Variability of Languages in Time and Space

Lecture IV
Writing Systems

• Variability of writing systems
• Development of writing

Anja Nedoluzhko
Writing

- Writing is not a purer form of language than speech!
- Writing is a system of recording language by means of visible / tactile marks
- Writing is NOT object of linguistics

speech – written text
music – written notes
Words spoken are symbols of affections or impressions of the soul; written words are symbols of words spoken. (Aristotle: Peri Hermeneias)

Language and writing are two distinct systems of signs; the second exists for the sole purpose of representing the first. The linguistic object is not both the written and the spoken forms of words; the spoken form alone constitutes the object. (F. de Saussure: Course in General Linguistics)
Writing systems of the world

semiography (meaning-based writing)

phonography (sound-based writing)
Predecessors of Writing

Things

Wampums (shell beads)

Pictograms (cave paintings)

Quipu from Inca people (talking knots)
The story of an Eskimo hunter

The combination of these Pictograms tell the story of a hunter.

The hunter leaves home, sleeps one night on an island.

Goes to another island, sleeps two nights.

Hunts and kills a sea lion and returns home.
Pictography

Ideography

Egyptian hieroglyphs

Chinese

Luwian

‘up’ concave

‘down’ salient

[re] ‘sun’

[re] ‘god’

sun
god of the sun
Rebus writing

language independent
- ideography

language dependent
- morphography

Itzkoatl
- Itz 'arrow'
- ko 'container'
- atl 'water flow'

Pictography

Rebus writing

What does this say?
- U C U
- heart

Capulteopan
- capul(in)
- teopan

Mapachtepec
- pach(tli)
- tepec

Miacatl
- mi(atl)
- acatl

Amacoztitlan
- ama(tli)
- coztli

Pantepec
- pan(tli)

Tepechpan
- te(tli)
- pe(tli)
Rebus writing

language independent
- ideography
- pictography

language dependent
- morphography

二千 两个人
20 two people

Chinese
• Relationship between the symbol and its referent is mostly arbitrary
• A graphic unit corresponds to a meaningful and grammatically autonomous unit (a word or a morpheme)
• Each morpheme gets its own symbol, thousands of symbols needed
• There are two major logographic writing systems: Sumerian (Cuneiform) and Chinese
• Further in the writing of Japanese, less frequently in Korean, formerly in Vietnamese
Sumerian writing

• one of the earliest writing systems
  – Sumerians in southern Mesopotamia
  – clay tablets with pictures of objects (semi-pictographic writing)
    • animals and their body parts, tools, plants etc. discernible
    • baked clay tablets are heavy, but indestructible

• early tablets
  – signs conventionalized in form, but considerable variation
    • the composition of the line drawing not standardized
  – the primary referent of the signs were physical objects (e.g. a bull)

• pictograms developed into cuneiform signs (klínové písmo)

http://oi.uchicago.edu/OI/MUS/ED/TRC/MESO/writing.html
Graphic development of Sumerian cuneiform signs

- cuneiform signs used for 3 thousand years
  - 900 to 1,000 attested independently occurring signs in total
  - a very limited expressive power (cf. an average high-school student uses vocabulary of app. 20,000 words, in comprehensive dictionaries 300,000 words listed)
Graphic development of Chinese characters

- grew out of drawings of natural objects
- their origin still unclear, app. 1750–1040 BC

<table>
<thead>
<tr>
<th>Period</th>
<th>Chinese term</th>
<th>Pinyin</th>
<th>English</th>
</tr>
</thead>
<tbody>
<tr>
<td>13th–11th centuries BCE</td>
<td>甲骨文</td>
<td>jiaguwen</td>
<td>oracle-bone script</td>
</tr>
<tr>
<td>13th–4th centuries BCE</td>
<td>金文</td>
<td>jinwen</td>
<td>bronze script</td>
</tr>
<tr>
<td>8th century BCE</td>
<td>大篆</td>
<td>dazhuan</td>
<td>greater seal script</td>
</tr>
<tr>
<td>3rd century BCE</td>
<td>小篆</td>
<td>xiaozhuan</td>
<td>lesser seal script</td>
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<tr>
<td>2nd century CE</td>
<td>隶书</td>
<td>lishu</td>
<td>clerical script</td>
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<tr>
<td>since 4th century CE</td>
<td>草書</td>
<td>caoshu</td>
<td>cursive script</td>
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<td></td>
<td>行書</td>
<td>xingshu</td>
<td>running script</td>
</tr>
<tr>
<td></td>
<td>梗書</td>
<td>kaishu</td>
<td>standard script</td>
</tr>
</tbody>
</table>

(Coulmas, 2003, 51)
Graphical structure of Chinese characters

• In Chinese, characters map onto morphemes and words
• lishu
  – first major lexicon compiled, about 120 AD: 9,500 characters, based on six formation principles (simple pictograms, ideographs etc.)
• lexicon of current Chinese
  – Tradition of Chinese lexicography: adding characters, never eliminating any
  – Huang and Huang (1989)
    • 74,000 characters, 25,000 out of which are variants
  – List of Modern Chinese Characters for Everyday Use by the Committee for the Writing of the National language (1988):
    • a primary list od 2,500 characters, a secondary list of another 1,000 characters
    • considered sufficient for other than specialized and technical texts
  – statistics:
    • 1,000 most common characters account for about 90 % of all characters used in publications directed at a general readership
    • another 1,400 characters necessary to cover the next 9 %
    • another 1,400 characters to raise the level to 99.9 %
      – reflecting the Zipf’s law
pictography
ideography
morphography
language independent
language dependent

