

Fiat Lingua

Title: Slides for Linguistics 183: The Linguistics of Game of Thrones and the Art of Language Invention

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LINGUISTICS 183

WEEK 1



Hildegard von
Bingen

Lingua Ignota
~1150

O *orzchis* Ecclesia, armis divinis
praecineta, et hyacinto ornata, tu es
caldemia stigmatum *loifolum* et urbs
scienciarum. O, o tu es etiam *crizanta* in
alto sono, et es *chorzta* gemma.

aigonz “God”
aieganz “angel”
inimois “human being”
iur “man”
vanix “woman”
galschiriz “battle axe”

a	b	c	d	e	f	g	h	i
ʃ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ
k	l	m	n	o	p	q	r	
ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ
f	t	u	x	y	z	et	est.	
ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ	ʒ

Universal Language 1668

John Wilkins



IX. BACCIFEROUS HERBS, may be distinguished according to their

- IX. BACCI-FEROUS HERBS.
- Qualities; into such as are
 - Esulent; either in respect of the
 - Fruit; being
 - Most pleasant; a Trefoil propagating by strings or wires.
 - 1. STRAWBERRY.
 - Least pleasant; || either that of a leaf like Agrimony, bearing round fruit of a bright red: or that of a broad hairy rough leaf, bearing a large fruit almost as big as a Cowcumber.
 - 2. } APPLE OF LOVE.
 - } MAD APPLE.
 - Root; bearing winged leaves, and a bell flower.
 - 3. POTATO OF VIRGINIA.
 - Malignant; whether such whose leaves are more
 - Simple and undivided; || either that which hath a broad leaf, bearing black berries: or that which hath a more long, broad, dark coloured leaf, a great root, bearing great berries on single stalks.
 - 4. } NIGHTSHADE.
 - } MANDRAKE.
 - Compound; or made up of many segments; || either that which bears light green berries in a cluster: or that which bears but one leaf divided into four or five parts, and but one black berry.
 - 5. } HERB CHRISTOPHER, Berry bearing Wolves-bane.
 - } HERB TRUE LOVE, One Berry.
 - Manner of growth; of the
 - Plants themselves; being Climbers, whether such as are considerable for
 - Purgativeness; bearing red berries; || either that of a great white root, having leaves like a Vine, but more rough: or that of a great black root, with leaves like those of Ivy.
 - 6. } WHITE BRIONY.
 - } BLACK BRIONY, Wild Vine, Ladies-seal
 - Being full of crooked prickles; having a long triangular leaf.
 - 7. PRICKLY BINDWEED.
 - Berries; whether in a
 - Bladder; || either that which is a low plant, which bears a red berry in a large bladder: or that whose leaves are like Chickweed, ramping upon other plants.
 - 8. } WINTER CHERRY.
 - } BERRY BEARING CHICKWEED.
 - Umbel; having winged leaves, like Elder, both for shape and sent.
 - 9. DANEWORT.

Fragaria.

Pomum amori-
vū.
Malum insu-
mum.

Battata.

Solanum.
Mandrægra.

Aconitum ra-
cemosum.
Herba Paris.

Bryonia alba.
Bryonia nigra.

Smilax aspera.

Alkængi.
Cacubulum.
Plini.

Eubulus.



Esperanto
1887

L. L.
Zamenhof

Mi estas bona knabo.

“I am a good boy.”

Mi estas bono knaba.
“I am a boyish good thing.”

bono = good thing

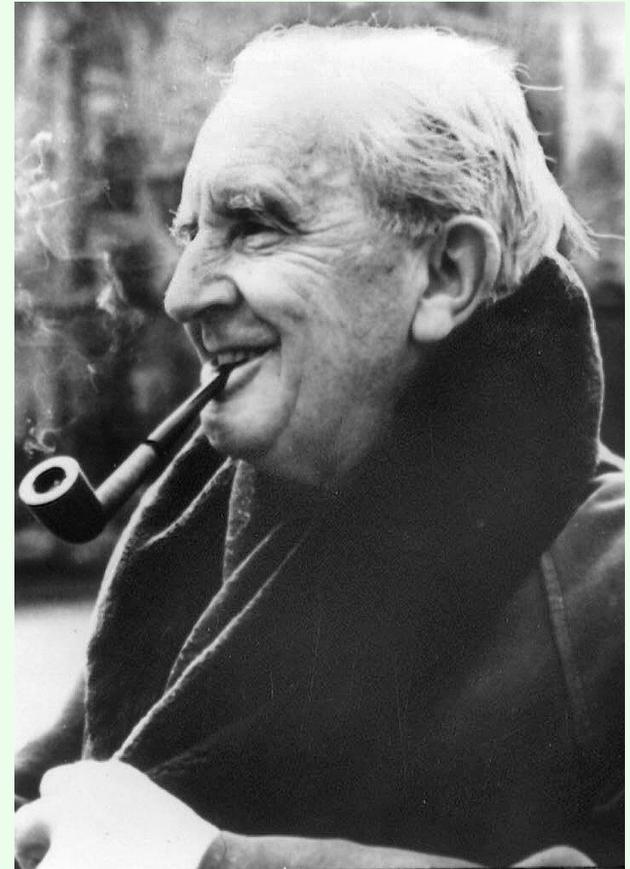
bona = good

boni = to be good

bone = well

bonu = be good

Quenya Sindarin ~1910



J. R. R. Tolkien

Sindarin "father"		Quenya "father"	
adar		atar	
Tehtar Mode	Mode of Beleriand	vowels on preceding consonants	vowels on following consonants
ada		atto	
Sindarin "father, daddy"		Quenya "father, daddy"	

**nelek > *nele > *nel > nêl* “tooth”
**neleki > *neliki > *neligi > nelig* “teeth”

Pakuni
1974



Victoria Fromkin



mura
“to befriend”

amura
“friend”

amurani
“friends”

emura
“friendship”

murasa
“friendly”

Klingon
1984



Marc Okrand

Indicative-mood prefixes ^[18]		Object						
		No object	1st person singular	2nd person singular	3rd person singular	1st person plural	2nd person plural	3rd person plural
Subject	1st person singular	jI-	—	qa-	vI-	—	Sa-	vI-
	2nd person singular	bI-	cho-	—	Da-	ju-	—	Da-
	3rd person singular	∅-	mu-	Du-	∅-	nu-	lI-	∅-
	1st person plural	ma-	—	pI-	wI-	—	re-	DI-
	2nd person plural	Su-	tu-	—	bo-	che-	—	bo-
	3rd person plural	∅-	mu-	nI-	lu-	nu-	lI-	∅-
	unspecified*	∅-	vI-	Da-	∅-	wI-	bo-	lu-



The Conlang Mailing List

Constructed Languages List

CONLANG@LISTSERV.BROWN.EDU

Web Interface

- [Search the archives](#)
- [Post to the list](#) (needs subscription)
- [Join or leave the list \(or change settings\)](#)
- [Manage the list](#) (list owners only)

Archives

You can also read this list [here](#).

- [May 2017, week 2](#)
- [May 2017, week 1](#)
- [April 2017, week 5](#)
- [April 2017, week 4](#)
- [April 2017, week 3](#)
- [April 2017, week 2](#)
- [April 2017, week 1](#)
- [March 2017, week 5](#)
- [March 2017, week 4](#)
- [March 2017, week 3](#)
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- [March 2017, week 1](#)
- [February 2017, week 4](#)
- [February 2017, week 3](#)
- [February 2017, week 2](#)
- [February 2017, week 1](#)
- [January 2017, week 4](#)

E-Mail Interface

- [Post to the list](#) (needs subscription)
- [List management \(a computer\)](#)
Mail body `HELP` to get a list of commands.
- [List owner \(a human being who helps you!\)](#)
The current list owners are Alex Fink and And Rosta.

Synopsis

Conlang is a mailing list for discussing constructed and artificial languages.

- [RSS 0.9](#)
 - [RSS 1.0](#)
 - [RSS 2.0](#)
- Discussions often include linguistical features and details about natural and constructed languages. The focus is on technical discussion and personal preferences and views of our enthusiastic conlangers rather than on advocacy, especially of international auxiliary languages (IALs), which are better discussed on the Auxlang list instead.

You can either [join the list by using the web interface](#), or subscribe via email by sending a mail to listserv@listserv.brown.edu with no subject but a body that contains exactly one line:

```
subscribe conlang FirstName LastName
```

To unsubscribe, [send the following mail body](#):

```
unsubscribe conlang
```

To get a list of commands, send a message with the following body to [the same address](#):

How to create a language

by [Pablo David Flores](#)

[Main page](#) | [Language Creation](#)

Table of Contents

The following are the topics and subtopics in the webpages of **How to create a language**.

- [Sounds](#)
 - [Phones and phonemes](#)
 - [Vowels vs. consonants](#)
 - [Consonants](#)
 - [New consonants](#)
 - [Vowels](#)
 - [New vowels](#)
- [Stress and pitch](#)
- [Tone](#)
- [Phonological constraints](#)
- [Sound change](#)
 - [Rules of sound change](#)
- [Harmony](#)
- [Sandhi or mutation](#)
- [Writing your language](#)
 - [Alphabets and other scripts](#)
 - [Ordering your script](#)
- [Grammar](#)
 - [Morphological typology](#)
 - [Inflection](#)
 - [Agglutination](#)
 - [Isolation](#)
 - [Analysis and synthesis](#)





Artlang
Auxlang
Engelang

A Posteriori A Priori

	A POSTERIORI	A PRIORI
ARTLANG	Brithenig	Teonaht
AUXLANG	Esperanto	Sona
ENGELANG	Briefscript	Ithkuil

ts'omoyl inopaznoket si:k gevan aR.

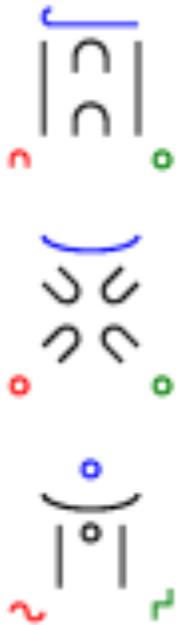
ts'omoyl inopaznoket si:k gevan aR.

/2SG.POS-chest IMP-be.exposed-V only night-this not/

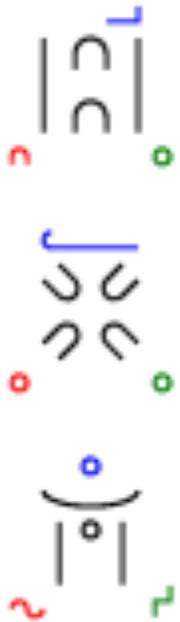
“Yours is not the only heart broken this night.”



The insect eats the flower.



The insect eats in the flower.



The flower eats the insect.





Naturalism: the attempt to create a language that mirrors, as closely as possible, the quirks and idiosyncrasies of natural languages.

Phonological Evolution

*mu:s > maus

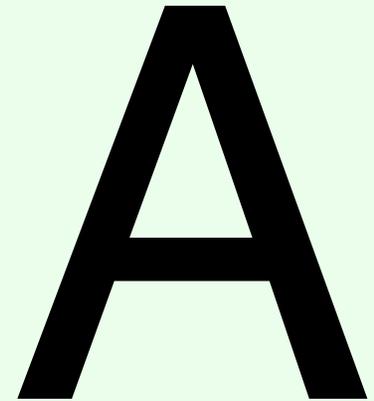
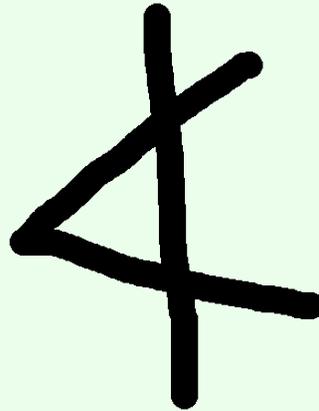
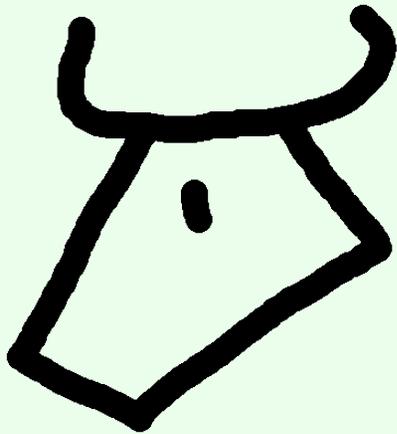
Grammatical Evolution

*lich “body” > -ly

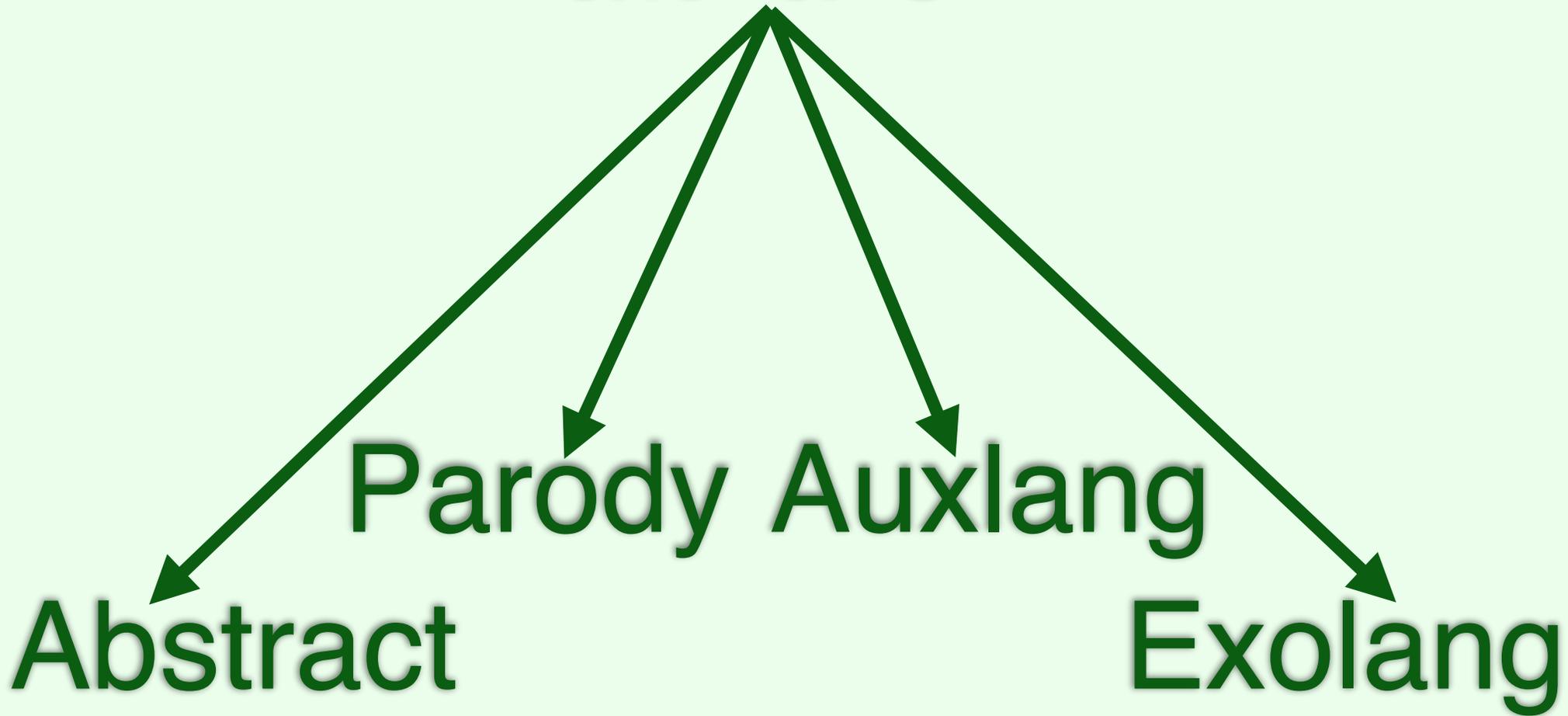
Lexical Evolution

*gesælig “holy” > silly

Orthographic Evolution



Naturalism





THE KNOWN WORLD

CITY TOWN RUINED CITY CASTLE RUINED CASTLE

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Create a language from
the *Song of Ice and Fire*
universe.

1. Phonology
2. Nominal Morphology
3. Verbal Morphology
4. Syntax/Typology
5. Orthography

M^1 -Th¹ = Learn/Practice
Th¹-M² = Writeup
M²+ = Revise

**Final = Revise and
Combine Writeups**

Categories

- [Analysis](#)
- [Art](#)
- [Conlang Descriptions](#)
- [Essays](#)
- [Experiments](#)
- [Interviews](#)
- [Literature](#)
- [Presentations/Demonstrations](#)
- [Reviews](#)

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- [Danny Garrett](#)
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- [David Johnson](#)
- [Don Boozer](#)
- [Doug Ball](#)
- [Emily Ahn](#)

Three Lesser-Known Tools for Lexicon-Building in Your Conlang

May 1, 2017 — Fiat Lingua

John Quijada spent more than thirty years creating the philosophical language Ithkuil, whose notoriety has been featured in *The New Yorker* magazine. He also writes the "Conlang Curiosities" column for the Language Creation Society's *Language Creation Tribune* quarterly publication. He has a degree in linguistics, speaks five languages, has co-written a novel exploring the philosophical implications of quantum physics, and composes music, among many other hobbies and interests.

- [Download \(.pdf\)](#)

Abstract

At the Fifth Language Creation Conference in Austin, Texas, John Quijada presented on some advanced lexicon building techniques. Unfortunately, his talk was shortened due to some organizational mishaps. In this paper, John goes over the main thrust of his talk, and uses the opportunity to share some of the examples and ideas he wasn't able to share at the talk itself.



Version History

- [fi-000044-00 \(Original Version\)](#)



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Posted in Presentations/Demonstrations. Tags: John Quijada. Comments Off on Three Lesser-Known Tools for Lexicon-Building in Your Conlang »

Links

- [Language Creation Society](#)
- [The Conlang Blog Aggregator](#)
- [The Conlanger's Library](#)

Archives

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- [April 2016](#)
- [March 2016](#)
- [February 2016](#)
- [January 2016](#)
- [December 2015](#)
- [November 2015](#)
- [October 2015](#)

Presentations
Throughout the Term
Starting Next Wednesday
(~4 Per Week)

1. Class Participation
2. Slack Participation
3. Practice Assignments
4. Mastery Assignments

Practice Assignments



Mastery Assignments
Graded (out of 20)
Writeup Steps = Mastery
Assignments

Assignments

Reading

- *The Art of Language Invention* (hereafter AoLI) Introduction (*Optional*)
- AoLI Chapter 1, pp. 25-60

Practice

- Set up your Slack account, sign in to [our course Slack](#), and introduce yourself.
- [Assessment Test](#)

Mastery

- (*None Today*)

Backburner

- Start looking over the language options for your final assignment [here](#).

Assignments

Reading

- *The Art of Language Invention* (hereafter AoLI) Introduction (*Optional*)
- AoLI Chapter 1, pp. 25-60

Practice

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- [Assessment Test](#)

Mastery

- *(None Today)*

Due by Next Class Period



Backburner

- Start looking over the language options for your final assignment [here](#).

