitic languages, which use non-concatenative root and stem morphology (tri-consonantal roots).

Arabic, Hebrew, and modern Aramaic are all considered 'impure' Abjads: they do represent some vowels in the script.

3 Alphabets: Greek, Latin, Cyrillic, and Others

Just as the Phoenicians adopted and modified Egyptian writing for their own purposes, so too did Greek adopt and modify Phoenician writing.

This time, however, only using consonants was insufficient for writing unambiguously in Greek. Some letters which represented sounds in Phoenician which Greek did not have were then used to represent certain vowels in Greek.

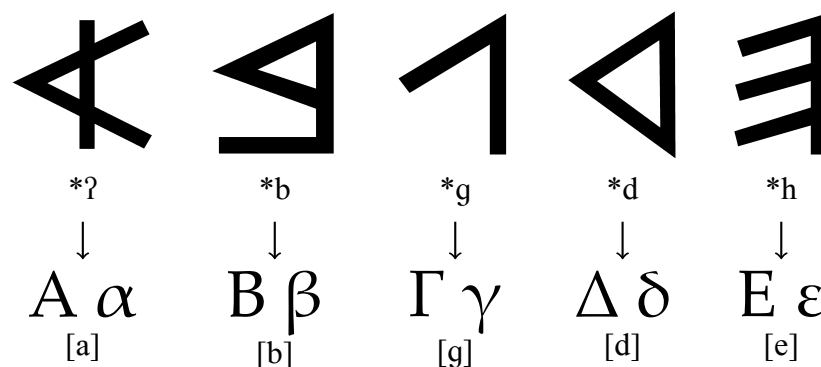


Figure 2: The evolution of the first five letters of the Phoenician script into the Greek alphabet.

Alphabet: A script in which consonants and vowels are both represented with independent signs.

Greek was originally chiseled into stone like its predecessors, but with the invention and promulgation of paper, a tradition of ink-and-paper writing formed. The sharp edges of the script inscribed in stone differed from the gentle flow that a pen and paper provided: using the sharp edges to highlight words in manuscripts became common, and a bicameral system was formed.

Bicameral: A script with two cases (a majuscule and minuscule case), as opposed to a **unicameral** script which has only one case.

When Greek influence spread to much of southern and eastern Europe and was adopted and modified by the Etruscans, who used the Old Italic Script, which was subsequently modified for Latin.

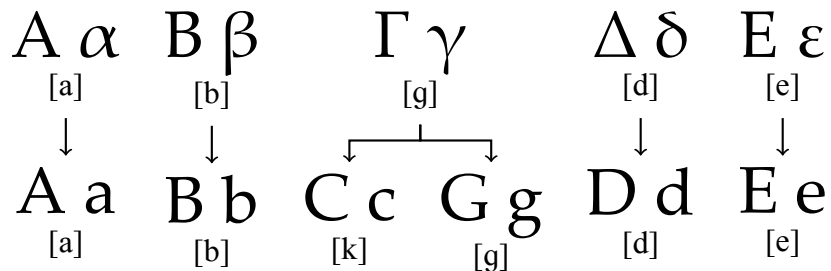


Figure 3: The first five letters of the Greek alphabet in their evolution into Latin

Byzantine missionaries Saints Cyril and Methodius were sent by the Byzantine Emperor to convert the Slavic peoples to Christianity. They invented the Glagolitic script to represent Old Church Slavonic (then the contemporary language). Though this fell out of use after their death, it, along with the Greek alphabet were modified to create the Cyrillic Alphabet.

