

Writing

Linguistics 203

Languages of the World

Writing and Language

- Many people associate 'language' with writing
- Writing is not a primary aspect of language
 - most languages of past had no writing system
 - first known writing systems arose 5-6,000 years ago
 - language is learned without explicit instruction; writing is only learned with explicit instruction

Pre-exercise

Examine the writing systems to the right. Try to discover how they are set up (i.e. what each symbol corresponds to).

For Scripts A-C, the top line contains the *graphemes*, and the middle line contains the phonetic transcription.

Script A

гфц шгм чвгф ц

kamani wikara umikama ni

'Did Kamani bring his sword?'

Script B

@ Z © Z | † ßH

kad taka ugura taka maridu marakat

'When did the man take the donkey?'

Script C

kwòq̄cw Øzow̄q èz̄q̄

mangetukan warganut kereto

'Virtue is always triumphant.'

Script D



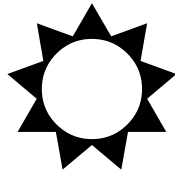
(Brief) History of Writing

- Pictograms are precursors of writing systems.
 - pictogram: an image that represents an object and resembles it



(Brief) History of Writing

- Pictograms become standardized, and their meanings get extended to related concepts (but not specific words). Thus, they become *ideograms*.



1. the sun
2. warmth
3. light
4. daytime
- ...

- Both pictograms and ideograms exist alongside other writing systems in modern societies.

(Brief) History of Writing

























- Ideograms eventually become associated with specific words. Thus, they become *logograms*.
- Logograms often become associated with homophonous words in a language.
- Logograms can become associated with a syllable, thus becoming *syllabic writing*.

(Brief) History of Writing

- First known writing system, *cuneiform*, began around 3500 BCE in Mesopotamia (modern day Iraq)
 - *cuneiform*: ‘in the shape of a wedge’
- Created by Sumerians and Akkadians
- Writing system began as pictographs, later becoming ideographs, logographs and then syllable characters.
- At the end, cuneiform was a combination of logographic and syllabic writing.

(Brief) History of Writing

- Cuneiform continued to change over time

MEANING		OUTLINE CHARACTER, B. C. 3500	ARCHAIC CUNEIFORM, B. C. 2500	ASSYRIAN, B. C. 700	LATE BABYLONIAN, B. C. 500
1.	The sun				
2.	God, heaven				
3.	Mountain				
4.	Man				
5.	Ox				
6.	Fish				

(Brief) History of Writing

- Around 3000 BCE, Egyptians develop writing system called *hieroglyphics* (possibly influenced by Sumerians and Akkadians)
- Pictograms → ideograms → logograms → syllabic
- In addition to different symbols, the ‘syllabic’ quality of cuneiform and hieroglyphics was distinct.
 - In cuneiform, one symbol = both vowel and consonant portions of syllable (V or CV)
 - Hieroglyphs represented only the consonants in a syllable, not the vowels. They could represent 1, 2 or 3 consonants.

(Brief) History of Writing

Hieroglyphs



(Brief) History of Writing

- Around 2000 BCE, Chinese begin using pictograms as symbols for words (*=logograms*), rather than concepts
- Some ideograms were combined to represent abstract ideas.
- Many words are actually represented by multiple logograms.
- Most modern Chinese symbols bear little resemblance to original ideograms

(Brief) History of Writing

Chinese

The characters on the right show the evolution of Chinese from the Shang Dynasty to several modern variants.

	oracle bone <i>jiaguwen</i>	greater seal <i>dazhuan</i>	lesser seal <i>xiaozhuan</i>	clerkly script <i>lishu</i>	standard script <i>kaishu</i>	running script <i>xingshu</i>	cursive script <i>caoshu</i>	modern simplified <i>jiantizi</i>
rén (*nin) human								
nǚ (*nra?) woman								
ěr (*nha?) ear								
mǎ (*mrā?) horse								
yú (*ŋha) fish								
shān (*srān) mountain								
rì (*nit) sun								
yuè (*ŋot) moon								
yǔ (*wha?) rain								
yún (*wan) cloud								

(Brief) History of Writing

Greek alphabet

- Phoenicians develop West Semitic Syllabary by 1500 BCE; only consonants were represented.
 - influenced by hieroglyphics
- Greeks borrowed Semitic syllabary around 900 BCE (probably from Phoenicians)
- Unneeded symbols came to represent vowels.
- Greek alphabet is first alphabet to represent consonants and vowels separately.