Assignments

Reading

- *The Art of Language Invention* (hereafter AoLI) Introduction (*Optional*)
- AoLI Chapter 1, pp. 25-60

Practice

- Set up your Slack account, sign in to [our course Slack](#), and introduce yourself.
- [Assessment Test](#)

Mastery

- (*None Today*)

NOT Due by Next Class Period



Backburner

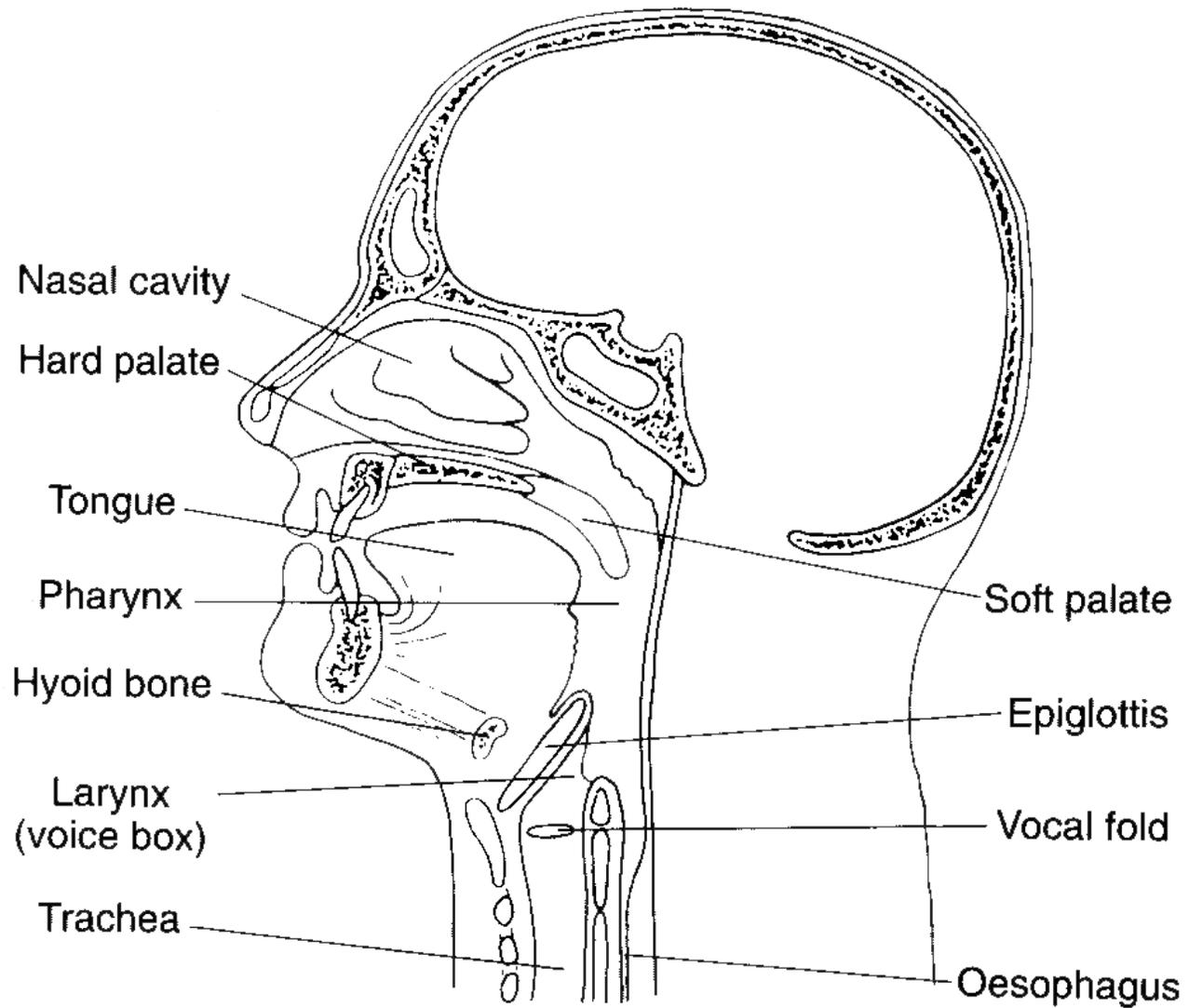
- Start looking over the language options for your final assignment [here](#).



SYLLABUS READING

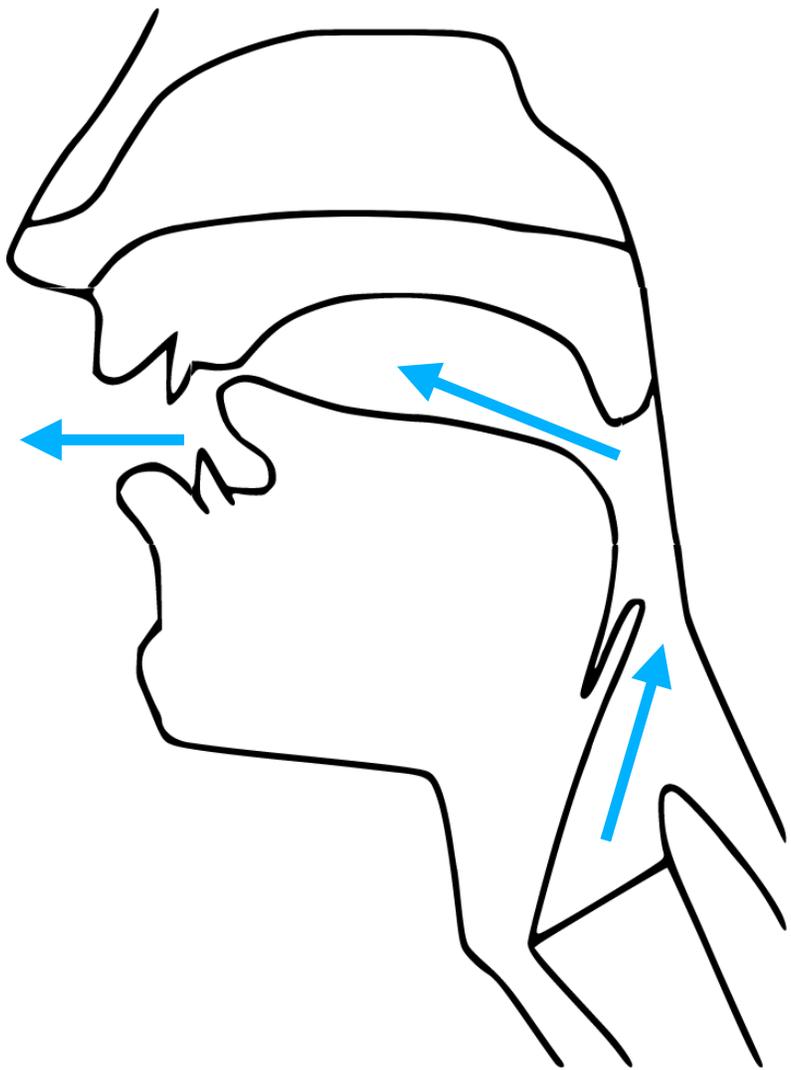


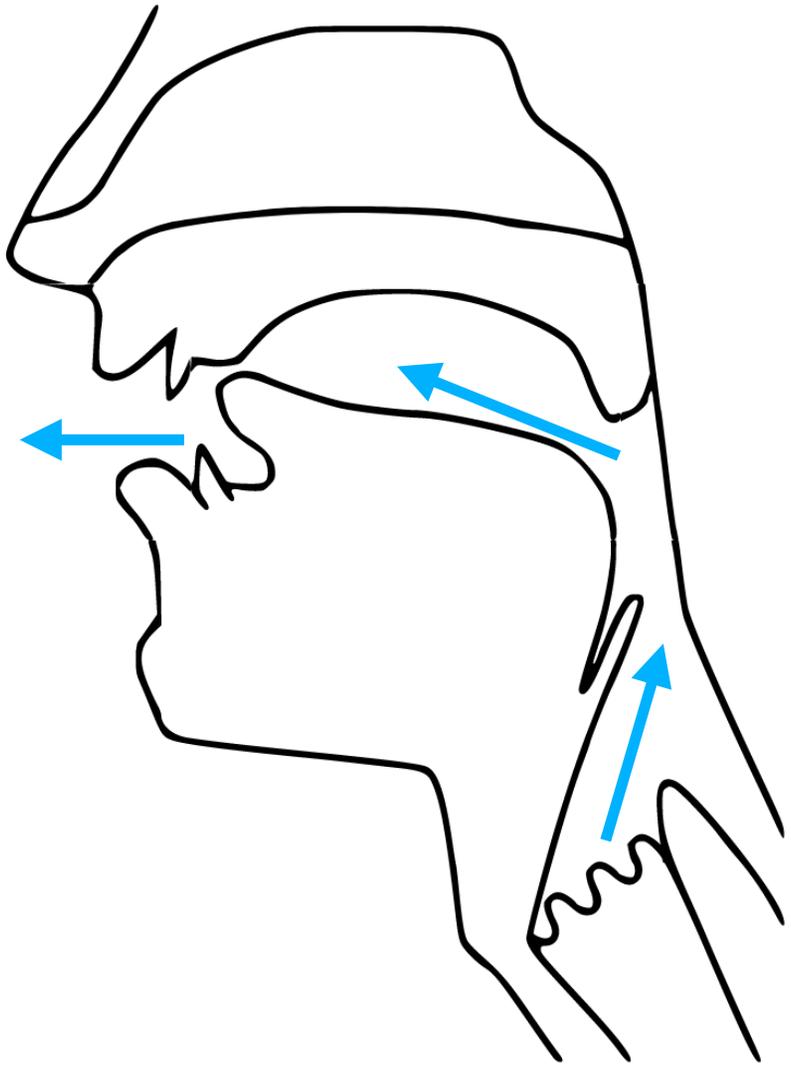
PHONOLOGY

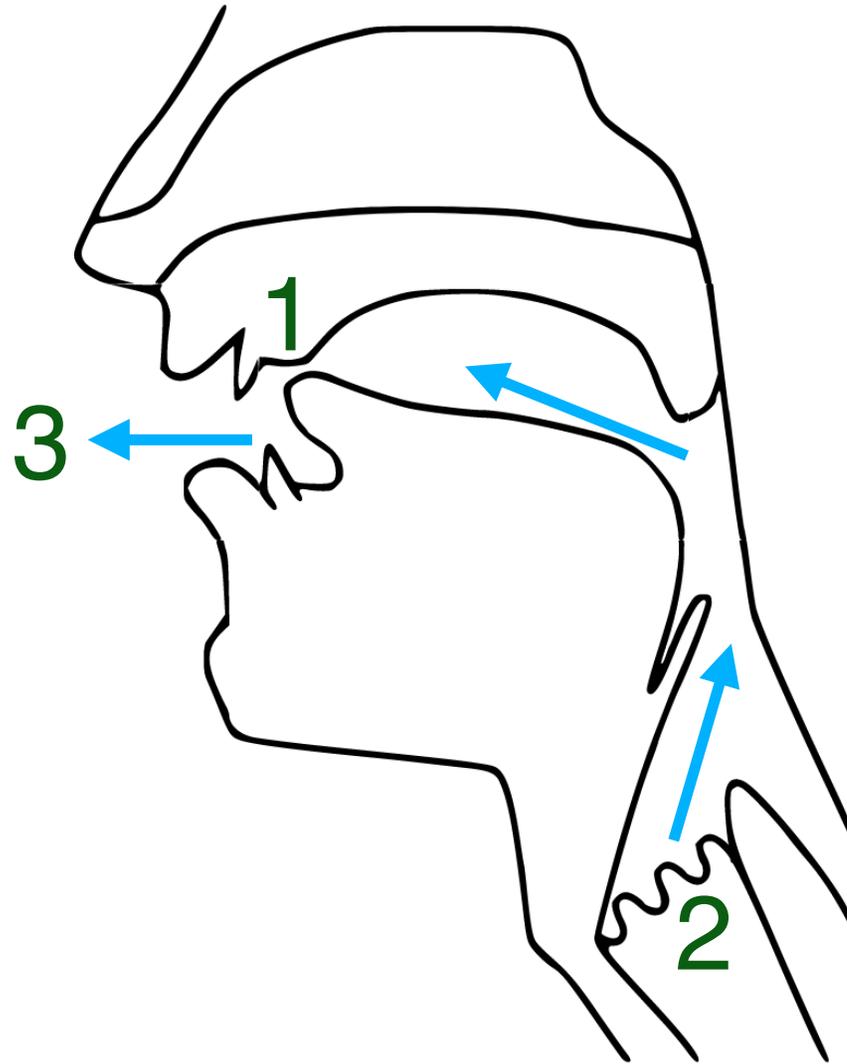


PLACE MANNER

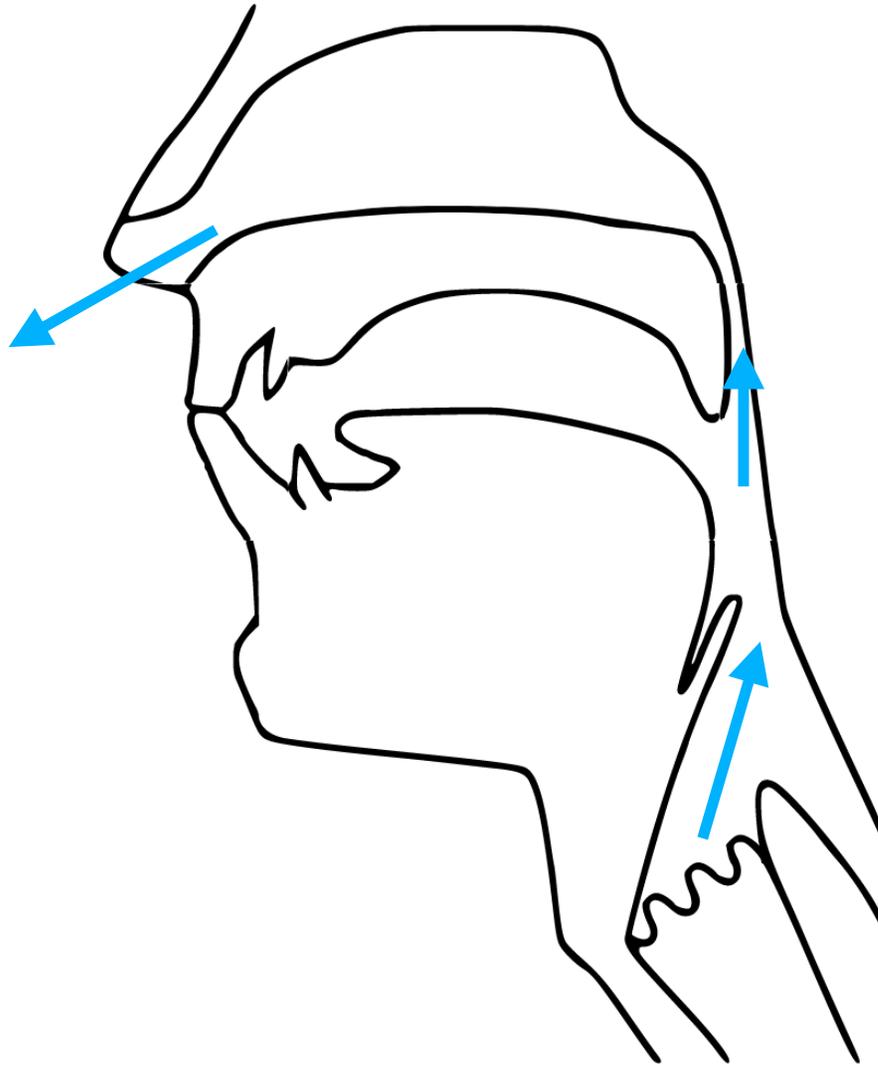
	BILABIAL	ALVEOLAR	PALATAL	VELAR
STOP	p/b	t/d	c/ɟ	k/g
FRICATIVE	ɸ/β	s/z	ç/ʝ	x/χ
NASAL	m	n	ɲ	ŋ

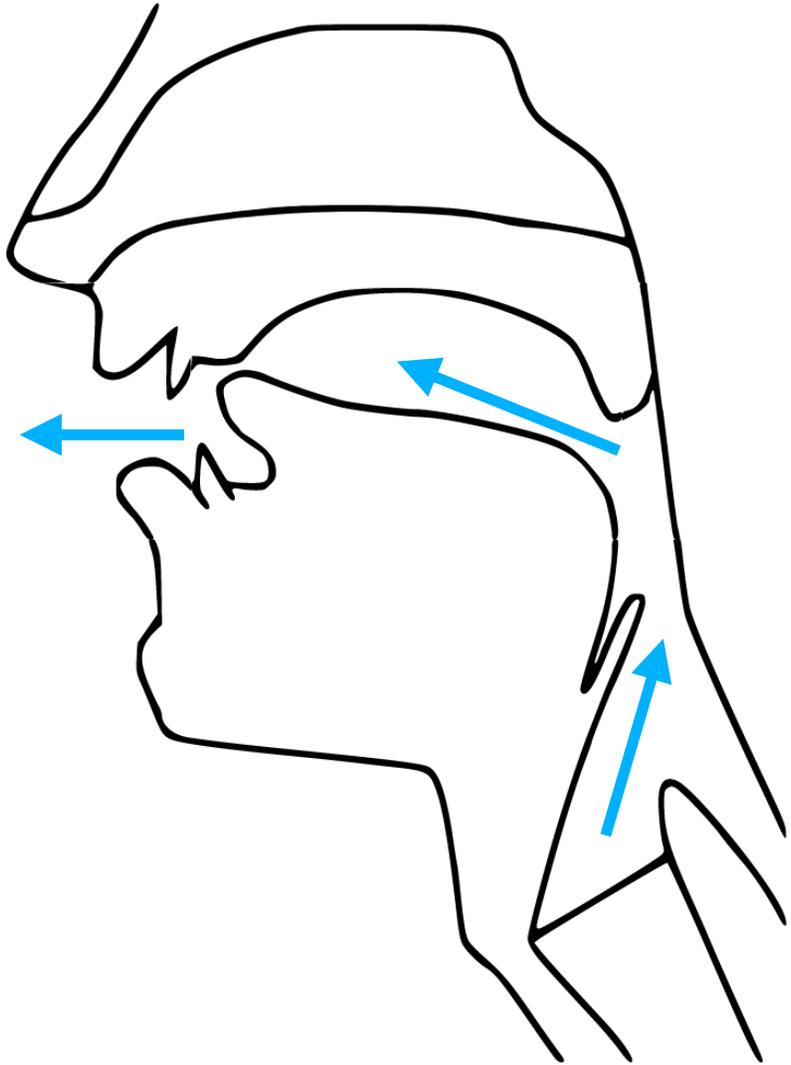


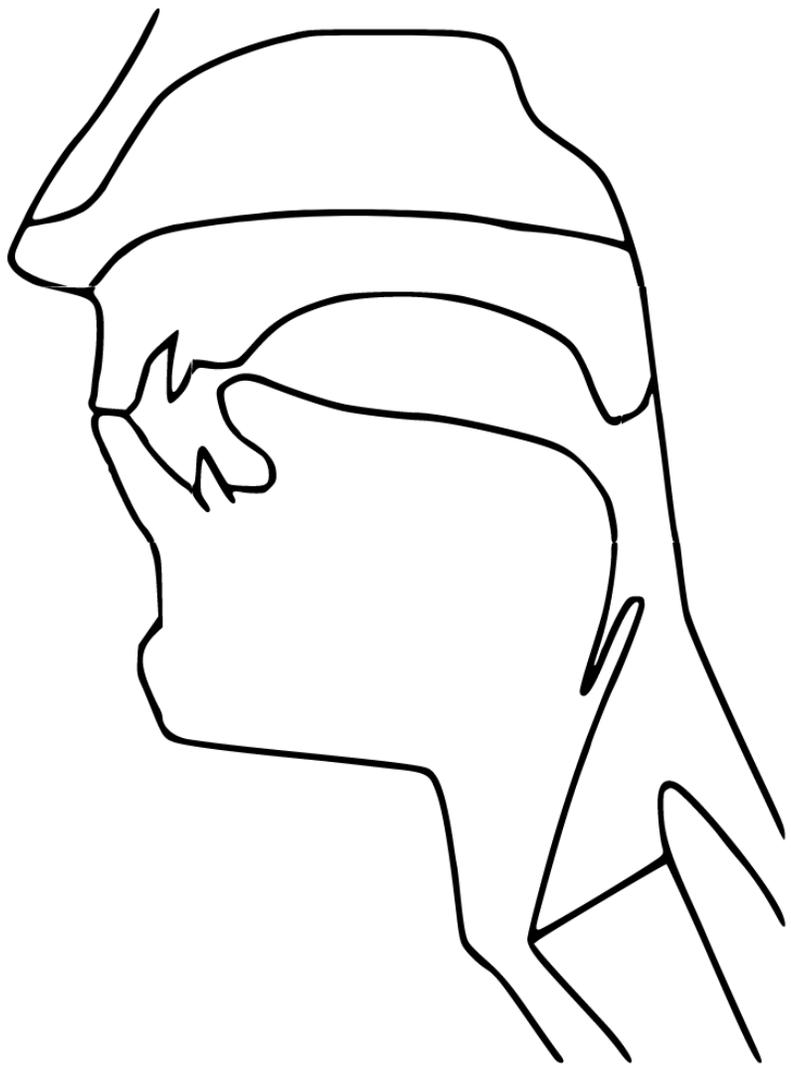




Thompson
*Thom's son







[q] = voiceless uvular stop
[k] = voiceless velar stop

Mark

[mɑ:k] vs. [mɑ:q]

[kalb] vs. [qalb]
“dog” vs. “heart”

make vs. mech
[mek] vs. [mɛk]

vague
[veg] not [vεg]

negative

	LABIAL		DENTAL		ALVEOLAR	PALATAL		VELAR		
NASAL	m				n	ɲ				
STOP	p	b	t	d			tʃ	dʒ	k	g
CONTINUANT	f				s				x	
LATERAL					l					
FLAP					r					
TRILL					r					

In designing a phonology,
only the sounds you use
exist.