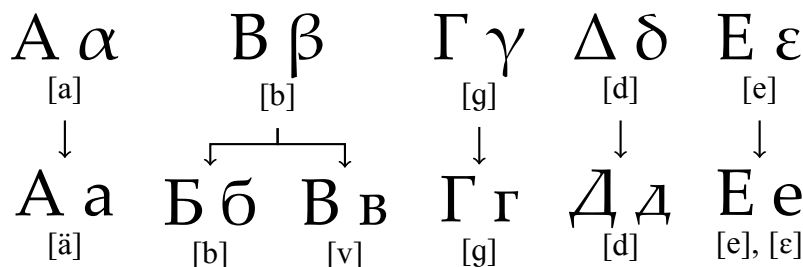


Figure 4: The first five letters of the Greek alphabet in their evolution into Cyrillic

The Greek alphabet also became the basis of other European scripts, such as Gothic, Coptic, Armenian, and Georgian. The Old Italic script used by the Etruscans was not only modified to make Latin, but was also modified by Germanic peoples in the north to use as Runic.

What are the benefits of using an alphabet rather than an abjad? What are the costs?

While there are alphabets (representing both vowels and consonants) and abjads (representing consonants but not vowels), there are no 'reverse abjads', where vowels are represented but not consonants. Why is that? Is it a historical accident or does it say something about language and how we write it down?

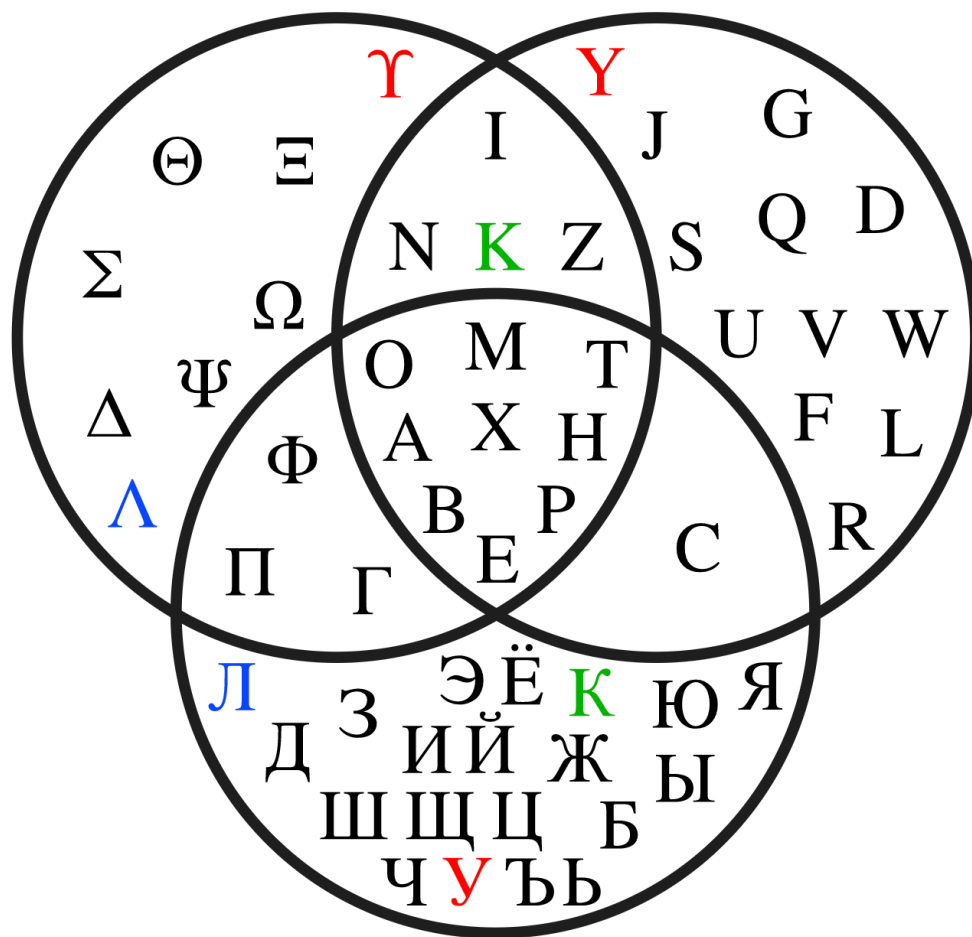


Figure 5: A Comparison of the Greek, Latin, and Cyrillic Alphabets, credit to Tilman Piesk

4 Abugidas: Brahmi, Devanagari, Ge'ez, and More

While alphabets flourished in Europe and abjads in North Africa, Arabia, and the Levant, influence from the Phoenician and Aramaic alphabets moved eastwards as well.