(Brief) History of Writing



Roman alphabet

- Romans borrowed Greek alphabet around 600 BCE
- Some symbols dropped, some changed in form, some came to represent different sounds

(Brief) History of Writing

Evolution of some common alphabets

AFFILIATION OF EGYPTIAN AND SEMITIC ALPHABETS.

Values.	EGYPTIAN.		SEMITIC.	LATER EQUIVALENTS.			
	Hieroglyphic.	Hieratic.		Phoenician.	Greek.	Roman.	
<i>a</i>	eagle 			Α	A	א	1
<i>i</i>	crane 			Β	B	ב	2
<i>k (g)</i>	throne 		 	Γ	C	ג	3
<i>t (d)</i>	hand 		 	Δ	D	ד	4
<i>h</i>	meander 			Ε	E	ה	5
<i>f</i>	cerastes 		 	Υ	F	ו	6

For complete example, see: <http://www.alphabetandletter.com/egyptian.html>

(Brief) History of Writing

Cyrillic alphabet

- Also borrowed independently from Greek
- Similar changes as Roman alphabet, with the addition of new symbols

(Brief) History of Writing

Cyrillic alphabet, 10th century

А а	Б б	В в	Г г	Д д	Е е	Ж ж	С с	З з / З з
azŭ	bukŭ	vědě	glagoli	dobro	estĭ	živěte	dzělo	zemlja
a	b	v	g	d	e	ž	dz	z
[a]	[b]	[v]	[g]	[d]	[ɛ]	[ʒ]	[dz]	[z]
И и	І і / І і	К к	Л л	М м	Н н	О о	П п	Р р
iže	i	kako	ljidije	mŭslite	našĭ	onŭ	pokoi	rĭci
i	i, i	k	l	m	n	o	p	r
[i]	[i]	[k]	[l]	[m]	[n]	[o]	[p]	[r]
Ѹ Ѹ	Т т	У у / Ѹ Ѹ	Ф ф	Х х	Ѡ Ѡ	Ц ц	Ч ч	Ш ш
slovo	tyrdo	ukŭ	fŭtŭ	xěrŭ	otŭ	ci	črvĭ	ša
s	t	u	f	x	ō, w	c	č, ch	š, sh
[s]	[t]	[u]	[f]	[x]	[o:]	[ts]	[tʃ]	[ʃ]
Ѣ Ѣ	Ъ ѡ	Ы ы / Ы ы	Ь ь	Ѧ Ѧ	Ю ю	Ѥ Ѥ	Ѧ Ѧ	Ѧ Ѧ
šta	jerŭ	jerŭ	jerĭ	jaťĭ	ju	ja	ęsŭ	jęsŭ
št, shta	ŭ, u:	ŭ	ĭ	ě	ju	ja	ę, ě	ję, jě
[ʃt]	[ʌ]	[y]	[ɪ]	[ja]	[ju]	[ia]	[ɛ]	[jɛ]
Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ	Ѧ Ѧ
qsŭ	jęsŭ	ksi	psi	fita	ižica	je:	gerv	otŭ
q, ō	ję, jō	ks	ps	θ, th	ŭ	je	đ, dj	ōt, wt
[ʃ]	[jɔ]	[ks]	[ps]	[t, θ, f]	[ɪ, y]	[ie]	[dʒ, dj]	[otŭ]

Precursors to Writing Systems

- *pictogram*: symbol that resembles an object which it signifies
- *ideogram*: symbol that represents a concept, without resembling it
- Neither pictograms nor ideograms are directly related to sounds or words.