Kēlen by Sylvia Sotomayor

	LABIAL	DENTAL	ALVEOLAR	POST-ALV.	PALATAL	VELAR
STOP	p~b		t~d		c~tʃ	k~g
FRICATIVE	ɸ~β	θ~ð	s~z	ʃ~ʒ	ç~j	h~ɣ
NASAL	m		n		ɲ	ŋ
APPROX.			r, l		ʎ	

	FRONT	CENTRAL	BACK
CLOSE	i, iː	ɨ	u, uː
MID	ɛ, ɛː		ɔ, ɔː
OPEN		a, aː	

ALLOPHONY

pie ~ spy
key ~ ski
two ~ stew

p^haj ~ spaj

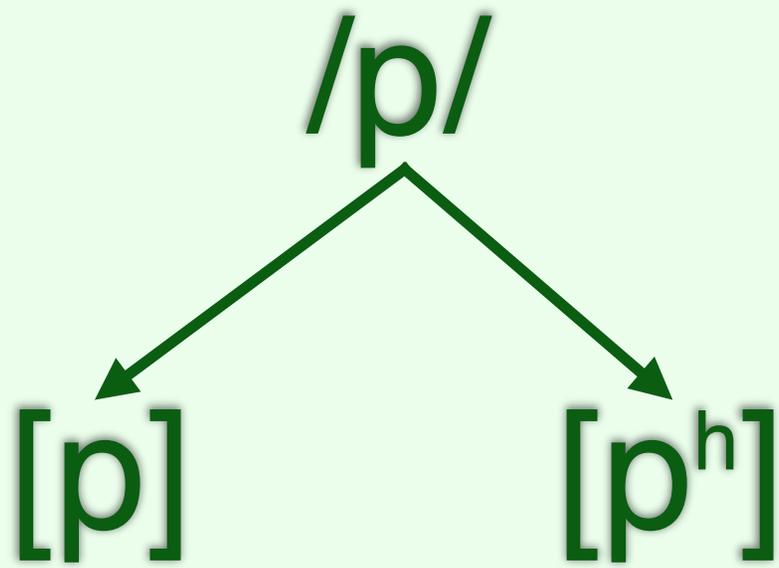
k^hi ~ ski

t^hu ~ stu

prepare ~ preparation

p^hɹə.'p^hɛɹɪ ~ 'p^hɹɛ.pə.'ɹe.ʃɪn

Same phoneme; different
sounds. Variation
predictable.



/p/ phoneme

[p]

[p^h]

allophones

/phonemes/
[allophones]

If /X/ is the phoneme, we
have to explain why /X/
shows up as either [Y] or
[Z].

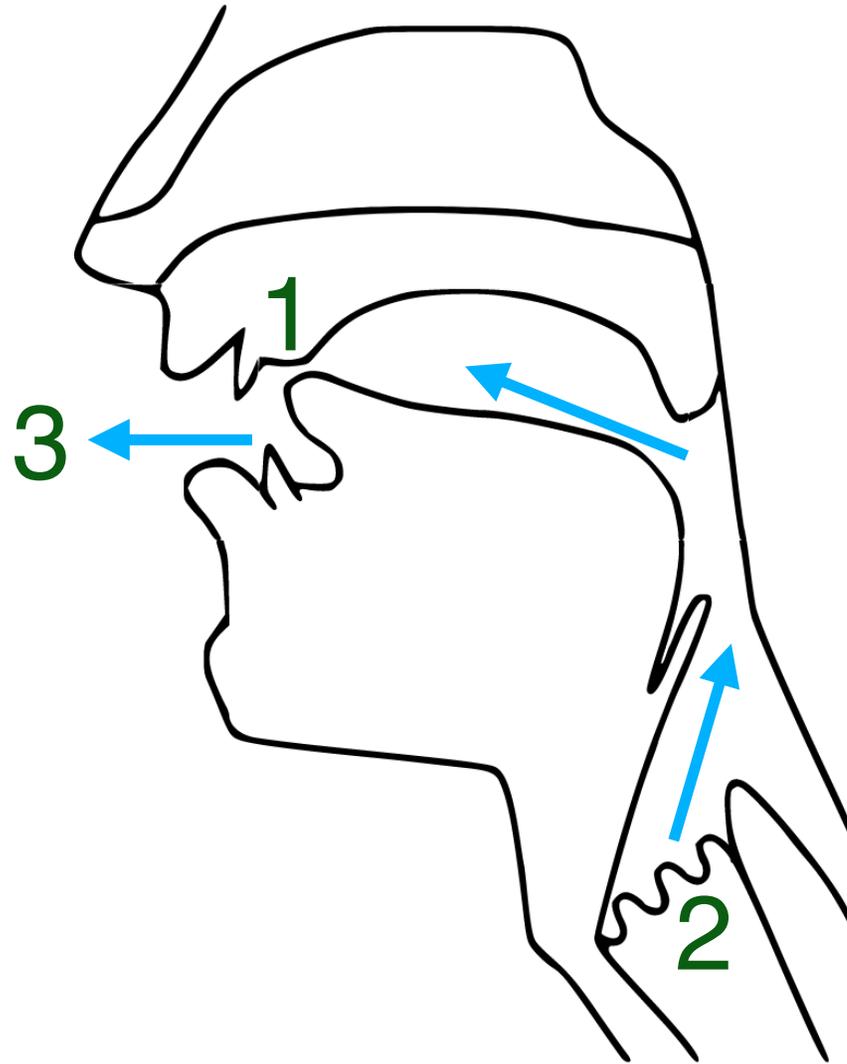
A > B / C_D

/p/ > [p^h] / #_

/t/ > [t^h] / #_

/k/ > [k^h] / #_

C[-voice] > C^h / #_



[p] vs. [p^h]

[p] vs. [p^h]

- Pronounced with the lips
 - Stops
 - Voiceless

[p] vs. [p^h]

+consonantal

-sonorant

-syllabic

[p] vs. [p^h]

+labial

-coronal

-dorsal

[p] vs. [p^h]

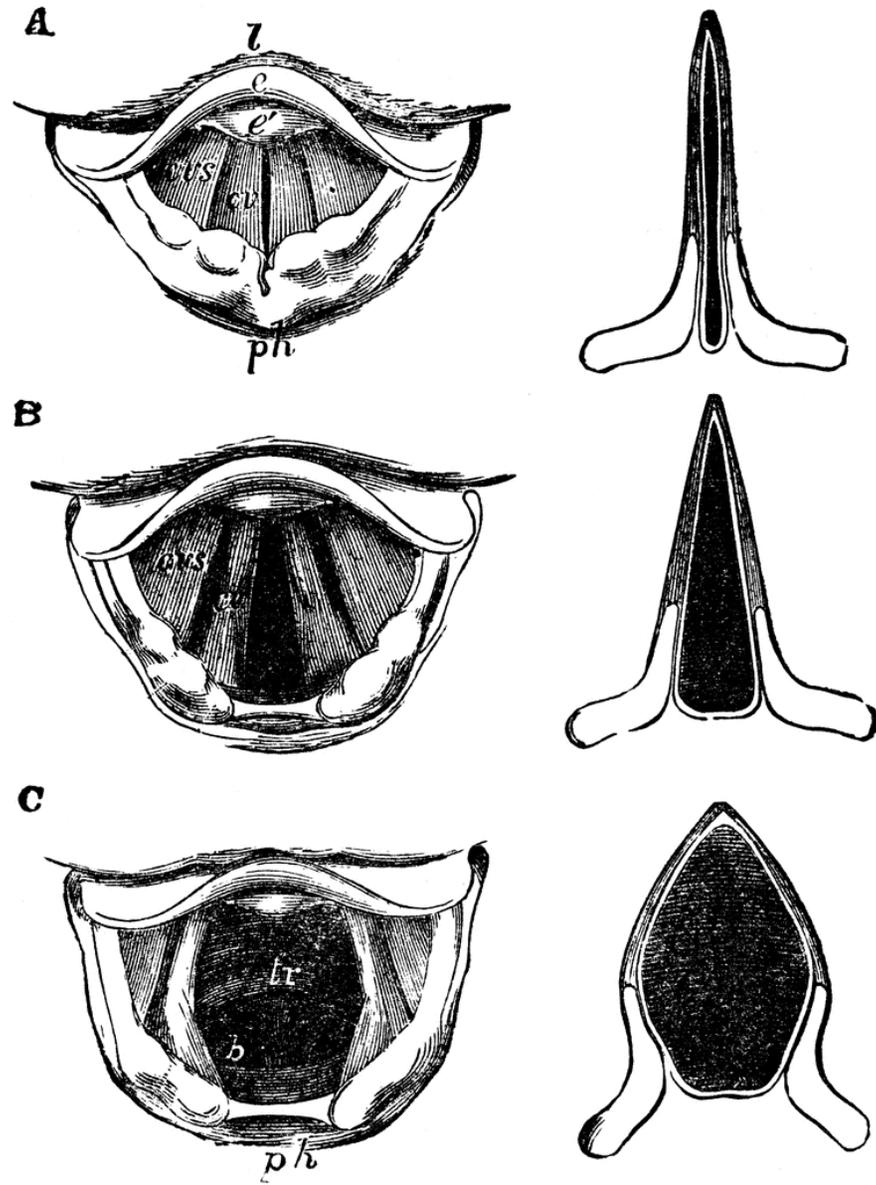
- continuant
- lateral
- nasal
- delayed release

[p] vs. [p^h]

-voice

-constricted glottis

(+/-)spread glottis



A > B / C_D

/p/ > [arim] / s_
/p/ > [l] / #_

*spaj > sɔrimaj
*pɫk > lɫk

Why?

SOUND SYSTEMS

	LABIAL		DENTAL		ALVEOLAR	PALATAL		VELAR		
NASAL	m				n	ɲ				
STOP	p	b	t	d			tʃ	dʒ	k	g
CONTINUANT	f				s				x	
LATERAL					l					
FLAP					ɾ					
TRILL					r					

	FRONT	BACK
HIGH	i	u
MID	e	o
LOW	a	

Voiced Consonants

-Voicing is easier to maintain in the front of the mouth

-b > g

Voiced Consonants

- Igbo: k, ŋ, gb
- Same applies to implosives.

Ejectives

-Easier in the back of the mouth than the front

-k' > p'

Sonorants

- Voiced by default
- Not uncommon to find them as nuclei

Geminates

- Sonorant geminates > fricative geminates > stop geminates
- Voiceless > voiced

Coronals

- Privileged class,
morphologically
- Fewer syllabic
restrictions

Affricates

-Coronal > others

Aspiration

-Voiceless > voiced

-Stops > fricatives > other

Rhotics

- They do funny stuff
- Attract retroflex consonants

Laterals

- Pretty much always coronal
- Tend to get lost in coda position

Palatals

- Cause palatalization
- Post-alveolar sounds
“stronger”; attract palatals

High Vowels

- Deflect nasalization

- Strong effect on
consonants

- Opposite rounding not at
all uncommon

Mid Vowels

-ATR harmony most common here

-Usually at least two (not true of high/low)

Low Vowels

- Not many distinctions
- Deflect rounding
- Less precise placement

Front Vowels

- Height/rounding distinctions common
- Cause palatalization

Back Vowels

-Opposite rounding less common

-Height distinctions less common

Central Vowels

- Notoriously mercurial
- Height/rounding distinctions rather uncommon

Natlang,
conlang, or
gibberish?

Sound System Apple

	Labial	Alveolar	Retroflex	Palatal	Velar
Stop	p	t	ʈ	c	k
Fricative					
Affricate					
Nasal	m	n	ɳ	ɲ	ŋ
Trill/Flap		r	ɽ		
Lateral		l	ɭ	ʎ	
Approximant			ɻ	j	w

	Front	Central	Back
Close	i, iː		u, uː
Close-Mid			
Mid			
Open-Mid			
Open		a, aː	

NATLANG!

Warlpiri

Sound System Banana

	Labial	Labio-Dental	Alveolar	Palatal	Velar	Glottal
Stop	p/b, p'/b'		t, t'		k/g, k'	ʔ
Fricative		f	s/z, s'	ʃ/ʒ, ʒ'		
Affricate			ts, ts'			
Nasal	m		n			
Trill/Flap		v	r			
Lateral			l			
Approximant				j, j'	w	

	Front	Central	Back
Close	ɪ, ɪː	ʉ, ʉː	
Close-Mid	e, eː	ə, əː	
Mid			
Open-Mid	ɛ, ɛː		
Open			ɑ, ɑː

CONLANG!
Nolwynn

Sound System Cherry

	Labial	Alveolar	Post-Alveolar	Palatal	Velar	Glottal
Stop	p/b	t/d		c/ɟ	k/g	ʔ
Fricative	f	s/z	ʃ			h
Affricate						
Nasal	m, m ^b	n, n ^d		ɲ, ɲ ^t	ŋ, ŋ ^g	
Trill/Flap		r				
Lateral		l				
Approximant				j	w	

	Front	Central	Back
Close	i, ĩ	ɨ, ɨ̃	u, ũ
Close-Mid	e, ẽ		o, õ
Mid		ə, ə̃	
Open-Mid	ɛ, ɛ̃		ʌ, ʌ̃, ɔ, ɔ̃
Open		a, ã	

NATLANG!
Acehnese

Sound System Fig

	Labial	Alveolar	Palatal	Velar	Uvular	Glottal
Stop	p, b	t, d, d̥		k, g	q, ɢ	ʔ
Fricative	ɸ	s	ʃ/ʒ			h
Affricate		ts	tʃ			
Nasal	m	n		ŋ		
Trill/Flap		r				
Lateral		l				
Approximant			j	w		

	Front	Central	Back
Close	i	ɨ	u
Close-Mid	e		o
Mid		ə	
Open-Mid			ɔ
Open		a	

GIBBERISH!

Sound System Grape

	Labial	Dental	Palatal	Velar	Uvular
Stop	p, pj	t, th, ti, tʰ		g, gj	ɢ
Fricative		s, ʒ, ʒj	ʃ	x, xj	
Affricate		ts, tʰs	tʃ, tʃʰ		
Nasal	m, mj	n, nj		ŋ	
Trill/Flap		r, rj			
Lateral					
Approximant			j	w, wj	

	Front	Central	Back
Close	i, i:		ʊ, ʊ:, u, u:
Close-Mid	e, e:	ə	o:
Mid			
Open-Mid			ɔ, ɔ:
Open		a, a:	

NATLANG!

Mongolian

Sound System Kiwi

	Lab.	Dent.	Alve.	Post-Alve.	Retr.	Pal.	Velar	Uvul.	Phar.	Glott.
Stop	p, p'		t, t'		ʈ, ʈ'		k, k'	q, q'		ʔ
Fric.	f/v	θ	s/z	ʃ/ʒ	ʂ/ʐ		x/χ		ħ	
Affric.	pf, pf'		ts, ts'	tʃ, tʃ'	tʂ, tʂ'					
Nasal	m		n				ŋ			
Trill/ Flap			r		ɾ					
Lateral			l		ɭ					
Approx.						j	w			

	Front	Central	Back
Close	i, i:		u, u:
Close-Mid	e:		o:
Mid		ə	
Open-Mid	ɛ		ɔ
Open		a	

GIBBERISH!

Sound System Mango

	Labial	Dental	Alveolar	Palatal	Velar	Glottal
Stop	p	t			k, kw	ʔ
Fricative			s	ʃ		h
Affricate			ts	tʃ		
Nasal	m		n	ɲ		
Trill/Flap			r			
Lateral			l			
Approximant				j	w	

	Front	Central	Back
Close	i		
Close-Mid	e, ě		o, õ
Mid			
Open-Mid			
Open		a, ã	

CONLANG!
Tmaśare?

Sound System Orange

	Labial	Alveo.	Post-Alveo.	Alveo.-Pal.	Retro.	Pal.	Velar	Uvular	Phar.	Glottal
Stop	p/b, p', pw'	t/d, t', tw'					kw/ gw, kw'	q, qw		ʔ, ʔw
Fric.	f	s/z, ʃ/ ʒ, ʃ'	ʃ/ʒ, ʃ', ʃw/ ʒw, ʃw'	ʃ/ʒ	ʒ/ʒ		x/ɣ	χ/ʁ, χw/ ʁw	ħ	
Affric.		ts/dz, ts', tsw/ dzw	tʃ/dʒ, tʃ'		tʃ, tʃ'					
Nasal	m	n								
Trill/ Flap		r								
Lateral										
Approx.						j	w			

	Front	Central	Back
Close			
Close-Mid			
Mid		ə	
Open-Mid		ɜ	
Open		a	

NATLANG!

Adyghe

Sound System Pear

	Labial	Coronal	Retroflex	Palatal	Velar	Glottal
Stop	p/b, ^m b	t/d, ⁿ d	ṭ/ḍ, ^{ṇ} ḍ		k/g, ^ŋ g	
Fricative		s				h
Affricate				tʃ/dʒ		
Nasal	m	n	ɳ	ɲ	ŋ	
Trill/Flap		r				
Lateral		l				
Approximant	ʋ			j		

	Front	Central	Back
Close	i, i:		u, u:
Close-Mid	e, e:		o, o:
Mid			
Open-Mid			
Open	æ, æ:	a, a:	

NATLANG!

Sinhalese

Sound System Strawberry

	Labial	Dental	Alveo.	Post-Alveo.	Retro.	Palatal	Velar	Uvular
Stop	p/b		t/d				k/g	
Fricative	f/v	θ/ð	s/z	ʃ/ʒ			x	ʁ
Affricate			ts/dz	tʃ/dʒ				
Nasal	m		n				ŋ	
Trill/Flap					ɾ			
Lateral			l					
Approx.						j	w	

	Front	Central	Back
Close	i, ɪ		u
Close-Mid	e		o
Mid			
Open-Mid			ʌ
Open			ɑ

CONLANG!
Teonaht

Sound System Tangerine

	Lab.	Dent.	Alve.	Post-Alve.	Retr.	Pal.	Velar	Uvul.	Phar.	Glott.
Stop	p/b, p ^h , p'	t/d, t ^h , t'				c/ɟ, c ^h , c'	k/g, k ^h , k'	q/G, q ^h , q'		ʔ
Fric.	f/v	θ/ð	s/z, ʈ	ʃ/ʒ	ʂ/ʐ	ç/ʝ	x/ɣ	χ/ʁ	ħ	h
Affric.			ts/ dz, tʂ ^h , tʂ'	tʃ/dʒ, tʃ ^h , tʃ'	tʂ/ dʐ, tʂ ^h , tʂ'	cç', cʝ ^h	kx'	qχ'		
Nasal	m		n				ŋ			
Trill/ Flap			r, r		ɾ					
Lateral		l, ɭ			l					
Approx.						j	w			

	Front	Central	Back
Close	i, y, ɪ		ɯ, ʉ, u
Close-Mid	e, ø		ɤ, o
Mid			
Open-Mid	ɛ, œ		ɔ
Open	æ	a	ɑ

CONLANG!