The Brahmi script was modified from Aramaic, and was used to write down Sanskrit, Pali, Prakrit, Kannada, Tamil, Saka, Tocharian, typically through inscription on stone. The script quickly took off and turned into the myriad of writing systems in India, Tibet, and Southeast Asia.

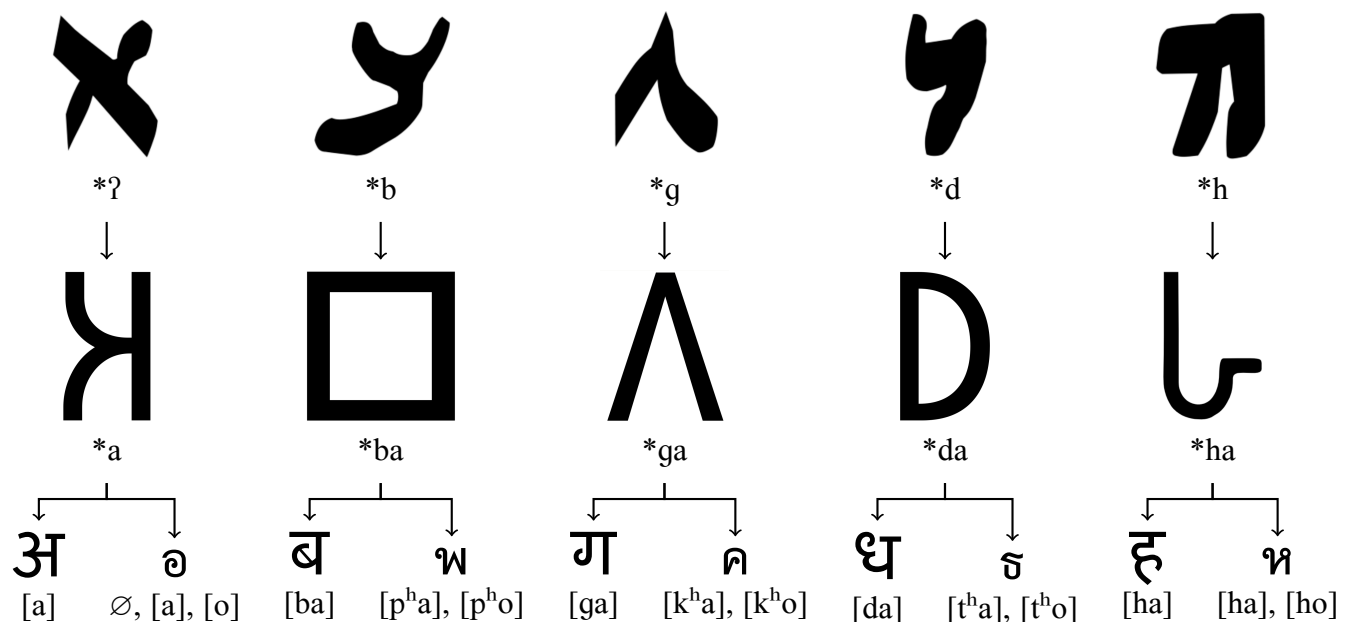


Figure 6: The first five letters of the Aramaic script (first row) and their descendents in Brahmi (second row), and Devanagari and Thai (left and right of each bottom pair, respectively).

These Brahmic scripts are typically divided into Northern Brahmic (Devanagari, Tibetan, Nepalese, Assamese, Gujarati, etc.) and Southern Brahmic (Burmese, Thai, Tamil, Sinhala, Khmer, Balinese, Baybayin, etc.) These scripts make up the bulk of script diversity in the modern world.