Writing Systems

- logographic
- phonographic
 - syllabary
 - alphabet
 - abjad
 - abugida

Writing Systems

- *logogram (logographic)*: a symbol which represents a specific word
 - no relation to sounds, just to words
 - language-specific

Logographic

Chinese

The characters on the right show the evolution of Chinese from the Shang Dynasty to present.

	oracle bone <i>jiaguwen</i>	greater seal <i>dazhuan</i>	lesser seal <i>xiaozhuan</i>	clerkly script <i>lishu</i>	standard script <i>kaishu</i>	running script <i>xingshu</i>	cursive script <i>caoshu</i>	modern simplified <i>jiantizi</i>
rén (*nin) human								
nǚ (*nra?) woman								
ěr (*nha?) ear								
mǎ (*mrā?) horse								
yú (*ŋha) fish								
shān (*srān) mountain								
rì (*nit) sun								
yuè (*ŋot) moon								
yǔ (*wha?) rain								
yún (*wan) cloud								

Writing Systems

- *Phonographic*: a system where a symbol represents a sound or sounds
 - *syllabary*: all symbols represent a syllable
 - *alphabet*: all symbols represent a phoneme (ideally)
 - *abjad*: all symbols represent a consonant, vowels are not represented or optional
 - *abugida*: a writing system based on consonants, but in which vowels must be marked

Japanese Writing

Japanese uses a combination of hiragana and kanji (Chinese characters) for native words; it uses katakana for loanwords.

Kanji, being Chinese characters, means that Japanese uses both syllabic graphemes and logograms. Japanese also uses the Roman alphabet occasionally, and of course Arabic numerals.

Modern Japanese is written left to right going downward, or top to bottom going leftward.

Hiragana

あ a	い i	う u	え e	お o
か ka	き ki	く ku	け ke	こ ko
さ sa	し shi	す su	せ se	そ so
た ta	ち chi	つ tsu	て te	と to
な na	に ni	ぬ nu	ね ne	の no
は ha	ひ hi	ふ fu	へ he	ほ ho
ま ma	み mi	む mu	め me	も mo
や ya		ゆ yu		よ yo
ら ra	り ri	る ru	れ re	ろ ro
わ wa				を wo
ん n				

Katakana

ア a	イ i	ウ u	エ e	オ o
カ ka	キ ki	ク ku	ケ ke	コ ko
サ sa	シ shi	ス su	セ se	ソ so
タ ta	チ chi	ツ tsu	テ te	ト to
ナ na	ニ ni	ヌ nu	ネ ne	ノ no
ハ ha	ヒ hi	フ fu	ヘ he	ホ ho
マ ma	ミ mi	ム mu	メ me	モ mo
ヤ ya		ユ yu		ヨ yo
ラ ra	リ ri	ル ru	レ re	ロ ro
ワ wa				ヲ wo
ン n				

Like other syllabaries, those in Japanese were derived from logograms. Katakana graphemes are shown on the left, and their source logogram is on the right.

ア	阿	イ	伊	ウ	宇	エ	江	オ	於
カ	加	キ	幾	ク	久	ケ	介	コ	己
サ	散	シ	之	ス	須	セ	世	ソ	曾
タ	多	チ	千	ツ	川	テ	天	ト	止
ナ	奈	ニ	仁	ヌ	奴	ネ	祢	ノ	乃
ハ	八	ヒ	比	フ	不	ヘ	部	ホ	保
マ	末	ミ	三	ム	牟	メ	女	モ	毛
ヤ	也			ユ	由			ヨ	與
ラ	良	リ	利	ル	流	レ	礼	ロ	呂
ワ	和							ヲ	乎
ン	尔								

The Cherokee syllabary

Cherokee Indian called Sequoia developed a syllabary for Cherokee in 19th century; it used characters from the Roman alphabet, but to mark syllables rather than phonemes.