Ithkuil

Sound System Watermelon

	Labial	Coronal	Retroflex	Palatal	Velar	Glottal
Stop	b, p ^h	t/d, t ^h	t̪/d̪		k/g	
Fricative		s/z	ʂ/ʐ		x/ɣ	h
Affricate		ts, t ^h s	tʂ/dʐ			
Nasal	m	n		ɲ		
Trill/Flap		r, ɾ				
Lateral		l	ɭ			
Approximant	ʋ			j	w	

	Front	Central	Back
Close	y		u
Close-Mid	e		o
Mid			
Open-Mid	ɛ		ɔ
Open		a	

GIBBERISH!

Takeaways

**Systemic pressure vs.
universal pressure**

Takeaways

Regular use (or overuse)
can rescue rarer
phonemes.

Kahtsaai by William Annis

	LABIAL	CORONAL	PALATAL	VELAR	GLOTTAL
STOP	p	t, ts		k	ʔ
FRICATIVE		s, ʃ			h
NASAL	m	n			
APPROX.		r, l	j	w	

	FRONT	CENTRAL	BACK
CLOSE	i, iː		uː
CLOSE-MID	eː		o
OPEN-MID	ɛ		
OPEN		a, aː	

SOUND CHANGE

The sounds of a language
change gradually over
time.

mu:s

mu:si

mu:s

my:si

mu:s

my:sə

mu:s

my:s

mu:s

mi:s

maws

majs

Why?

A given sound
change never
NEEDS to happen!

Why?

- Gradual change
- Need for one group to distinguish itself
- Influx of non-native speakers

Gradual Change

-Mishearing

-Analogy

-Mispronunciation (e.g.
faster speech)

Gradual Change

-Mishearing

-Analogy

-Mispronunciation (e.g.
faster speech)

Sound Change...

- Has no exceptions
- Ignores grammar
- Ignores history

...but...

-Accelerated for
morphology

-May actually leave
certain paradigms alone

-Near mergers

Sound Changes
Assimilation
Dissimilation
Lenition
Deletion
Insertion

Assimilation

Sounds being more like
the sound(s) next to them.

Assimilation

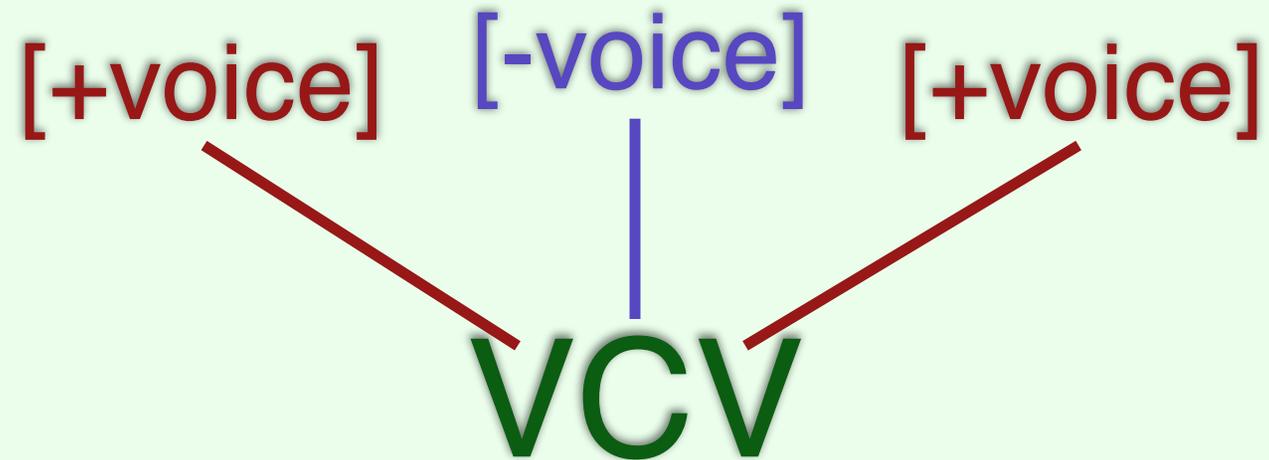
C > [+voice] / V_V

*lacus > lago

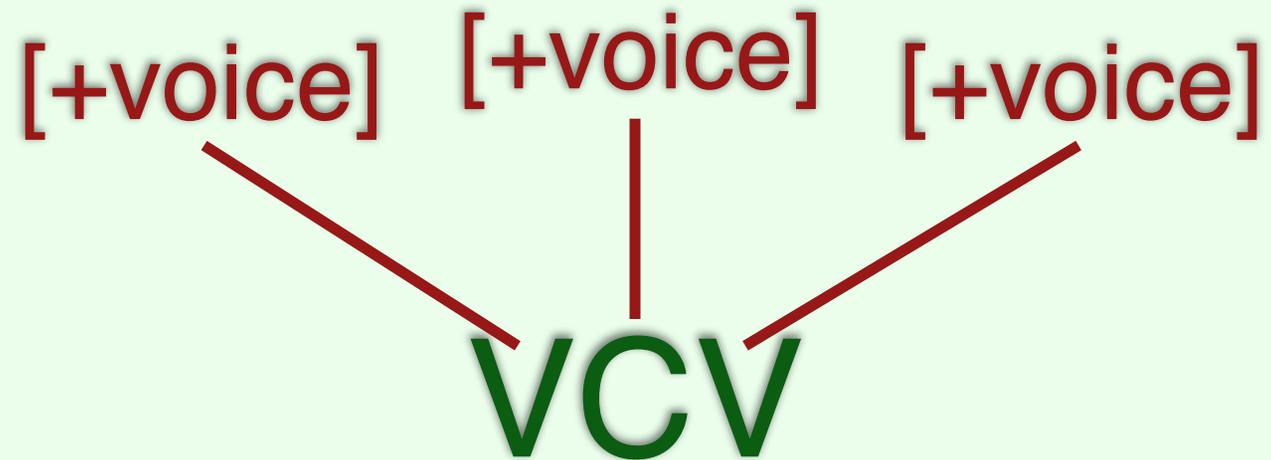
Assimilation

VCV

Assimilation



Assimilation



Assimilation

Japanese

daisuke > dais_uke

Assimilation

Japanese

daiswke > daisẉke

Assimilation

RESULT

Vocal folds do less work
(not off then on then off,
or vice-versa).

Common Assimilations

Nasal Place Assimilation

*in-possible > impossible

Common Assimilations

Voice Assimilation

*tʌtʃ + -d > tʌtʃt

Captain Picard “Wesley”

Common Assimilations

Anticipatory/Regressive

$s > z / _C[+voice]$

Common Assimilations

Perseveratory/
Progressive
d > t / C[-voice]_

Common Assimilations

Post-Nasal Fortition

C > [+voice] / N_

*n- + lima > ndima

Common Assimilations

Total Assimilation (Geminations)

*octo > otto

*somnus > sonno

Common Assimilations

Palatalization

*kentum > *cent*

*gela:tus > *gelato*
future

*vetçer > v^jetçer

Common Assimilations

Umlaut

*goosi > geese

*mani > men

Digression

Vowel Harmony: Vowels change quality to match the vowels in the base.

Vowel Harmony

Turkish

køjin > køjyn

tʃodʒuyin > tʃodʒuyun

adam > adamun

Vowel Harmony

Turkish

-in, -yn, -un, -wn

Vowel Harmony

Turkish

-in, -yn, -un, -wn

All High

Vowel Harmony

- Only applies when there are affixes that can be changed
- Work within the system

Dissimilation

Sounds being less like the sound(s) next to them.

Dissimilation

moral

molar

solar

aural

oral

floral

mural

polar

Dissimilation

morar

molal

solal

aurar

orar

florar

murar

polal

Common Dissimilations

Manner Dissimilation

molar

moral

Common Dissimilations

Manner Dissimilation

*k^wi:ŋk^we > kink^we

Common Dissimilations

Manner Dissimilation

*t^hriks “hair”

*trik^hes “hairs”

Common Dissimilations

Manner Dissimilation

pollo /pojo/ [poɔo]

Common Dissimilations

Manner Dissimilation

*dʌθrak + qɔʝi >
dʌθraxqɔʝi

Common Dissimilations

Place Dissimilation

cardamom > cardamon

Common Dissimilations

Voice Dissimilation

Japanese

toki + toki > tokidoki

Common Dissimilations

Note:

Not intervocalic voicing!

toki + toki > tokidoki

Lenition

Sounds get “weaker”.

Lenition

Finnish

konsertti > konsertissa

koti > kodissa

Skotlanti > Skotlannissa

Lenition

English

Sacramento

winter vs. winner

Common Lenitions

Opening

SS > S > A > F > [h] > Ø

Common Lenitions

Spirantization

$S > [+voice] > F > G > \emptyset$

Common Lenitions

Spanish

status > estado

*estado > *estađo >

*estađo > estao

Common Lenitions

Finnish

tukea ~ tuen

ripaa ~ rivän

pataa ~ padan

Common Lenitions

Spanish
ehtao > ettao

Common Lenitions

Coda L Lenition

l > w / _{#/CC}

l > j / _{#/CC}

Deletion

Sounds get lost.

Common Deletions

Word-final C Loss

French

trop [tʁɔ]

Common Deletions

Word-final V Loss

French

porte [pɔxt]

Common Deletions

Unstressed V Loss
comfortable

Common Deletions

Unstressed V Loss

comfortable

(Also metathesis!)

Common Deletions

Unstressed V Loss

[^hkʌmf.tɹ.bl]

(Also metathesis!)

Common Deletions

CC Simplification

knight

ought

light

Common Deletions

CC Simplification

rafts

crafts

listen

Common Deletions

Compensatory
Lengthening

*lixt > *li:t > lajt

Insertion

Sounds get added.

Common Insertions

Epenthesis

Thompson

messenger

passenger

Common Insertions

Prosthesis

status > *estado*

> *état*

Common Insertions

Paragoge

Japanese

strike > sʉtorai_oki_o

bus > basʉ_o

Other Phenomena
Word-Final Devoicing
Turkish
kitabın “of the book”
kitap “book”

Other Phenomena

Word-Final Lowering

$V > [-\text{high}] / _ \#$

$i, u > e, o / _ \#$

Other Phenomena

Breaking Spanish

*porta > puerta

*semper > siempre

Other Phenomena Breaking Finnish

*so:mi > suomi

*sø:n > syøn

*te:tæn > tiedæn

Other Phenomena

Nasalization

French

bon [bɔ̃]

Other Phenomena

Chain Shifts

Hawaiian

(1) $h/? > \emptyset$

(2) $f/s > h, k > ?$

(3) $t > k$

Ordering
Hawaiian
hiku “seven”
waʻa “canoe”
ʻuku “louse”

Ordering

$$(1) h/? > \emptyset$$

$$(2) f/s > h, k > ?$$

$$(3) t > k$$

Ordering

Proto-Polynesian

fitu “seven”

waka “canoe”

kutu “louse”

Ordering

(1) $f/s > h, k > ?$

(2) $h/? > \emptyset$

(3) $t > k$

Ordering

(1) $f/s > h, k > ?$

$fitu > hitu$

$waka > wa?a$

$kutu > ?utu$

Ordering

(2) $h/? > \emptyset$

hitu > itu

wa?a > waa

?utu > utu

Ordering

(3) $t > k$

$itu > iku$

$waa > waa$

$utu > uku$

Ordering

Hawaiian

iku hiku “seven”

waa waʻa “canoe”

uku ʻuku “louse”

Ordering

$$(1) t > k$$

$$(2) f/s > h, k > ?$$

$$(3) h/? > \emptyset$$

Ordering

Hawaiian

iu hiku “seven”

waa waʻa “canoe”

uu ʻuku “louse”









Dothraki
nasa “snipe”
tavo “axe”
sado “drum”
vado “filly”
dini “drizzle”

Dothraki

nasa “snipe”

n'as

tavo “axe”

t'af

sado “drum”

s'aθ

vado “filly”

vaθ

dini “drizzle”

dĩ

Dothraki

nasa “snipe”

naðhə

tavo “axe”

taðhə

sado “drum”

haɮə

vado “filly”

faɮə

dini “drizzle”

ɮinə

Dothraki

nasa “snipe”

neθ

tavo “axe”

tef

sado “drum”

seð

vado “filly”

feð

dini “drizzle”

tã

Dothraki

nasa “snipe”

as

tavo “axe”

taf

sado “drum”

sat

vado “filly”

fat

dini “drizzle”

di

Dothraki

nasa “snipe”

nans

tavo “axe”

θat

sado “drum”

sanθ

vado “filly”

vanθ

dini “drizzle”

đin

Dothraki

nasa “snipe”

enese

tavo “axe”

eθevu

sado “drum”

seǒu

vado “filly”

veǒu

dini “drizzle”

iǒ^jan^ja

Dothraki

nasa “snipe”

tavo “axe”

sado “drum”

vado “filly”

dini “drizzle”

najs

tajf

sajt

vajt

d3in

Dritok by Don Boozer

	LABIAL	CORONAL	PALATAL	RETROFLEX	UVULAR	GLOTTAL
STOP	p, p'	t, t'			q, q', q ⁷	
AFFRICATE		ts', tr _o '	cç'			
CLICK	ʘ, ʘ ^w	ǀ, ǀ ^w	ǃ, ǃ ^w		ǁ	
FRICATIVE	ɸ	s, ʈ	ç	ʂ	χ	h
NASAL	ᶞ					
APPROX.		ɽ			ʘ	

STRESS AND TONE

Stress

Prominence associated
with some syllable.

Stress

subject (n) vs. subject (v)

pervert (n) vs. pervert (v)

Stress

PROMINENCE

-Intonation

-Length

-Volume

Stress

Fixed

Predictable

“Unpredictable”

Fixed Stress

FINNISH

sauna

Suomea

sampo

Fixed Stress

TURKISH

kitap

evler

tarafından

Fixed Stress

HAWAIIAN

Kamehameha

pua'a

Moana

Predictable Stress

ARABIC

kitaːb

walad

kataba

katabta

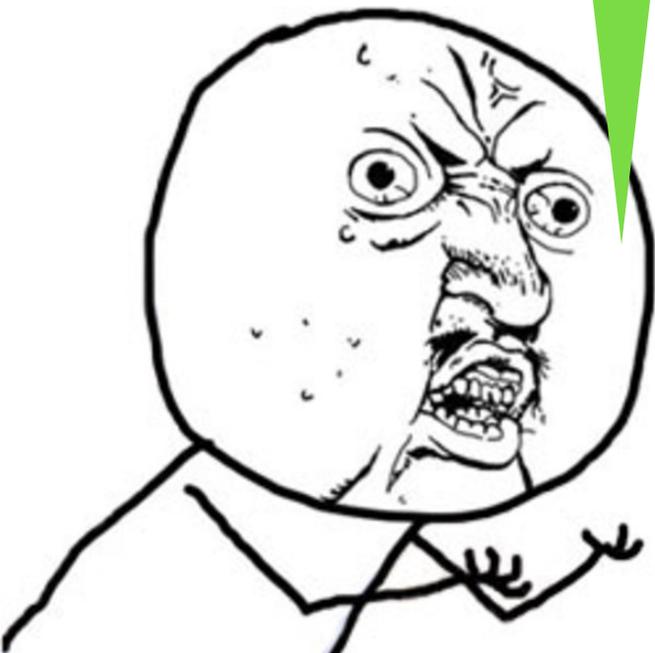
Predictable Stress

Heavy Syllable: Language dependent, but V:, VC, V:C, VCC, VV. Each unit called a mora.

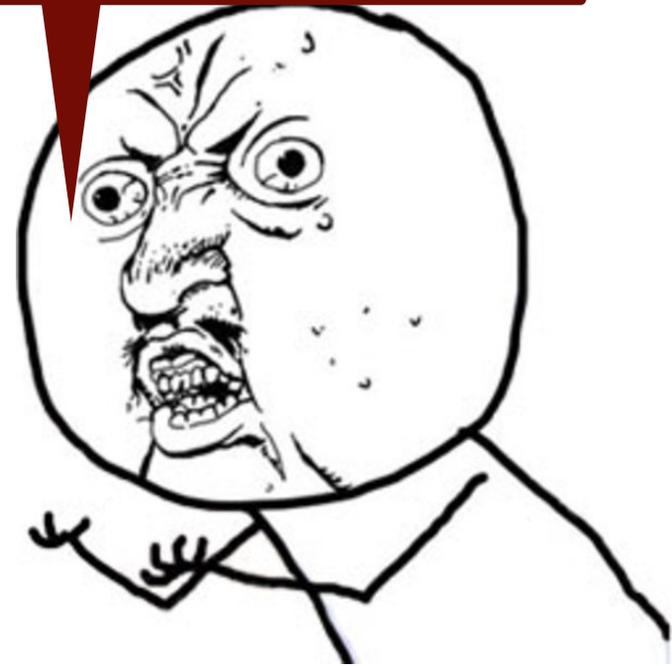
Predictable Stress

Optimality Theory: What you hear is the least bad version of the language.

**Y U PUT STRESS CLOSE TO
THE END OF THE WORD!**



**Y U NO STRESS HEAVY
SYLLABLES!**



Predictable Stress

ARABIC

/ka.ta.ba/

Predictable Stress

ARABIC

/'ka.ta.ba/

Predictable Stress

ARABIC

/ka.tab.ta/

Predictable Stress

ARABIC

/ka.'tab.ta/

Predictable Stress

ARABIC

/ki.taːb/

Predictable Stress

ARABIC

/ki.'ta:b/

Predictable Stress

Heavy $\sigma >$ RT Edge

Predictable Stress

ARABIC

/wa.lad/

Predictable Stress

ARABIC

/ˈwa.lad/

Predictable Stress

ARABIC

“Long Vs more important!”

“They have to be SUPER
heavy!”

Predictable Stress ARABIC

*kita:bu > kita:b

*waladu > walad

*kataba > kataba

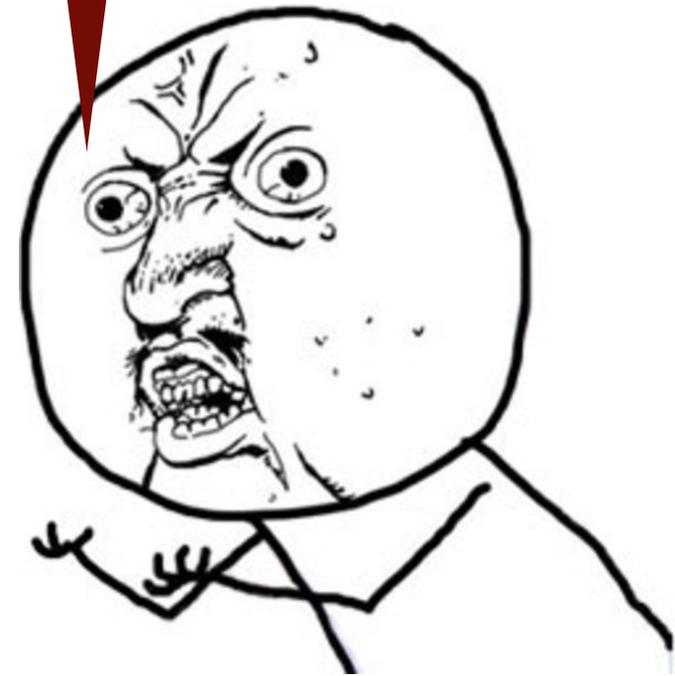
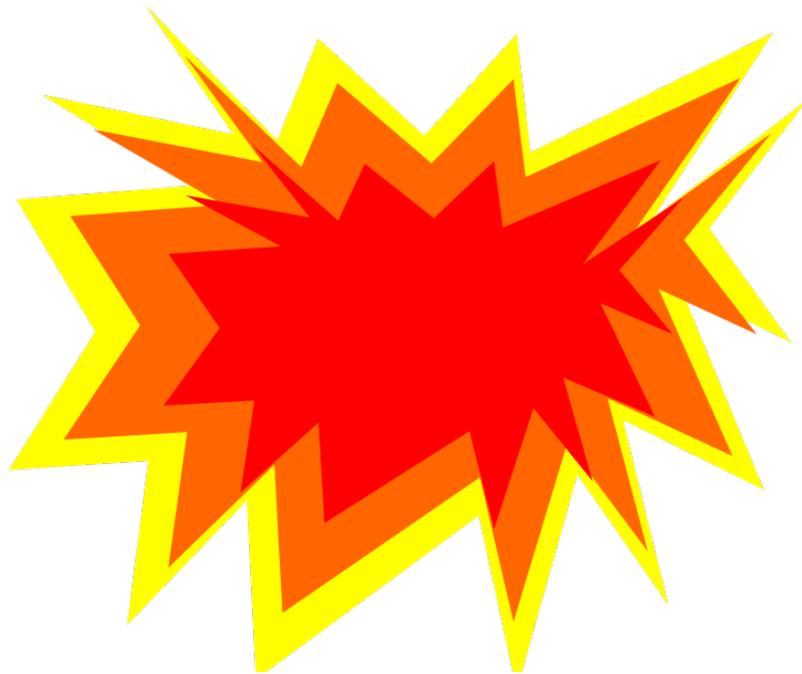
*katabta > katabta

Regular rules + sound
change + borrowing +
analogy = “unpredictable”
stress.