Egyptian hieroglyphs

[re] ‘sun’
sun

determinatives, keys
to distinguish homonyms...
en. Polish – polish
g. Leben – leben

[re] ‘god’
god of the sun

rebus writing
The basic graphic units are interpreted as speech syllables

- A syllable is a unit of speech that can be articulated in isolation and bears a single degree of stress (English) or a single tone (Chinese)
- Typically, a syllable is a consonant followed by a vowel (CV)
- Different languages allow for different syllables

VC  CVC  CCCVCC
V  CvCV

EN: strength
Syllabic Writing System

• No writing system could map speech syllables to graphic signs in the ratio 1:1

• Languages combine different strategies developed for syllabic writing to decrease the number of signs in comparison to the number of speech syllables
  • combining simple syllables, disregarding minor distinctions such as aspiration of final consonants
  • combining syllables with logograms

• One of the most well-known examples of syllabic systems is the Katakana writing system in Japanese
Japanese Writing System

• Kanji - logographic system, adopted Chinese characters
• Kana (syllabic)
  – Hiragana (used primarily for native or naturalised Japanese words and grammatical elements)
  – Katakana (used primarily for foreign words and names)
**Language independent**

- Ideography

**Language dependent**

- Morphography
- Syllabic systems

- Consonant system

**Pictography**

- Rebus writing
- Determinatives, keys
Consonantal writing systems (Abjad)

• signs represent the consonantal value of a syllable, ignore the vocalic element
• a certain amount of guess is needed to determine which syllable is represented

زمن
 zaman ‘time’
vowel differences generally do not distinguish morphemes

**Arabic**

- *kataba* كتابَ or "كتَب" he wrote" (masculine)
- *kutiba* كتِبَ or "كتِب" it was written" (masculine)
- *yaktub* يكتبَ (u) or يكتب "يَكْتُب" he writes" (masculine)
- *kitāb* كتابَ or كتاب "كتَاب" book"
- *kutub* كتابَ or كتاب "كتَب" books" (plural)
- *kātib* كاتِبَ or كاتِب "كتَب" writer"
- *katabat* كتابة or كتابة "كتَب" clerks"
- *katā’ib* كتابَة or كتابَ "كتَاب" "documents"
Diacritic

• a mark put above, below, through or on a letter (διακριτικός - 'distinguishing')
  – For Latin script: from 24 to more than 100 signs
  – For Cyrillic script: from 33 to ca. 60 signs

- (é) acute
- (ő) double acute
- (á) angstrom, circle
- (ũ) breve
- (č) caron, haček, klicka
- (ć) cedilla
- (ô) circumflex
- (ıt) crossbar, bar
- (ö) diaeresis, umlaut
- (è) grave
- (ť) lower dot
- (ő) macron
- (ь) ogonek, hook
- (ę) raised dot
- (ê) solidus, slash
- (ł) stroke
- (ń) tilde

**acute accent (´)**

fr. café
rus. миcroфóн
cs. káva
pl. sześć
hs. kósć
viet. dâu sắc
God [elohim]

Consonants: א ל ה י מ

Vowels: ו o i

Arabic:

وَمَنْ بِجَسَمِي وَحَالي عَنْدَهُ سَقُمُ
وَتَدْعِي حُبّ سَيّفِ الدُّولَةِ الْأَمْمِ
فَلْيَتْ أَنَا بِقَدْرِ الحُبّ نَفْتُسُمُ
وَقَدْ نَظَرْتُ إِلَيْهِ وَالسُّيُوفُ دَمُ
وَكَانَ أَحْسَنَ مَا فِي الْأَحْسَنِ الشَّيْمُ
فِي طَيِّبِهِ أَسْفَفُ فِي طَيِّبِهِ نَعْمُ
لِكَ الْمَهَابَةُ مَا لاَ تَصْنَعُ الْبَهْمُ

Hebrew:

ישראל

Izrael

Arabic:

لا يعمر إلهي قحه الفيهم

God [elohim] Israel

«هو القطر ده مفيهوش رجولة ولا إيه يا جدعان؟!»، بهذه الكلمات وذع الشاب محمد عيد الحياة، ليقفز بعدها مباشرة من القطار رقم «394» المتجه من الإسكندرية إلى الأقصر، بعد أن أجبره الكمسري على القفز، لعند قدرته على دفع ثمن التذكرة.
language independent

ideography

morphography

syllabic systems

language dependent

consonant system

alphabetic system

pictography
• Alphabetic letters encode phonemic segments
• Less than 50 symbols is needed to make this system work
• Languages: English, German, Greek, Czech, ...
References

• Harrise Roy: The Origin of Writing (1986); Signs of Writing, (1995); Rethinking Writing, (2000)