a	e	i	o	u	v [ǎ]
D a	R e	T i	Ꭰ o	Ꭱ u	Ꭲ v
Ꭳ ga Ꭴ ka	Ꭶ ge	Ꭷ gi	Ꭸ go	Ꭹ gu	Ꭺ gv
Ꭼ ha	Ꭽ he	Ꭾ hi	Ꭿ ho	Ꮀ hu	Ꮁ hv
Ꮂ la	Ꮃ le	Ꮄ li	Ꮅ lo	Ꮆ lu	Ꮇ lv
Ꮉ ma	Ꮊ me	Ꮋ mi	Ꮌ mo	Ꮍ mu	
Ꮎ na Ꮏ hna Ꮐ nah	Ꮑ ne	Ꮒ ni	Ꮓ no	Ꮔ nu	Ꮕ nv
Ꮖ qua	Ꮗ que	Ꮘ qui	Ꮙ quo	Ꮚ quu	Ꮛ quv
Ꮝ s Ꮞ sa	Ꮟ se	Ꮠ si	Ꮡ so	Ꮢ su	Ꮣ sv
Ꮤ da Ꮥ ta	Ꮦ de Ꮧ te	Ꮨ di Ꮩ ti	Ꮪ do	Ꮫ du	Ꮬ dv
Ꮮ dla Ꮯ tla	Ꮰ tle	Ꮱ tli	Ꮲ tlo	Ꮳ tlu	Ꮴ tlv
Ꮖ tsa	Ꮗ tse	Ꮘ tsi	Ꮙ tso	Ꮚ tsu	Ꮛ tsv
Ꮖ wa	Ꮗ we	Ꮘ wi	Ꮙ wo	Ꮚ wu	Ꮛ ww
Ꮖ ya	Ꮗ ye	Ꮘ yi	Ꮙ yo	Ꮚ yu	Ꮛ yv

Source: http://en.wikipedia.org/wiki/File:Cherokee_Syllabary.svg

The Vai syllabary

Vai is an ethnic group in western Liberia, developed this syllabary in the early 19th century. It has around 200 graphemes.

▶	𐒃	𐒄	𐒅	𐒆	𐒇	𐒈	𐒉	𐒊	𐒋	𐒌	𐒍	𐒎	𐒏
pi	pa	pu	pe	peh	poh	po	bi	ba	bu	be	beh	boh	bo
𐒐	𐒑	𐒒	𐒓	𐒔	𐒕	𐒖	𐒗	𐒘	𐒙	𐒚	𐒛	𐒜	𐒝
bi	ba	bu	be	beh	boh	bo	mbi	mba	mbu	mbe	mbeh	mboh	mbo
𐒞	𐒟	𐒠	𐒡	𐒢	𐒣	𐒤		𐒥		𐒦	𐒧	𐒨	𐒩
kpi	kpa	kpu	kpe	kpeh	kpoh	kpo		mgba		mgbe	mgbeh	mgboh	mgbo
𐒪	𐒫	𐒬	𐒭	𐒮	𐒯	𐒰	𐒱	𐒲	𐒳	𐒴	𐒵	𐒶	𐒷
gbi	gba	gbu	gbe	gbeh	gboh	gbo	fi	fa	fu	fe	feh	foh	fo
𐒸	𐒹	𐒺	𐒻	𐒼	𐒽	𐒾	𐒿	𐓀	𐓁	𐓂	𐓃	𐓄	𐓅
vi	va	vu	ve	veh	voh	vo	ti	ta	tu	te	teh	toh	to
𐓆	𐓇	𐓈	𐓉	𐓊	𐓋	𐓌	•	𐓍	𐓎	𐓏	𐓐	𐓑	𐓒
di	da	du	de	deh	doh	do	li	la	lu	le	leh	loh	lo
•	𐓓	𐓔	𐓕	𐓖	𐓗	𐓘	𐓙	𐓚	𐓛	𐓜	𐓝	𐓞	𐓟
dj	dja	dju	dje	djah	djoh	djo	ndj	nda	ndju	nde	ndjah	ndjoh	ndjo
𐓠	𐓡	𐓢	𐓣	𐓤	𐓥	𐓦	𐓧	𐓨	𐓩	𐓪	𐓫	𐓬	𐓭
si	sa	su	se	seh	soh	so	zi	za	zu	ze	zeh	zoh	zo
𐓮	𐓯	𐓰	𐓱	𐓲	𐓳	𐓴	𐓵	𐓶	𐓷	𐓸	𐓹	𐓺	𐓻
ci	ca	cu	ce	ceh	coh	co	ji	ja	ju	je	jeh	joh	jo
𐓼	𐓽	𐓾	𐓿	𐔀	𐔁	𐔂	𐔃	𐔄	𐔅	𐔆	𐔇	𐔈	𐔉
nji	nja	nju	nje	njah	njoh	njo	yi	ya	yu	ye	yeh	yoh	yo
𐔊	𐔋	𐔌	𐔍	𐔎	𐔏	𐔐	𐔑	𐔒	𐔓	𐔔	𐔕	𐔖	𐔗
ki	ka	ku	ke	keh	koh	ko	jgi	jga	jgu	jge	jgeh	jgoh	jgo