Unpredictable Stress

subject vs. subject

HOW U LEARN??????????



WHO CARES?!

Tone

Intonation routinely
associated with specific
syllables.

Tone

7	1	1	1	1
5	4	3	2	1
H	HM	M	LM	L

Tone

Contour Register

Contour

mā (媽/妈) 'mother'

má (麻/麻) 'hemp'

mǎ (馬/马) 'horse'

mà (罵/骂) 'scold'

ma (嗎/吗) (an interrogative particle)

Register

shekára [ʃeː.ka.raː] "year" (LHL)

shekarú [ʃeː.ka.ruː] "years" (LH)

surúká [su.ru.kaː] "mother-in-law" (LH)

surukúwá [su.ru.ku.waː] "mothers-in-law" (LH)

Tonogenesis

How you get 'em.

Tonogenesis

*CVC > Contour

*CV > Register

Tonogenesis

(1) Stress > Tone

es. 'ta.đồ > è.táồ

Tonogenesis

(2) C-Loss > Tone

Tonogenesis

Loss of voicing/phonation
of #C_ > tone levels.

Loss of phonation/C _C#
> contours.

Tonogenesis

SIMPLE

#C_: [+voice] = L
[-voice] = H

Tonogenesis

SIMPLE

C#: Loss of F = L

Loss of S = H

Tonogenesis

COMPLEX

#C_: Breathiness/murmur associated with L (murmuring associated with [+voice]). Tenseness (i.e. [-voice]) associated with H.

Tonogenesis

COMPLEX

_C#: Tenseness of stop pronunciation associated with H; breathiness associated with L.

Tonogenesis

BUT!

H tone reconstructed from $_?#\$ from Language A1; L tone from Language A2.

L tone reconstructed from $_h#\$ from Language B1; H tone from Language B2.

Tonogenesis

Has to do with *how* tense the glottal stops were pronounced, etc.

Tonogenesis

Summary: Stick to your story; you're probably good.

DOTHRAKI

Language of the Dothraki
people who live in the
Dothraki Sea, in the
middle of Essos.



Proto-Plains

Dothraki

Lhazareen

CONSONANTS	LABIAL	DENTAL	ALVEOLAR	PALATAL	VELAR	UVULAR	GLOTTAL
STOP	p/b	t/d		tʃ/dʒ	k/g	q	
CONTINUANT	f/v	ð	s/z	ʃ/ʒ	x/ɣ		h
NASAL	m	n					
LATERAL		l					
FLAP/TRILL			r, r̄				
GLIDE				j	w		

CONSONANTS	LABIAL	DENTAL	ALVEOLAR	PALATAL	VELAR	UVULAR	GLOTTAL
STOP		t/d		tʃ/dʒ	k/g	q	
CONTINUANT	f/v	θ	s/z	ʃ/ʒ	x		h
NASAL	m	n					
LATERAL		l					
FLAP/TRILL			r, r				
GLIDE				j	w		

VOWELS	FRONT	CENTRAL	BACK
HIGH	i	ɨ	u
MID	e	ə	o
LOW	a		

VOWELS	FRONT	CENTRAL	BACK
HIGH	i		
MID	e		o
LOW	a		

Allophony

$N > [\alpha\text{place}] / _C[\alpha\text{place}]$

*dʒalan + qoji > dʒalanqɔji

Allophony

V > [-high ~ +back] / q_

*qoj > qɔj *qiɸ > qeθ

*qesah > qɛsaħ

*qana > qɑna

Allophony

V > [-round] / C[+dental]_

*doθrak > dʌθrak

Allophony

$r > r / \# _ V, _ \#$

*aʃhadʒar > aθhadʒar

*riʒ > riʒ

Phonotactics

#_ = any C or V

_# = any V; no /w, q, g/

_V = any V or C

V_ = any V or C

Phonotactics

REPAIR

$\emptyset > e / \{q, w, g\}_\#$

$*tʃoq > tʃoqε$

Phonotactics

#CC = C[+stop]{r, l, w}

#CC = h, {r, l}

#CC = {m, n}{r, l, h}

Phonotactics

EXCEPTIONS

*tw, *dw

fr, fl, vr, vl

Phonotactics

**CC# = inverse sonority
hierarchy**

Phonotactics

REPAIR

$\emptyset > e / CC_ \#$

*add > adde

Stress

C# = ultimate

VCCV# = penultimate

...V# = initial

Stress

*doϕrak > dɣ.'θrak

*diʃattʃra > di.'ʃat.tʃra

*doϕraki > 'dɣ.θra.ki

Stress

EXCEPTIONS

me- COMP

'an.ha ne.'sak me.'je.ri

'e.ri.ni

Stress

EXCEPTIONS

-CCeja

dʒo.'rok.ke.ja

Sound Changes

PREFACE

Dothraki separated from
Lhazar due to cultural
differences.

Sound Changes

$V[+\text{round}] > [-\text{high}]$

$*u > o$

Sound Changes

RESULT

*idu > idʌ “wooden”

*ido > idʌ “moaned”

Sound Changes

C[+labial] > [+cont]

*p, *b > f, v

Sound Changes

RESULT

*bad > vadχ “turnip”

*vad > vadχ “filly”

Sound Changes

RESULT

*bruz > vroz “slow”

*plas > flas “surface layer”

Sound Changes

C[+cont, +dent] > [-lateral]

* ϕ > θ

Sound Changes

RESULT

*dɔɤrak > dʌθrak

but *#θr

Sound Changes

V[-front, -back] > \emptyset / _#
ɨ > i, ə > e / elsewhere

Sound Changes

EXCEPTIONS

$$*\#C(C)VC\{i, \emptyset\} > \#C(C)VC\{i, e\}$$

Sound Changes

RESULT

PARTATIVE -ə/-ɪ

Sound Changes

Ch > [+cont]

*ph > f, *th > θ, *tʃh > ʃ,
*kh > x, *qh > x

Sound Changes

RESULT

*aphisi > afisi “of the fly”

*haw fisi > afisi “you will
be clean”

Sound Changes

C[+son, -syl] > [+con] / #_

*w > v, *j > ʒ

Sound Changes

RESULT

*wap > vaf “sheep”

*jant > ʒani “spear”

Sound Changes

* $\gamma > \emptyset / V_ (V)$

* $\gamma > j / \#_$

Sound Changes

RESULT

* γ esi > jesi

Mistakes

GENITIVE

xal ~ xali

ko ~ kosi

Mistakes

GENITIVE

xaleesi ~ xaleesisi

Mistakes

GENITIVE

(1) xaleesis

(2) xaleessi

(3) xa.le.e.'si

Mistakes

But I forgot. :(

Mistakes

rhae /rhae/

hrakkar /hrakkar/

Qotho /qoθo/

shierak /sierak/

Mistakes

khal /xal/

khaleesi /xaleesi/

Mistakes

khalisi /xalisi/

Mistakes

*yesi > jesi

Mistakes

*xal > xal

*xal-γesi > xaleesi

Mistakes

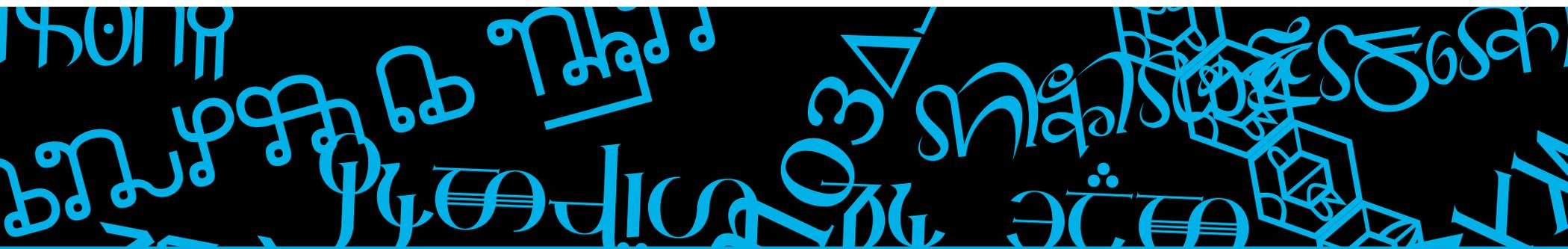
xa.'le.e.si

Mistakes

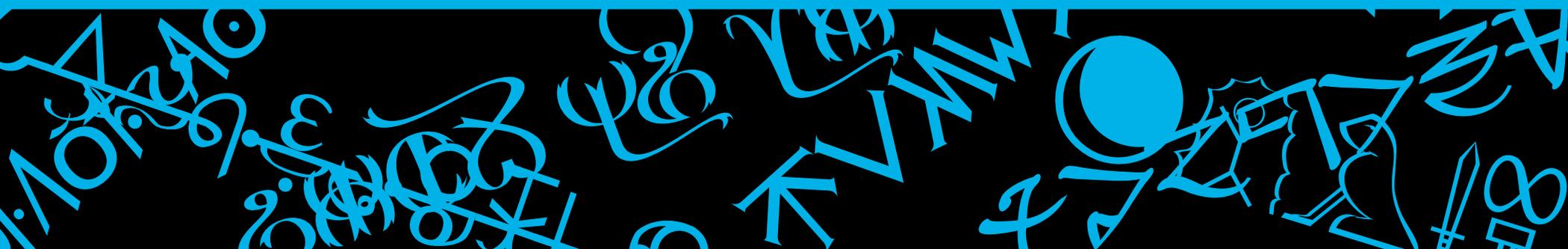
bláck bírd (2 words)

bláck b`ird (compound)

Questions?



CONLANG PHONOLOGY ASSIGNMENT







LINGUISTICS 183

WEEK 2

Klingon by Marc Okrand

	Singular	Plural
animal limb	γam	γamdɔʔ
hand	γop ^h	γop ^h ɔʔ
man	loɔ	loɔp ^h uʔ
back	ɔub	ɔubɔʔ
mother	ξoξ	ξoξp ^h uʔ
runner	q ^h εthwIʔ	q ^h εthwIʔp ^h uʔ

NOMINAL MORPHOLOGY

NOUNS

CVC
CCVC
VCVC

sun
person
bone

man/woman
tree
blood

**Morphology:
Interrelationships between
words that result in
grammatical, rather than
lexical, meaning.**

cat ~ cats

goose ~ geese

Russian
/kniga~knig/

Spanish

['a.βlɔ] “I speak”

[a.'βlɔ] “s/he spoke”

a man ~ the man
men ~ the men

French

un garçon ~ le garçon

des garçons ~ les garçons

The boy eats.
The boy is eating.
The boy hears.
??The boy is hearing.

Affix: A bit of phonological material that attaches to a word.

***lix “body”**

***knixt + lix “in the body of a
knight”**

***knixtlix “like a knight”
knightly**

Suffixes

cat~cats

dog~dogs

bush~bushes

Suffixes

German

Buch~Bücher

Reit~Reiter

Suffixes

Finnish

talo~talossa

Skotlanti~Skotlannissa

Helsinki~Helsingissä

Prefixes

udzi~lədzi

đamala~jamala

ɲini~ɲini

Circumfixes

elongate

Circumfixes

Georgian
didi “large”
sidide “size”

Infixes

bilí

binilí

bumilí

Infixes

alís

inalís

umalís

Infixes

/in + bilí/

(1) inbilí (4) ibnilí

(2) ibilí (5) nibilí

(3) inibilí (6) binilí

Suprafixes

subject~subject

Suprafixes

Hausa

sáɾ.kíː nèː

jáː.ɾòː néː

Suprafixes

sing

sang

sung

Suprafixes

katabtu

katabat

kutub

kitaab

**Suffixes: Common for
inflection, derivation, or
anything.**

Prefixes: Less common for inflection, common for derivation.

**Circumfixes: Rare, about
50/50 inflection vs.
derivation.**

**Infixes: Vanishingly rare.
Arise from prefixes, suffixes,
or analogy. Inflection
common; agrammatical
usage common.**

**Suprafixes: Quite common
—especially in conjunction
with another affix. Inflection
or derivation.**

Reduplication: The repetition of part or all of a word.

Reduplication

Hawaiian

‘au = swim

‘au‘au = bathe

Reduplication

Turkish

kitap = book

kitapmitap = books and stuff

Reduplication

Japanese

toki = time

tokidoki = sometimes

Reduplication

“Do you like him, or do you
like like him?”

Reduplication
hanky-panky
loosey-goosey
topsy-turvy
harakiri > /hɛɹikɛɹi/

Reduplication

Attic Greek

lu- > λεlu-

ρεmp- > ρερεmp-

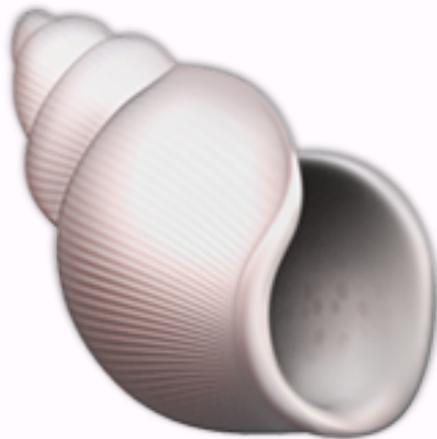
kri:- > κεkri-

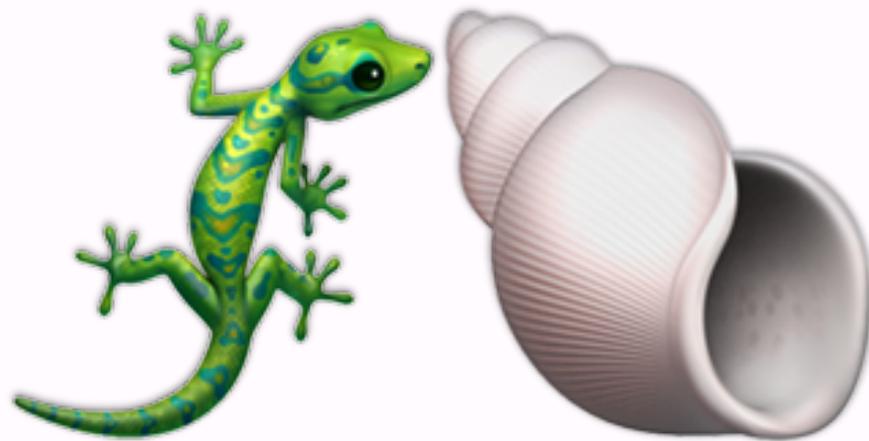
Every language uses reduplication. Many use it grammatically. Can arise ex nihilo.

**Often associated with:
diminutives, augmentatives,
pluralization, collectives,
duratives, definiteness,
perfect.**

EVOLVING AFFIXES









N-MOD

MOD-N

***lix “body”**

***knixt + lix “in the body of a
knight”**

***knixtlix “like a knight”
knightly**

knight's body MOD-N

Middleton
Pittsburgh
Anaheim
Peterson

**Generally the head
becomes the affix.**

Middleton > Middle town

Generally affixes reduce phonologically further than the rest of the language.

NUMBER

Nominal Number: How many of a thing there is.

Count vs. Mass

**Count number: Individuable
units referred to separately
by the grammar.**

Mass number: Indivisible masses referred to as a clump.

tree vs. grass

I've a tree on my estate.

That's the tree there.

Do you have any trees?

These are the trees I mean.

All three trees.

***I've a grass on my estate.**

@That's the grass there.

?Do you have any grasses?

**?These are the grasses I
mean.**

?*All three grasses.

my hair ~ ?my hairs
mein Haar ~ meine Haare

Singular
Dual
Trial
Plural

Singular: Ubiquitous
Dual: Not Uncommon
Trial: Vanishingly Rare
Plural: Crazy Common

**Tetral: Turned out that guy
was wrong.**

Paucal Collective

Paucal: Uncommon
Collective: Somewhat
Common

Singulative Common

Singulative: Uncommon
Common: Uncommon

Singulative

adar “birds” ~ aderyn “bird”

coed “forest” ~ coeden “tree”

plant “children” ~ plentyn

“child”

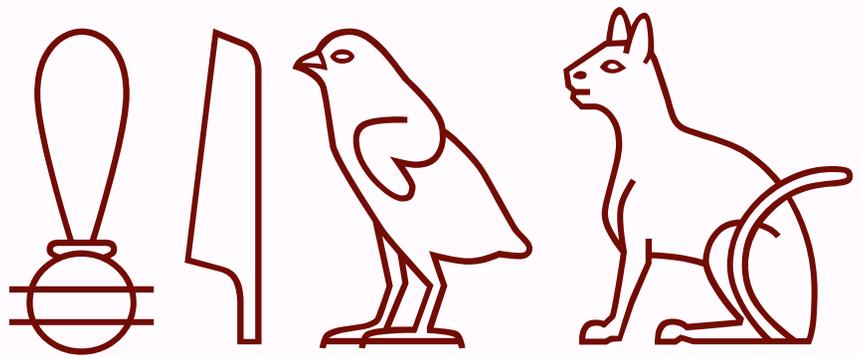
No Number

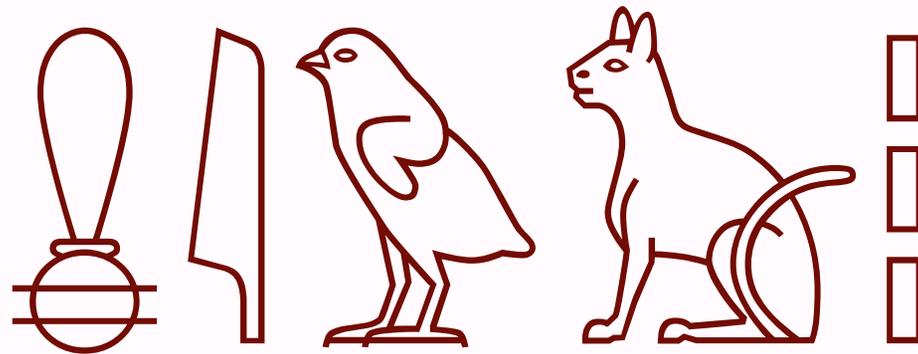
No Number: Not Uncommon

EVOLVING NUMBER

Plural
Three
Many/Much
Pile/Heap
Bunch
Reduplication







Singulative

One

Diminutive (Child, Small,
Small Object, etc.)

Paucal

**Hand, Palm, Handful
Arm
Gather**

Collective

Gather

Group

Classifier

Dual/Trial

Two
Three

Articles

Affixes that didn't make it.

Articles

le ~ les

la ~ las

Articles

*ille ~ *illos

*illa ~ *illas

Articles

Indefinite

one

person/individual

Articles
Definite
this/that
here/there
she, he, it

MODIFIERS

Noun-Like Modifiers

Verb-Like Modifiers

the red cat
the big cat
the soft cat

The Reds The Blues

Red is a good color.
Blue is a good color.