All of these systems are instances of an **abugida**: a writing system in which letters represent a consonant and some inherent vowel, whose quality changes through applying diacritical marks.

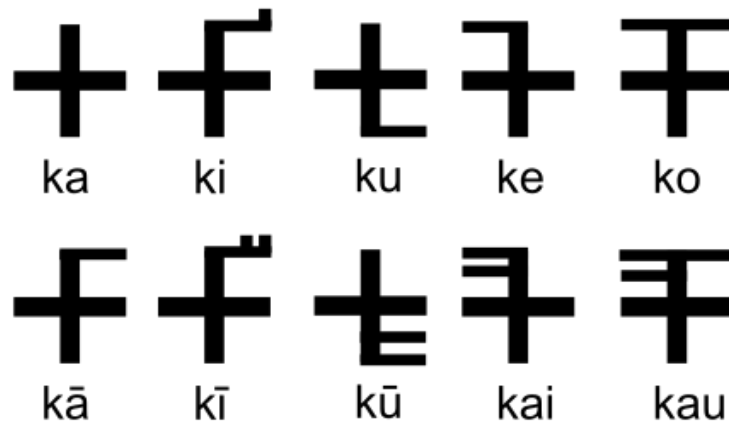


Figure 7: Representation of various vowel diacritics on 'k' in Brahmi Script



Figure 8: Representation of various vowel diacritics on 'k' in Devanagari Script

In addition to the descendants of Brahmi, three other abugidas are well recognized.

Tāna Script (Thaana), is used to write the Maldivian language of the Maldives, and originates from the use of arabic and hindi numerals to represent consonants, with Arabic diacritics marking the vowels.

The Ge'ez abiguda is used to write various languages of Ethiopia and Eritrea, including Amharic, Tigrinya, Guragigna, Bilen, and, Me'en. It is derived from the South Arabian Script, itself derived from Proto-Sinaitic, the precursor to Phoenician.

Canadian Syllabics is a script used to write many North American languages, including Cree, Ojibwe, Inuktitut, Inuinnaqtun, Blackfoot, and Slavey. It was invented by James Evans in 1840 based on Devanagari, but with vowel marking denoted by sign rotation rather than diacritics.

Feature	North Indic	South Indic	Tāna	Ge'ez	Canadian Syl.
Inherent V	[ə], [ɔ], [a], or [o]		None	[ɐ]	N/A
Noninherent V	Independent Diacritic			Fused Diacritic	Rotation
Initial V	Distinct letter	Glottal Stop/Zero Consonant + Diacritic			
Zero V	Diacritic			Same as [i]	Shrunk letter

Figure 9: Comparison of different Abugidas by how they deal with vowel marking

These systems differ in what they consider to be the inherent vowel (the vowel which occurs when non marked by a diacritic), how they mark non-inherent vowels, how they represent initial vowels with no preceding consonant, and how they represent consonants with no vowels (zero vowel, or vowel-killing stroke).

What are the benefits of using an abugida rather than an alphabet or abjad? What are the costs? Why do you think the vowel represented through a diacritic always occurs after the consonant in speech? Why do you think there is such a variety of different abugida scripts in comparison to abjads and alphabets?

Devanagari (Hindi)

हिन्दी विकिपीडिया

Tibetan

ཁྱོད་རྒྱལ་དུས་མཆོད་ཀྱི་སྒྲུབ།

Burmese

ဝိကိပီဒီးယားမှ ကြိုဆိုပါသည်။

Thai

ยินดีต้อนรับสู่วิกิพีเดีย

Tāna (Maldivian)

ބަނޑުބަނޑު ބަނޑުބަނޑު ބަނޑުބަނޑު ބަނޑުބަނޑު

Ge'ez (Amharic)

ወደ ውስጥ ዲያ እንሰጥ ደህና መጡ

Canadian Syllabics (Inuktitut)

◁n▷ᓄᓄΔ< ▷ΔPΛn◁

Figure 10: Various abugidas