Runic

Each symbol is called a *rune*, these were used by various Germanic groups.

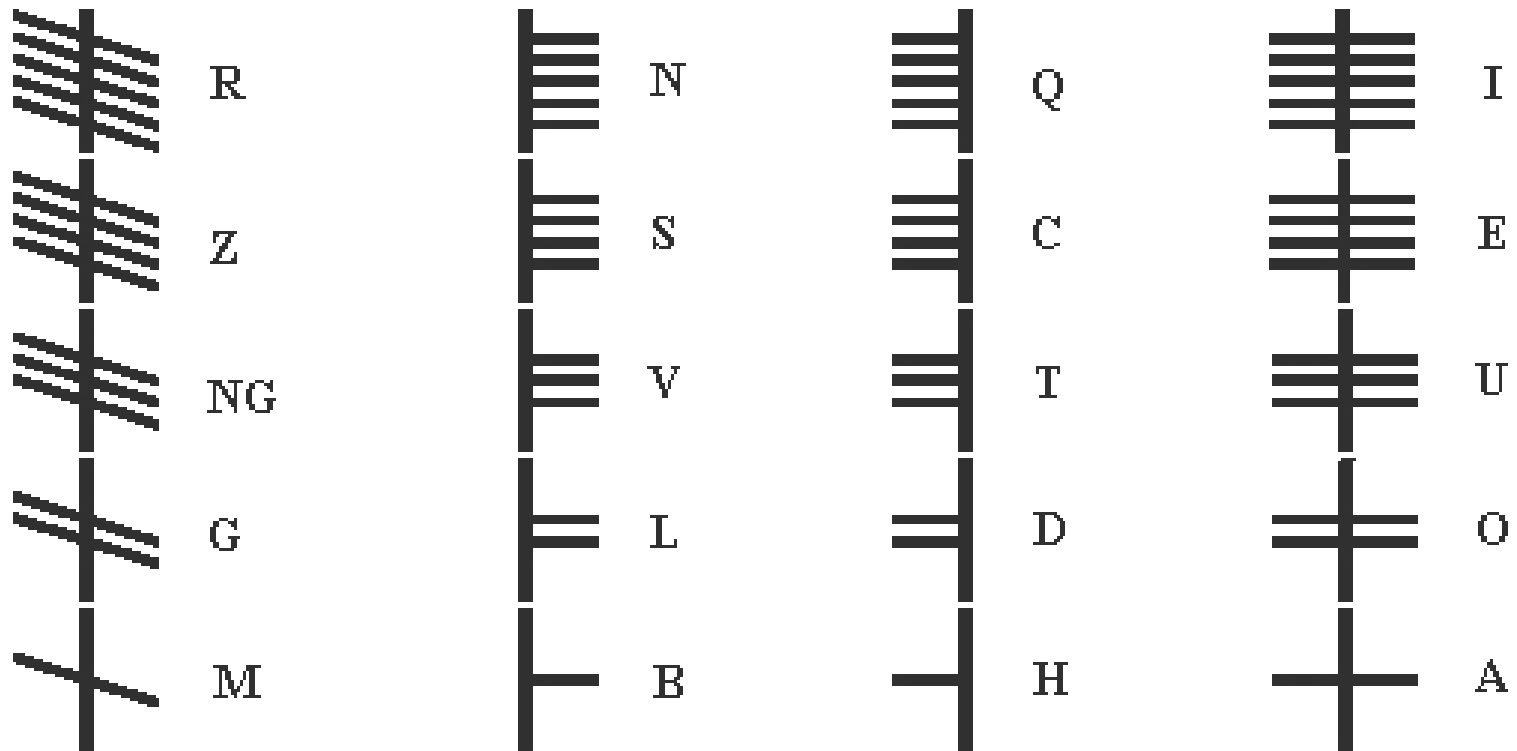
NAMES.	VALUES.	RUNES.			IV. ALPHABET OF ULPHILAS.	
		I. GOTHIC.	II. ANGLIAN.	III. SCANDI-NAVIAN.		
fech, feh, fe	<i>f</i>	ƿ ƿ	ƿ ƿ	ƿ	ƿ	ϕ
ur, hur	<i>u</i>	ʌ ʌ	ʌ ʌ	ʌ	ʌ	ou
thorn	<i>th</i>	ᚢ ᚢ ᚢ	ᚢ	ᚢ	ᚢ	δ
asc, æsc, os	<i>a, æ, o</i>	ᚦ ᚦ	ᚦ ᚦ	ᚦ	ᚦ	α
rad, rat	<i>r</i>	ᚱ ᚱ	ᚱ	ᚱ ᚱ	ᚱ	ρ
cen, kaun	<i>c, k</i>	ᚨ ᚨ	ᚨ	ᚨ	ᚨ	κ
gebo, gifu	<i>g</i>	ᚷ	ᚷ		ᚷ	γ
wen	<i>v, w</i>	ᚰ	ᚰ		ᚰ ᚰ	v, hv
hegl, hagal	<i>h</i>	NIHH	NI	*	h	h
nyd, nod	<i>n</i>	ᚠ ᚠ	ᚠ	ᚠ ᚠ	ᚠ	ν
is	<i>i</i>	ᚱ	ᚱ	ᚱ	ᚱ	ι
ger, yr, ar	<i>y, ge, j, a</i>	ᚹ ᚹ ᚹ	ᚹ	ᚹ ᚹ	ᚹ	j
hic, ih, eoh	<i>ih, i, eo</i>	ᚺ ᚺ	ᚺ		ᚺ	ζ
peorth, perc	<i>p</i>	ᚷ	ᚷ ᚷ	ᚷ	ᚷ	π
ilix, calc	<i>a, i, k, x</i>	ᚹ	ᚹ		ᚹ ᚹ	q
sigil	<i>s</i>	ᚱ	ᚱ	ᚱ	ᚱ	σ
tir	<i>t</i>	ᚠ	ᚠ	ᚠ ᚠ	ᚠ	τ
berc, berith	<i>b</i>	ᚷ	ᚷ	ᚷ	ᚷ	β
hæc, ech, eh	<i>e</i>	ᚠ ᚠ	ᚠ		ᚠ	η
man	<i>m</i>	ᚠ	ᚠ	ᚰ ᚹ	ᚠ	μ
lagu	<i>l</i>	ᚠ	ᚠ	ᚠ	ᚠ	λ
ing	<i>ng</i>	ᚠ ᚠ	ᚠ		ᚠ	χ
dag, dæg	<i>d</i>	ᚠ ᚠ	ᚠ		ᚠ	θ
othil	<i>o, œ</i>	ᚠ ᚠ	ᚠ		ᚠ	ω