**?Give me the big.
Give me the big one.**

After rotating, the Spurs send their two bigs at Curry, and he just blows right by them.

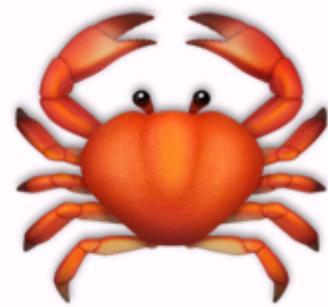
red \approx redness
big \neq bigness

red ~ redder ~ reddest
big ~ bigger ~ biggest

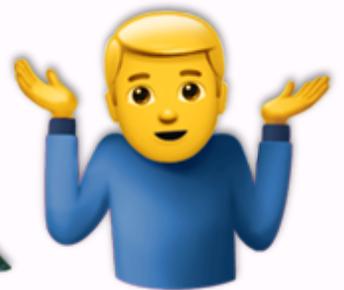
incredible ~ *incredibler ~
*incrediblest

**“We all know we are the 4th
winningest franchise in NBA
history.”**

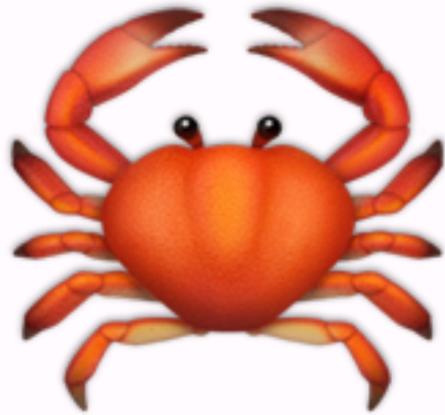
***?#@The Suns are a
(more?) winninger franchise
than the Jazz.**



pak



kum



kum pak

a man a big one

a big one man

Head-Mod
Mod-Head

Head-Mod Suffixes

Mod-Head Prefixes

Demonstratives: Specify location, definiteness, or nearness of a noun.

Demonstratives

Usually primitives.

Demonstratives

Usually “close to me” and “not close to me”, or “close to me”, “close to you”, or “close to neither”.

Demonstratives

Proximal/Medial/Distal

Visible/Invisible

Base/Side/Summit

Demonstratives

Noun-Like Demonstratives

Take Case

Can Stand Alone

Demonstratives

Particle-Like Demonstratives

Don't Take Case

Can't Stand Alone

Tonight

- (1) Create Nouns
 - (2) Find a Noun Case
- ## Grammar

Brithenig by Andrew Smith

English	Masculine SG	English	Feminine SG
hut	ill bwrdd	hut cluster	Ila fwrdd
tree	ill bwsc	forest	Ila fwsc
egg	ill ew	eggs	Ila ew
bone	ill ws	bones	Ila ws
branch	ill rham	tree leaves	Ila ram

NOUN CASE

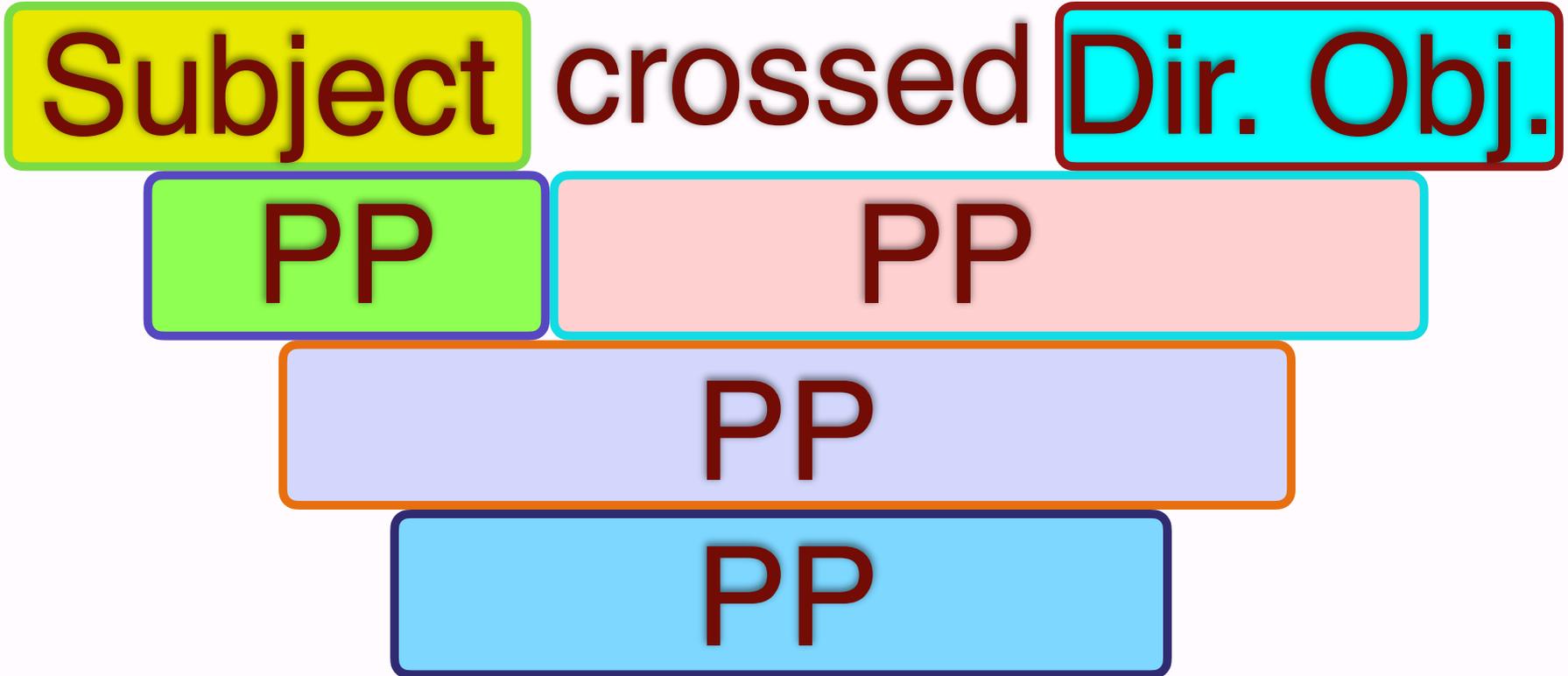
Noun case: Changing the form of the noun to indicate its grammatical role in the sentence.

I saw her.

Me saw she.

**The boy crossed the field
by car with his friend
to the other side
of the valley.**

The boy crossed the field
by car with his friend
to the other side
of the valley.



Agent

crossed

Theme

Instr.

Companion

Goal

Possess.

Agent: _ V

Patient: V _

Theme: V _

Instrument: by/with _

Companion: with _

Goal: to(wards) _

Agent: _ V

Patient: V _ [+Partitive/Gen.]

Theme: V _ [+Partitive/Gen.]

Instrument: V _ [+Instr./Ade.]

Companion: V _ [+Gen.] kanssa

Goal: V _ [+allative/illative]

Agent: talo

Patient: taloa/talon

Theme: taloa/talon

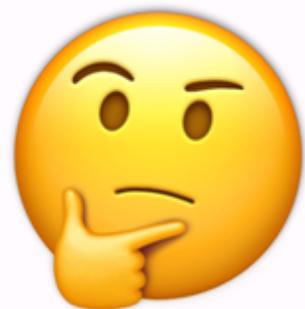
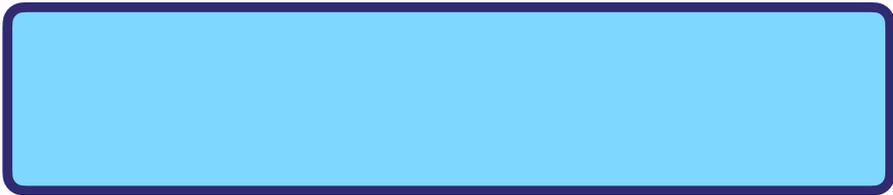
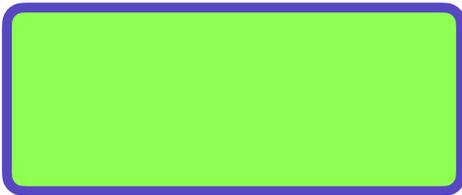
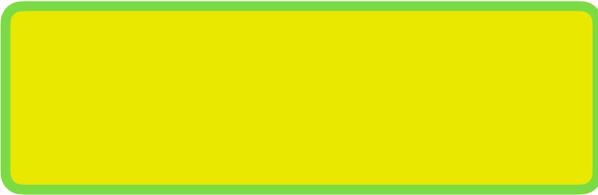
Instrument: taloin/talolla

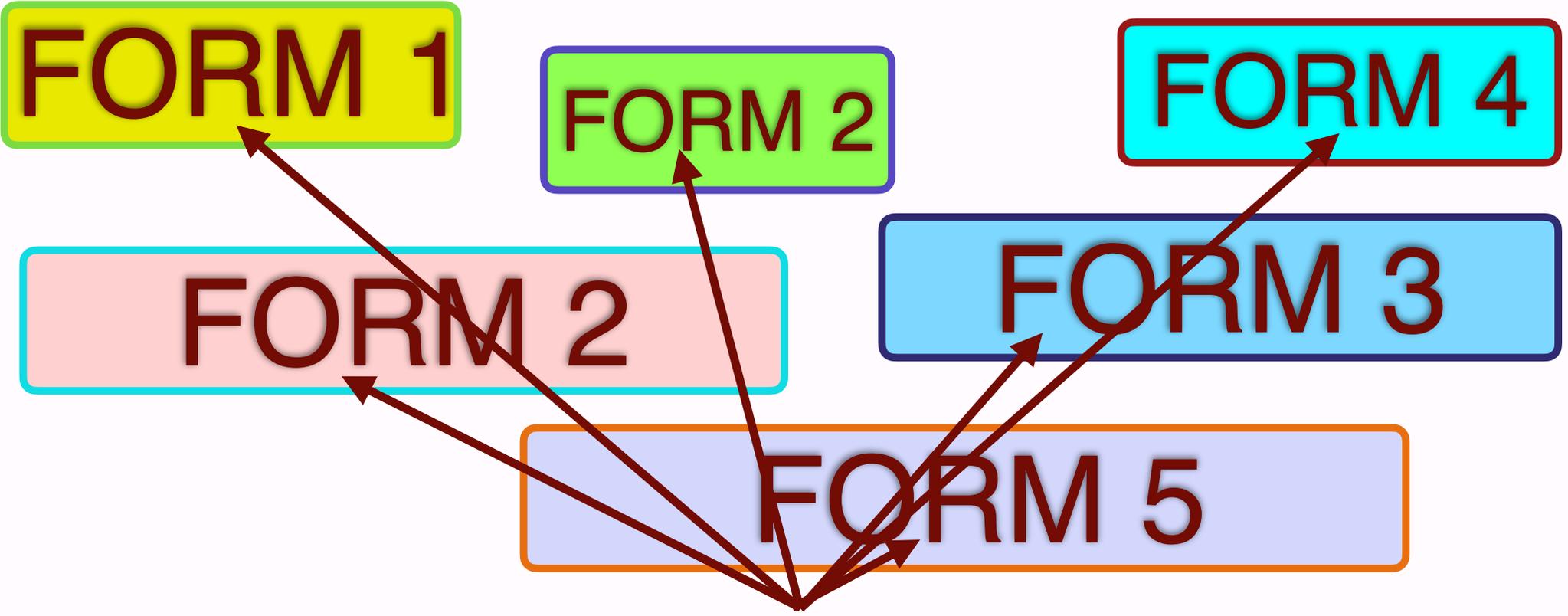
Companion: talon kanssa

Goal: talolle/taloon

Languages do with case
what other languages do
with adpositional phrases.

Case is language specific; it does *NOT* line up perfectly with semantics, theta rules, syntax—anything.





FORM 1

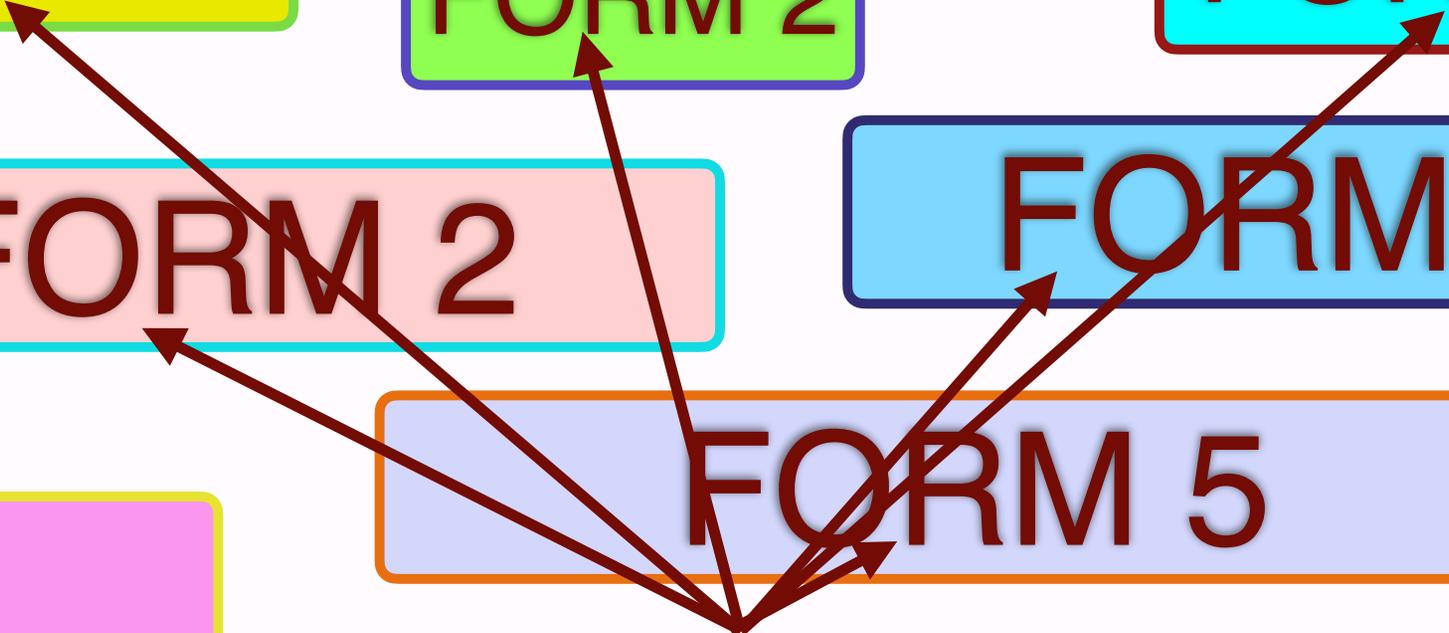
FORM 2

FORM 4

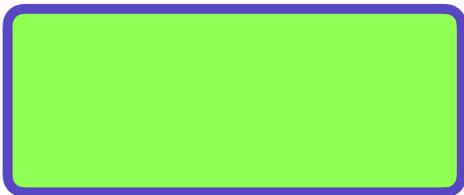
FORM 2

FORM 3

FORM 5



torma
torme
tormon
tormua



torma
torme
tormon
tormua

+ skiu

torma

torme

tormon

tormua

Grammatical Cases

Local Cases

Core Cases

Non-Core Cases

Core

Non-Core

Grammatical

Local

	Core	Non-Core
Grammatical	Nominative Accusative Vocative	Dative Genitive
Local	—	Ablative

	Core	Non-Core
Grammatical	Nominative Accusative Genitive	—
Local	Partitive	Inessive Illative Adessive, etc.

	Core	Non-Core
Grammatical	Nominative Accusative Genitive/Dative	Instrumental
Local	Prepositional	—

**Core Cases: More
commonly assigned directly
by the verb; less adverbial.
Less obviously
compositional.**

**Non-Core Cases: Mostly
adverbial; rarely required by
verbs. Usually fairly
compositional.**

Nominative: talo/talot

Accusative/Genitive: talon#

Partitive: taloa/taloja*

#takes nominative plural

***frequently irregular**

Inessive: talossa/taloissa

Elative: talosta/taloista

Adesive: talolla/taloilla

Ablative: talolta/taloilta

Inessive: talo-s-sa/talo-i-s-sa

Elative: talo-s-ta/talo-i-s-ta

Adesive: talo-l-la/talo-i-l-la

Ablative: talo-l-ta/talo-i-l-ta

Grammatical Cases: Direct grammatical roles (objects, etc.), or quirky cases.

Vocative: Direct address.

dāria “queen”

dār̄ys “Queen!”

Genitive: Possession.

dāria “queen”

dārio zaldrīzes “the queen’s
dragon”

Nominative: Subject
Accusative: Direct Object
Dative: Indirect Object

Dāria zaldrīzi aōt teptas.
“The queen gave you a
dragon.”

Digression

I sleep. = intransitive

I hug her. = transitive

Digression

I sleep. = intransitive

I hug her. = transitive

Digression

S V
A V P Nominative-Accusative
Focus on the one
doing the action.

Digression



Ergative-Absolutive

Focus on the one
experiencing the action.

Digression

S V
A V P Tripartite

No focus.

Digression

S V
A V P Positional.

No focus.

Digression

S V
A/P V Animacy.

“Obvious” who does
what to whom.

Digression

kafu nale timoke.

/dog man bite-PST/

“The dog bit the man.”

Digression

kafu nale timokeli.

/dog man bite-PST-INV/

“The man bit the dog.”

Digression

A V P R MANY options.

A V P R

Digression

1. Special R case.
2. Adposition.
3. Worder change.
4. P=R.
5. Special A case.

**Local Cases: What we use
prepositions for.**

Adessive: At the house.

Allative: To the house.

Ablative: From the house.

Inessive: Inside the house.

Illative: Into the house.

Elative: Out from the house.

Super-: on, onto, off of

**Sub-: under, to under, from
under**

**Cont-: among, in among,
from among**

Perlative: by way of the road
Aversive: avoiding the road

Instrumental: with a tool
Comitative: with a person
Abessive: without something

Lots of other crazy cases,
but these are specific to a
system.

Case + Number

sagus ~ sagī

talossa ~ taloissa

	Core	Non-Core
Grammatical	90%	40%
Local	60%	20%

Case + Number

High Valyrian	Singular	Plural
Nominative	vala	vali
Accusative	vale	valī
Genitive	valo	valoti
Dative	valot	valoti
Locative	valā	valoti

GENDER

Gender = Noun Class

Gender is inherent in and inseparable from the noun it's associated with.



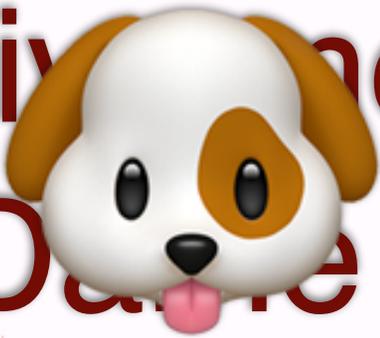


**By golly,
it's a boy!**



**Give me those red books.
Dame esos libros rojos.**

Give me the red books.
Dance escape books.



Give me the red books.
Dance escape books.



Give me those red books.
Dame esos libros rojos.

Quantity (Count vs. Mass)
Animacy
Shape (Physical/Phono.)
Function
Relationship with Humans

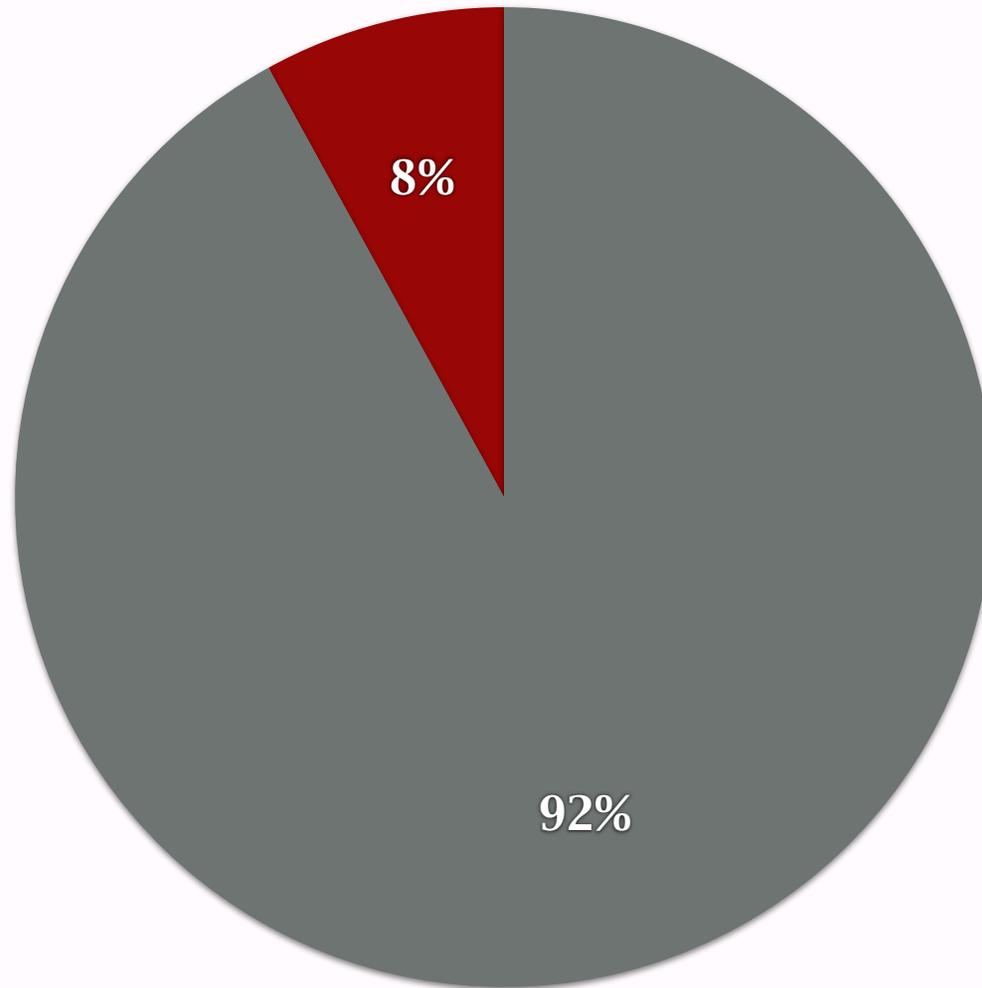
Phonology > Semantics

madre
niña
cara
esquina
canción

hombre
niño
estado
tiempo
animal

● **PHONOLOGICAL**

● **SEMANTIC**



mtoto
mke

mnazi
mchungwa

kisu
kilima

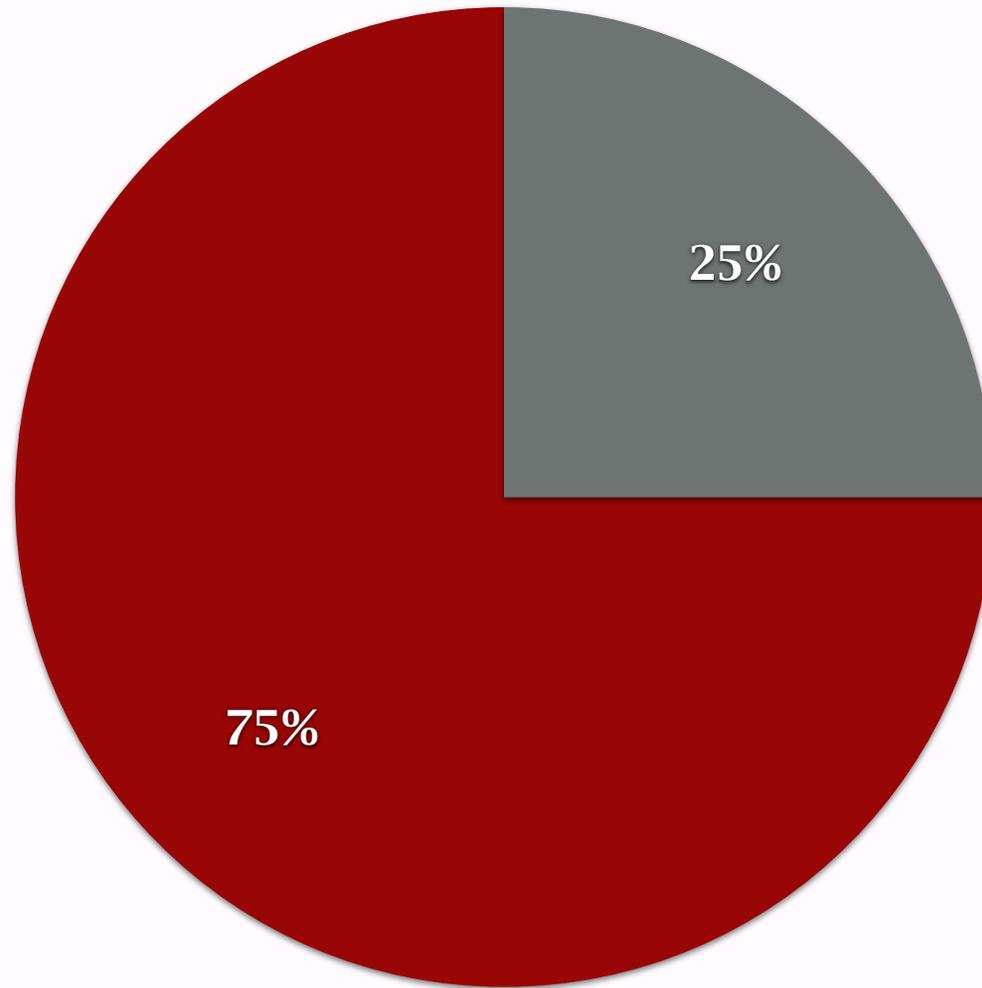
jina
jiwa

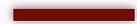
**Class 1: People, animals,
birds, insects, fish...**

**Class 9: Manufactured
products, places,
abstracts, parts of the
body, fruit, natural things...**

● PHONOLOGICAL

● SEMANTIC





Masculine, Feminine

Masculine, Feminine, Neuter

Animate, Inanimate

**Human, Animal,
Instrument, Plant {Edible/
Inedible}**

**Human, Animal,
Instrument, Plant {Edible/
Inedible}, Places,
Abstracts, Small Things,
Large Things**

a man a big one

mtu mkubwa

mtu **mkubwa**

Oedipus Rēx

Oedipum Rēgem vidi.

liber ruber

Librum rubrum vidi.

EVOLVING CASE AND GENDER

Basic Words

**person, man, woman, child,
boy, girl, thing, rock, place,
area, tool**

toku “man”

mole “cook”

*moletoku > *moledogu >

*moleđoγu > *molehou >

molehu “male cook”

naki “woman”

mole “cook”

*molenaki > *molenagi >

*molenayi > *molenai >

molene “female cook”

rati “group”

mole “cook”

*molerati > *moleradi >

*molerađi > *molerahi >

moleraç “cooks (M or F)”

**Semantic class of generic
nouns = noun class.**

Can also become declension class (e.g. if nominative form has some sort of affix).

Cases > Basic Words

Case	Lexical Source
nominative, absolutive	— (unmarked noun, basic word like “person”)
ergative, agentive	from, with, at, near, hand
accusative, objective, patientive	to, at, on, against, take
dative	to, for, give
genitive	from, for, to, home, property, thing, at

Case	Lexical Source
ablative	come from, leave, from, fall
allative	arrive, go to, see, to
instrumental	with, take, use, from
comitative	comrade, follow, take
partitive	from, child, of
aversive	be, fail, love, near, want

Tonight

(1) Free PA

(2) New MA

Enyarel by El_Predsjednik

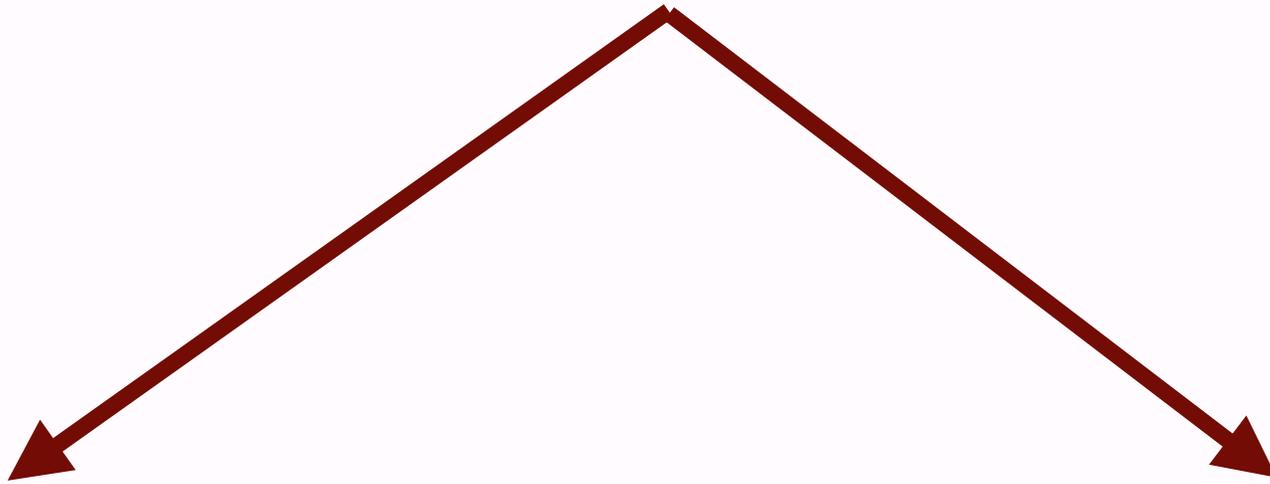
English	"Ram"	English	"Father"
ram	æg edʒn	father	æg pođa
ewe	eg esdʒn	chief	eg pođga
wool	ul eθdʒn	fatherland	ul pođna
mutton	fen ekdʒn	soup roll	fen pođʃa
sheep encl.	eθ eldʒn	balcony	eθ pođfa

HIGH VALYRIAN

The common language of the Valyrian Freehold, a federation in Essos that was destroyed by the Doom before the series begins.



????????



High Valyrian

????????

Valar morghulis.

“ALL men MUST die.”

Valar dohaeris.

“ALL men MUST serve.”

Singular, Plural, Collective

Number Marking	Definite	Indefinite
Small Number	Singular	
Large Number	Collective	Plural

Number Marking	Definite	Indefinite
Small Number	Singular	Paucal
Large Number	Collective	Plural

Head Final
ADJ — N
kastor qintir
“green turtle”

Head Final
ADJ — N
*val ka:r
“man heap”

Head Final

ADJ — N

*valha:r > *valhar > valar

“all men”

Head Final

ADJ — N

*val ont > *valon > valun

“man hand > some men”

SOUND CHANGE

Dispreference for certain *_#*

Cs, e.g. voiced stops,
laterals, voiceless non-
coronals, etc.

SOUND CHANGE

Dispreference for
monosyllabic words—
especially in nouns (didn't
have enough weight).

SOUND CHANGE

*val > vala

*to:m > to:mo

*gue:s > gue:se

*qi:b > qi:bi

-a	-e	-i	-o	-y
vala	gue:se	qi:bi	to:mo	u:ly
a:bra	gelte	pisti	ovoŋo	poyry
taoba	korze	ele:ni	nu:mo	qilo:ny
zokla	nine	ke:li	melvo	somby

vala
toꝛmo
gueꝛse
qiꝛbi

azantys
aꝛpsos
beqes
bantis

obvos ~ rongon
“arch” ~ “hide”

doxros ~ doxon
“wall” ~ “stone”

vala ~ valar ~ valun
“man” ~ “all men” ~ “some
men”

*val > vala ~ valar
*kon > kono ~ konor

*val > vala ~ valar

*kon > ~~kono~~ ~ konor

	Count	Mass
Strong	vala	konor
Weak	obvos	ronḡgon

	Count	Mass
Strong	Class 1	Class 3
Weak	Class 2	Class 4

*kast > kasta
“blue/green”

kasta la:ra
“blue crow”

kasta
“the blue one (Class 1)”

kast-?

“the blue one (Class 2/3/4)”

	Count	Mass
Strong	huːra	voːkor
Weak	perzys	tegon

	Count	Mass
Strong	-a	-or
Weak	-ys	-on

kasta

vala
gue:se
qi:bi
to:mo
u:ly

	Count	Mass
Strong	moon	water
Weak	fire	dirt

	Count	Mass
Strong	lunar	aquatic
Weak	solar	terrestrial

	Core	Non-Core
Grammatical	Nominative Accusative	Genitive Dative Vocative
Local		Locative Instrumental Comitative

	Lunar	Solar	Aquatic	Terrestrial
Nominative	vala	perzys	embar	havon
Accusative	vale	perzi	embri	havon
Genitive	valo	perzo	embro	havo
Dative	valot	perzot	embrot	havot
Locative	vala:	perzy:	embra:r	havot
Instrument	valosa	perzomy	embrosa	havoso
Comitative	valoma	perzomy	embroma	havoso
Vocative	valus	perzys	embrus	havos

Lunar all end in a vowel.

Solar all end in /s/.

Aquatic all end in /r/.

Terrestrial all end in /n/.

**Nouns that have /o/ as a
theme vowel don't have
distinct accusative or
locative forms.**

The default plural is /i/, with
a backup plural in /a/
when /i/ can't apply.

	Lunar	Aquatic	Lunar	Aquatic
Nominative	vala	embar	nu:mo	my:r
Accusative	vale	embri	nu:mo	my:r
Genitive	valo	embro	nu:mo:	my:ro
Dative	valot	embrot	nu:mot	my:rot
Locative	vala:	embra:r	nu:mot	my:rot
Instrument	valosa	embrosa	nu:moso	my:roso
Comitative	valoma	embroma	nu:moso	my:roso
Vocative	valus	embus	nu:mos	my:s

	Lunar	Aquatic	Lunar	Aquatic
Nominative	vali	embri	nu:ma	my:ra
Accusative	valix	embri:	nu:ma	my:ra
Genitive	valoti	embroti	nu:moti	my:roti
Dative	valoti	embroti	nu:moti	my:roti
Locative	valoti	embroti	nu:moti	my:roti
Instrument	valossi	embrossi	nu:mossi	my:rossi
Comitative	valommi	embrommi	nu:mossi	my:rossi
Vocative	valis	embis	nu:mas	my:ras

Four Genders
Four Numbers
Six Declension Classes

Questions?

PRONOUNS

Pronouns: Variables that stand in for other arguments.

{The girl/She} is reading.
{David Peterson/I} sat on
{the chair/it}.

First Person: Speaker
Second Person: Addressee
Third Person: Referent

First Person: Speaker
Second Person: Addressee
Third Person: Referent

	Number	Gender	Clusivity	Honor
Pronouns	99%	50%	40%	20%

Clusivity: In plural (usually 1st person) pronouns, whether the addressee is a part of the exchange or not.



We are going to Disneyland.





WE. Not you.



**Honor: Social status of the
reference with respect to
the speaker.**

Tu es mon ami!
Vous n'êtes pas mon ami!

wataji “I” (normal/formal)
watakuji “I” (very formal)
ore “I” (men mostly)
atai “I” (women)

Arabic

	Singular	Dual	Plural
1st	ana	naħnu	
2nd	anta/anti	antumax	antum/antunna
3rd	huwa/hija	humax	huma/hunna

Hawaiian

	Singular	Dual		Plural	
		Incl.	Excl.	Incl.	Excl.
1st	au	ka:ua	ma:ua	ka:kou	ma:kou
2nd	?oe	?olua		?oukou	
3rd	ia	la:ua		la:kou	

EVOLVING PRONOUNS

1st Person and 2nd Person Singular Nearly Always Basic

1st Person Plural and 2nd Person Plural Are Often Basic

**3rd Person Singular and
3rd Person Plural Are
Sometimes Basic**

Inclusive vs. Exclusive 1st Person Plural Pronouns Are Sometimes Basic

Dual Pronouns, Gendered Pronouns, Honorifics Are Never Basic

**Third Person Pronouns >
Demonstratives (this/that),
Articles, Basic Words (e.g.
“person”)**

**Plural Pronouns from Plural
Affixes (If Not Basic), or
Same Source as Plural
Marking (“group”, “bunch”,
etc.)**

Dual/Trial Pronouns > Two/
Three + Pronoun (Inclusive
Often “you me”)

Formal Pronoun > Plural

French

vous = 2P > 2S Formal

German

Sie = 3P > 2S Formal

Special Words

usted > “your mercy”

boku > “servant”

odzis̄san > “uncle”

Gender and Pronouns: If the language has a gender system, its pronouns will have gender if they derive from gendered words.

**Swahili: ~10 genders, but
one third person pronoun.**

Arabic: Gendered second and third person pronouns, not first.

English: Gendered third person singular pronouns, not plural.

Gender Distinction Likelihood

3 > 2 > 1

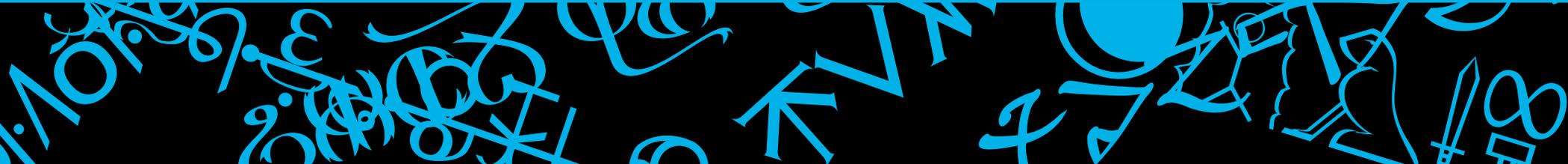
Singular > Plural > Dual

Also though...

Tibetan and Japanese: No
nominal gender, but
gendered pronouns.



CONLANG NOMINAL MORPHOLOGY ASSIGNMENT





The background is a dense, chaotic pattern of various blue script characters and symbols on a black field. The characters include Latin letters, numbers, and symbols from different alphabets, such as Cyrillic, Greek, and others, all rendered in a vibrant blue color. The text 'LINGUISTICS 183' and 'WEEK 3' is centered in a white, sans-serif font with a slight glow effect.

LINGUISTICS 183

WEEK 3

Wenedyk by Jan van Steenberg

Pres.	"love"	"hurt"	"sell"	"open"
1SG	jemu	dole	więdu	oprze
2SG	jemasz	dolesz	więdziesz	oprzesz
3SG	jema	dole	więdzie	oprze
1PL	jemamy	dolemy	więdźmy	oprzemy
2PL	jemacie	dolecie	więdźcie	oprzecie
3PL	jemą	dole	więdą	oprzę

Wenedyk by Jan van Steenberg

Pres.	“love”	“hurt”	“sell”	“open”
1SG	jɛmu	dɔlɛ	viendu	ɔpʒɛ
2SG	jɛmaf	dɔlɛf	viendziɛf	ɔpʒɛf
3SG	jɛma	dɔlɛ	viendziɛ	ɔpʒɛ
1PL	jɛmamɪ	dɔlɛmɪ	viendʒmɪ	ɔpʒɛmɪ
2PL	jɛmatsiɛ	dɔlɛtsiɛ	viendʒtsiɛ	ɔpʒɛtsiɛ
3PL	jɛmɔ̃	dɔlɛ̃	viendɔ̃	ɔpʒɛ̃

NEW ARROWS

→ or ← = becomes, goes
to

> or < = comes from,
derives from

VERBAL MORPHOLOGY

**Predicate: The part that
says something about
whatever the thing's about.**

My brother is fictitious.

The fish swam away.

The boy is on the ceiling.

My mom is a principal.

**My brother is very.
The fish away.
The boy on the ceiling.
My mom a principal.**

Verbal Predicates
Nominal Predicates
Adjectival Predicates
Locative Predicates

**Nominal Predicate: Some
noun is some other noun.**

My cat is a champion.



Option 1: Full Copula

Like English, Spanish,
French, etc.