Source:

<http://www.alphabetandletter.com/gifs/runiccharacters.gif>

Ogham

An interesting alphabet used by Celts in Britain and Ireland, the symbols could be written vertically (as depicted below) or horizontally (symbols turned 90° *clockwise* from below).



Source:

http://www.ballybegvillage.com/images/Ogham_letters.gif

Arabic abjad (sample)

- Written right to left, the shape of a letter depends on its position relative to other letters.
- Diacritics can optionally mark vowels, or various other things (e.g. gemination)

IPA	Latin	Name	Final	Medial	Initial	Isolated	
[ʔ]	ʾ(a)	ʾalif	ألف	ا	—	—	ا
[b]	b	bāʾ	باء	ب	ب	ب	ب
[t]	t	tāʾ	تاء	ت	ت	ت	ت
[θ]	t̤	t̤āʾ	ثاء	ث	ث	ث	ث
[dʒ]	ǧ	ǧīm	جيم	ج	ج	ج	ج
[ħ]	ḥ	ḥāʾ	حاء	ح	ح	ح	ح
[x]	ḫ	ḫāʾ	خاء	خ	خ	خ	خ
[d]	d	dāl	دال	د	—	—	د
				ب	ب	ب	ب
				ب	ب	ب	ب
				ب	ب	ب	ب
	ḍamma	kasra	fatha				
	bu	bi	ba				
					bbu	bbi	bba

Devanagari abugida (sample)

- Consonant symbols must carry vowel symbols.

		Primary vowels				Diphthongs	
		Short		Long			
		Initial	Diacritic	Initial	Diacritic	Initial	Diacritic
Unrounded low central		अ a	प pa	आ ā	पा pā		
Unrounded high front		इ i	पि pi	ई ī	पी pī		
Rounded high back		उ u	पु pu	ऊ ū	पू pū		
Syllabic variants		ऋ ṛ	पृ pṛ	ॠ ṝ	पृ॑ pṝ		
		ऌ ḷ	प्ल pḷ	ॡ ḹ	प्ल॑ pḹ		
Secondary vowels							
	Unrounded front			ए e	पे pe	ऐ ai	पै pai
	Rounded back			ओ o	पो po	औ au	पौ pau

- When consonant clusters occur, the symbols are combined into *conjuncts*.

क्क क्ख क्क क्ण क्त क्त्य क्र क्र्य क्तव क्क क्क्य क्क
 kka kkha kca kṇa kta ktya ktra ktrya ktva kna knya kma

Exercise

What type of writing system is this?

Three symbols have two pronunciations/functions. What are they?

공	[koŋ]	‘ball’
말	[mal]	‘language’
아무	[amu]	‘any’
덕분	[təkpun]	‘favor’
박	[pak]	‘Park’ (name)
누님	[nunim]	‘older sister’
로	[ro]	‘to’
번	[pən]	‘time’
삼	[sam]	‘three’
식사	[ʃiksa]	‘meal’
눈	[nun]	‘snow’
우리	[uri]	‘we’
일상	[ilsaŋ]	‘daily’
말	[mat]	‘first’

Alphabets

Korean alphabet (Hangeul)

- Developed in mid-15th century under King Sejong
- Previously, Chinese writing had been used
- Designed to be easy to learn
- Letters based on phonetics
- Letters are combined into syllables

Letters in Hangeul

Consonants - Plosives

ㄱ	ㄲ	ㅋ	ㄷ	ㄸ	ㅌ	ㅍ	ㅑ	ㅑ	ㅑ
g, k	kk	k	d, t	tt	t	b, p	pp	p	
k, g	kk	k'	t, d	tt	t'	p, b	pp	p'	
[k, g]	[k']	[kʰ]	[t, d]	[t']	[tʰ]	[p, b]	[p']	[pʰ]	

Affricatives

Fricatives

Nasals

Liquids

ㄷㅈ	ㄷㅉ	ㅌㅈ	ㅌㅉ	ㅌㅊ	ㅎ	ㄴ	ㅁ	ㅇ	ㄹ
j	jj	ch	s	ss	h	n	m	ng	l
ch, j	tch	ch'	s	ss	h	n	m	-ng	l, r
[tʃ, tʃʰ]	[tʃʰ]	[tʃʰ]	[s]	[s']	[h]	[n]	[m]	[ŋ]	[l, r]

Vowels

ㅏ	ㅑ	ㅓ	ㅕ	ㅗ	ㅛ	ㅜ	ㅠ	ㅡ	ㅣ
a	eo	o	u	eu	i	ae	e	oe	wi
a	ö	o	u	ü	i	ae	e	oe	wi
[a]	[ʌ]	[o]	[u]	[ɨ]	[ɪ]	[æ]	[e]	[we]	[wi]

Diphthongs

ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ	ㅑ
ya	yeo	yo	yu	yae	ye	wa	wae	wo	we	ui
ya	yö	yo	yu	yae	ye	wa	wae	wö	we	üi
[ja]	[jʌ]	[jo]	[ju]	[jæ]	[je]	[wa]	[wæ]	[wʌ]	[we]	[ɥi]