Option 1: Full Copula

Soy profesor.
Serás profesor.
Era profesor.

Option 2: Half Copula

Like Russian, Arabic, etc.

Option 2: Half Copula

hija tʰaːliba.

ɔna student.

“She is a student”

Option 2: Half Copula

hija ka:nat tʰa:liba.

ɔna bi:la student.

“She was a student”

Option 3: Particle

Like Hausa, Beja, etc.

Option 3: Particle

Hausa

M/P Copula: né:/nè:

F Copula: tʃé:/tʃè:

Option 3: Particle
Grade I: gámà:
Grade IV: gámè:
Grade V: gámár
Grade VI: gámó:
Grade VII: gàmú

**Adjectival Predicate: Some
noun is some adjective.**

My cat is pretty.



Option 1: Full Copula

Again, like English, Spanish,
French, etc.

Option 1: Full Copula

Tu es belle.

Tu étais belle.

Tu seras belle.

Option 2: Half Copula

Like Russian, Arabic, etc.

Option 2: Half Copula

hija zamila.

ona krasiva.

“She is beautiful.”

Option 2: Half Copula

hija kanat zamila.

ona bila krasiva.

“She was a student”

Option 2: Half Copula

krasivaja student
“the beautiful student”

Option 3: Full Predicate

Like Hawaiian, Tahitian, etc.

Option 3: Full Predicate

ka wahine nani

/the woman pretty/

“pretty woman”

Option 3: Full Predicate

Ke nani nei ka wahine.

/PRES pretty now the woman/

“The woman is pretty.”

Option 3: Full Predicate

Ua nani ka wahine.

/PERF pretty the woman/

“The woman was pretty.”

Option 3: Full Predicate

Ua paʻani nani ka wahine.

/PERF play pretty the woman/

“The woman played prettily.”

Option 3: Full Predicate

Anha remekak.

“I sleep.”

Option 3: Full Predicate

Anha layafak.
“I am happy.”

Option 3: Full Predicate

Modifying Adjectives \approx
Participles

**Locative Predicate: Some
noun is in some location.**

My cat is in a bag.



Option 1: Full Copula

Like English, German, etc.

Option 1: Full Copula

The cat is in the bag.

The cat was in the bag.

The cat will be in the bag.

Option 2: Half Copula

Like Russian, Arabic, etc.

Option 2: Half Copula

hija ʔala attʔawila.

ona na stolje.

“She is on the table.”

Option 2: Half Copula

hija ka:nat ʔala attʔa:wila.

ona bila na stolje.

“She was on the table.”

Option 3: Locative Copula

Like Spanish, Jamaican
Patois, etc.

Option 3: Locative Copula

El gato está en la mesa.

*El gato es en la mesa.

Option 3: Locative Copula

El gato está bonito.

El gato es bonito.

EVOLVING COPULÆ

**Full/half copulae almost
always basic.**

ser, être, etc. > *s

For languages that make a past/non-past split, often common to have two different copular roots: One for each tense.

Particles usually come from pronouns or demonstratives.

This is where gendered particles come from (e.g. neː/tʃeː from Hausa).

Stative verbs often don't participate in the full gamut of verbal morphology.

Japanese
watafi wa tabemasu.
“I eat.”
watafi wa tabete iru.
“I am eating.”

watafi wa taberw koto ga
dekimasu.

“I can eat.”

*watafi wa taberw koto ga
dekite iru.

“??I am being able to eat.”

Locative copulae almost always evolve from a verb of positioning, e.g. “stand”, “sit”, “lie”, “stay”, “wait”, etc.

estar ~ estando ~ estado
estado “state”
> *sta “to stand”

**Also locative adverbs, e.g.
“there”, “here”.**





A black and white photograph of Bob Marley performing on stage. He is shown in profile, facing left, with his mouth open as if singing. He has a full beard and his long dreadlocks are blowing in the wind, creating a dynamic and energetic scene. He is wearing a light-colored jacket with dark stripes on the sleeves. He is holding a vintage-style microphone with his right hand. The background is dark and out of focus, suggesting a concert setting.

Yes, me friend, me friend

A black and white photograph of Bob Marley performing on stage. He is shown in profile, facing left, with his mouth open as if singing. He has long, dark dreadlocks that are blowing in the wind. He is wearing a light-colored, long-sleeved shirt. He is holding a microphone in his right hand, which is raised towards his mouth. The background is dark and out of focus, suggesting a stage setting. The text "Yes, me friend, me friend" and "Dem set me free again" is overlaid in yellow on the image.

Yes, me friend, me friend
Dem set me free again

A black and white photograph of Bob Marley performing on stage. He is shown in profile, facing left, with his eyes closed and mouth open as if singing. He has his signature dreadlocks and a beard. He is wearing a light-colored, long-sleeved shirt. He is holding a vintage-style microphone with both hands. The background is dark and out of focus, suggesting a concert setting. Overlaid on the image is yellow text.

Yes, me friend, me friend
Dem set me free again
Yes, me friend, me friend

A black and white photograph of Bob Marley performing on stage. He is shown in profile, facing left, with his eyes closed and mouth open as if singing. He has his signature dreadlocks and a beard. He is wearing a light-colored, long-sleeved shirt. He is holding a vintage-style microphone with both hands. The background is dark and out of focus, suggesting a concert setting.

Yes, me friend, me friend
Dem set me free again
Yes, me friend, me friend
Me de pon street again

**“De” super common in
English lexifier creoles as a
locative copula.**

As part of MA6, you'll need to figure out a strategy for nominal, locative, and adjectival predicates.

**ACTUAL, REAL,
NO FOOLIN'
VERBS**

VERBAL AGREEMENT

**Agreement: I am vs. you are
vs. he is.**

Verbs can agree with:
Subjects/Agents
Direct Objects/Patients
Indirect Objects

In:
Person
Number
Gender

Spanish: PER/NUM
Swahili: PER/NUM/GEN
English: PER/NUM + NUM

Spanish

Present	Singular	Plural
1st	llamo	llamamos
2nd	llamas	llamáis
3rd	llama	llaman

Spanish

Present	Singular	Plural
1st	-o	-amos
2nd	-as	-áis
3rd	-a	-an

Early Modern English

Present	Singular	Plural
1st	am	are
2nd	art	are
3rd	is	are

Early Modern English

Past	Singular	Plural
1st	was	were
2nd	was	were
3rd	was	were

Early Modern English

Past	Singular	Plural
Person	was	were

Russian

Present	Singular	Plural
1st	vstr ^j etfaju	vstr ^j etfajem
2nd	vstr ^j etfajeŋ ^j	vstr ^j etfajet ^j e
3rd	vstr ^j etfajet	vstr ^j etfajut

Russian

Present	Singular	Plural
Masc.	vstr ^j et ^j il	vstr ^j et ^j ili
Fem.	vstr ^j et ^j ila	
Neu.	vstr ^j et ^j ilo	

ja vstr^jetil(a) tvaju mat^j.
“I met your mother.”

Swahili

Nouns	Singular	Plural
I/II	m-, mw-	wa-, w-
III/IV	m-	mi-
V/VI	dzi-/∅, dz-	ma-
VII/VIII	ki-, tʃ-	vi-, vj-
IX/X	n-	n-
XIV	u-, w-/uw-	

Swahili

Agree	Subject	DO	A-Tense
I/II	a-/wa-	m-/wa-	wa
III/IV	u-/i-		wa-/ja-
V/VI	li-/ja-		la-/ja-
VII/VIII	ki-/vi-		tja-/vja-
IX/X	i-/zi-		ja-/za-
XIV	u-		wa-

alimpa daktari mtoto.
/I-PST-I-give doctor child/
“He gave a child to the
doctor.”

kisu kilimpa daktari mtoto.
/knife VII-PST-I-give doctor
child/

“The knife gave a child to
the doctor.”

mtoto alikipa daktari kisu.
/child I-PST-VII-give doctor
knife/

“The child gave a knife to
the doctor.”

mtoto alivipa daktari visu.
/child I-PST-VIII-give doctor
knives/

“The child gave the knives to
the doctor.”

watoto walivipa daktari visu.
/children II-PST-VIII-give
doctor knives/
“The children gave the
knives to the doctor.”

mtoto aliipa daktari ndege.

/child I-PST-IX-give doctor
plane/

“The child gave a plane to
the doctor.”

mtoto alizipa daktari ndege.

**/child I-PST-X-give doctor
planes/**

**“The child gave the planes
to the doctor.”**

visu vilizipa daktari ndege.
/knives VIII-PST-X-give doctor
planes/
“The knives gave the planes
to the doctor.”

Georgian

Subject	Singular	Plural
1st	v-	v-...-t
2nd	h-/s-/∅	h-/s-/∅...-t
3rd	-s/-a/-o	-(e/a)n/-es

Georgian

Object	Singular	Plural
1st	m-	gv-
2nd	g-	g-...-t
3rd	h-/s-/∅	h-/s-/∅...-t

Georgian

vts'er

“I write.”

Georgian

ts'er

“you write.”

Georgian

ts'ers

“s/he/it writes.”

Georgian

mts'er

“You write to me.”

Georgian

mts'ers

“S/he/it writes to me.”

Georgian

gts'ers

“S/he/it writes to you.”

Georgian

gts'er

“I write to you.”

Georgian

gts'ert

“I/S/He/It write(s) to you all.”

PRO-DROP

Logic: If the marking on the verb is unambiguous, then you shouldn't need a pronoun.

Spanish
(Yo) duermo.
(Tú) duermes.
(Él/Ella/Ud.) duerme.

English
I sleep.
You sleep.
S/he/it sleeps.

But...
Je dormirai.
Tu dormiras.
Il/Elle dormira.

Of course...
Je dors.
Tu dors.
Il/Elle dort.

Of course...

[ʒə dɔːs]

[tʃ dɔːs]

[ɪl/ɛl dɔːs]

But then...
wataji wa tabemasu
anata wa tabemasu
kare wa tabemasu

Routine

wataji wa **tabemasu**

anata wa **tabemasu**

kare wa **tabemasu**

**alimpa daktari mtoto.
“He gave a child to the
doctor.”**

alimpa daktari mtoto.

“He gave a child to the
doctor.”

alimpa daktari.

“He gave {him/her/it} to the
doctor.”

***alipa daktari mtoto.
“He gave a child to the
doctor.”**

**alikipa daktari kisu.
“He gave a knife to the
doctor.”**

alikipa daktari.

**“He gave {it/him/her} to the
doctor.”**

alipa daktari kisu.
“He gave a knife to the
doctor.”

alikipa daktari kisu.

**“He DID give a knife to the
doctor.”**

EVOLVING AGREEMENT

Agreement → Pronouns or Generic Nouns

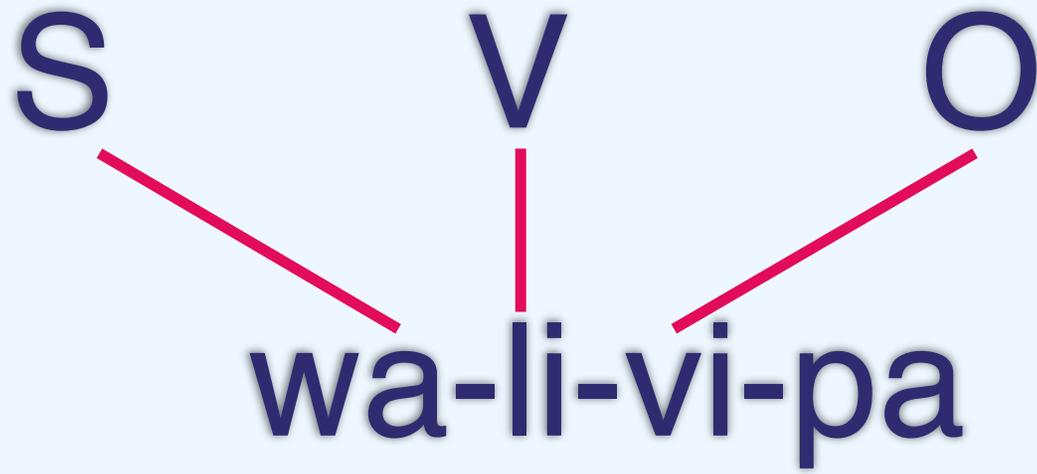
watoto walivipa daktari visu.
/children II-PST-VIII-give
doctor knives/
“The children gave the
knives to the doctor.”

wa-toto wa-li-vi-pa vi-su

SBJ TENSE OBJ

wa-li-vi-pa





**Ich habe ihn gesehen.
/I have him seen/**

Verb + Pronoun → Verb-Suf

Pronoun + Verb → Pref-Verb

Agreement > Pronominal Possessors

Verb → Verbal Noun
Verbal Noun + Poss. Pron.

Cf. I eat vs. my eating

**That's one reason why you
might get subject agreement
more than sbj./obj.
agreement.**

Could also be a split (usually with 1st/2nd vs. 3rd). One may be old pronominal suffixes, other pronominal possessors.

Basic is always verb root + noun/pronoun. One of those can be your basic (e.g. English “we/they/you eat”).

No agreement always a possibility.

Tonight

- (1) Find a sample sentence on John Q's site.
- (2) Agreement pattern with no change for at least two paradigm cells.

Skerre by Doug Ball

Verbs	Imperative	Perfective
drink	tsari	tsari:n
eat	hos	hosin
bite	take	take:n
swim	tehasa	tehasa:n
sit	?ire:	?ire:jin
ask	tсен	tсенin



TENSE

**Tense situates an action/
event some place in time.**

He will eat.

He eats.

He ate.

Future
Present
Past

Non-Past Past

**Matkustan Helsinkiin.
“I travel to Helsinki.”**

**Matkustan Helsinkiin ensi
kuussa.**

**“I will travel to Helsinki next
month.”**

**Matkustan Helsinkiin ensi
kuussa.**

**“I travel to Helsinki next
month.”**

**Matkustin Helsinkiin.
“I traveled to Helsinki.”**

I eat bagels.
I'm eating bagels.

**So I walk into this store and
I go up to the counter and
this guy says to me, “You
going to offer me a bagel or
what?”**

I eat.
I ate.
I will eat.

**Futures really actually
predictive/prospective.**

**Right now I am eating and
watching TV.**

**Yesterday I ate and watched
TV.**

**??Tomorrow I eat-FUT and
watch-FUT TV.**

Humans can't predict the future. Can't talk about it like we can the present or the past.

Base Tense → Actual Use

Restrict the number of actual forms you have. Use them to their utmost before creating a new one.

**Hodiernal: Done something
earlier in the day as
opposed to earlier than that.**

**Narrative/Ancient: Talking
about things that happened
in the distant past.**

**Immediate Future: To be
about to do something.**

Immediate Past: To just have done something (e.g. “I just ate”).

EVOLVING TENSE

**Start with past vs. non-past
if you're doing tense.**

Two different routes:
(1) Non-past formed from reduplication/vowel lengthening.

**Idea is it emphasizes the
ongoing nature of the
activity.**

**(2) Past formed from
reduplication/vowel
lengthening.**

Idea is it emphasizes the remoteness of the activity (also makes it different from “usual”, which is non-past).

**Yes, these are exact
opposites. Language is
weird.**

**Other sources for past
tense: finish, complete, put
down, set down, stop,
cease.**

Still other sources for past tense: yesterday, then, long time, other temporal expression referring to past.

**Or for present tense: now,
this, here, today, etc.**

LOCATION IS TIME

Near = close to the present

Far = far from the present

Words like “today” and
“yesterday” and “tomorrow”
sometimes basic.

**Other tenses derived in
apposition to your first
distinction.**

Future

I am going to leave.

Je vais sortir.

Voy a salir.

Future

yo comeré > comere he >
comedere habeo “I have to
eat.”

Future

I will leave. (< desire)

I shall leave. (< obligation)

Future

**I am to visit Finland this
summer.**

Future
Desire
Obligation
Motion Towards
Temporal Adverb

Other Ones
Similar things. Depends on
your other tenses.

Shiväisith

***V Imperfect ~ V: Perfect
-(a)n Past Tense***

Shiväisith

	Non-Past	Past
Imperfect	Present	Past Imperfect
Perfect	???	Perfect

Shiväisith

	Non-Past	Past
Imperfect	Present	Past Imperfect
Perfect	Hodiernal	Perfect

**Shiväisith
Vurar vathe.
“I see him (now).”**

**Shiväisith
Vuurinar vathe.**

“I saw him (in the past).”

**Shiväisith
Vuurir vathe.**

**“I saw him (at some point in
time that’s still relevant, e.g.
this morning).”**

Tonight
(1) MA5
**(2) Come up with a new
metaphor (see site for
details)!**

Sodna-ɛni by Sylvia Sotomayor

	IMPF	ITER	INCH	PERF	FRUS
	tiŋi	tinna	tambi	otni	taŋŋi
	kifi	kilna	kibi	kitti	kiŋi
	aŋi	anna	ambi	onnit	aŋŋi
	duso	dusna	duspi	duste	dusiŋi
	ono	onna	onobi	tono	onoŋi
	pesi	pesna	pespi	peste	pesiŋi
	evi	evna	evibi	tavi	eviŋi
	ememe	emena	emebi	omet	emeŋi

Table 1. Inflections for the Verbs of Motion.

	IMPF	ITER	INCH	PERF	FRUS
→	tɪŋi	tɪnna	tambi	otni	taŋŋi
→ ↓	kifi	kilna	kibi	kitti	kiŋi
⊙→	aŋi	anna	ambi	onnit	aŋŋi
↔	duso	dusna	duspi	dustɛ	dusiŋi
←	ono	onna	onobi	tono	onoŋi
·→	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛsiŋi
↗ ↘ ↖ ↙	evi	evna	evibi	tavi	eviŋi
✳	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

mava kitti tasu.

“She went past the market.”

	IMPF	ITER	INCH	PERF	FRUS
→	tɪŋi	tɪnna	tambi	otni	taŋŋi
↗	kifi	kilna	kibi	kitti	kiŋi
⊙→	aŋi	anna	ambi	onnit	aŋŋi
↔	duso	dusna	duspi	dustɛ	dusiŋi
←	ono	onna	onobi	tono	onoŋi
▪→	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛsiŋi
↖↗	evi	evna	evibi	tavi	eviŋi
✳	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

mava kitti kjagat tɛɛ.

“She avoided becoming sick.”

	IMPF	ITER	INCH	PERF	FRUS
	tɪŋi	tɪnna	tambi	otni	taŋŋi
	kifi	kilna	kibi	kitti	kiŋi
	aŋi	anna	ambi	onnit	aŋŋi
	duso	dusna	duspi	dustɛ	dusiŋi
	ono	onna	onobi	tono	onoŋi
	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛsiŋi
	evi	evna	evibi	tavi	eviŋi
	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

ɪɛɪɛɪ mava sodna duso.
“She and I are talking.”

	IMPF	ITER	INCH	PERF	FRUS
→	tɪŋi	tɪnna	tambi	otni	taŋŋi
↓	kifi	kilna	kibi	kitti	kiŋi
⊙→	aŋi	anna	ambi	onnit	aŋŋi
↔	duso	dusna	duspi	dustɛ	dusiŋi
←	ono	onna	onobi	tono	onoŋi
·→	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛsiŋi
↗↘↙↕	evi	evna	evibi	tavi	eviŋi
✻	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

loho logɪdija evi.

“The sun is shining.”

	IMPF	ITER	INCH	PERF	FRUS
→	tɪŋi	tɪnna	tambi	otni	taŋŋi
↓	kifi	kilna	kibi	kitti	kiŋi
⊙	aŋi	anna	ambi	onnit	aŋŋi
↔	duso	dusna	dupi	dustɛ	duŋi
←	ono	onna	onobi	tono	onoŋi
→	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛŋi
↗	evi	evna	evibi	tavi	evŋi
✳	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

ɪɛnɛ ludɪdɛn tavi.

“I took off the cloak.”

	IMPF	ITER	INCH	PERF	FRUS
→	tɪŋi	tɪnna	tambi	otni	taŋŋi
↓	kifi	kilna	kibi	kitti	kiŋi
⊙→	aŋi	anna	ambi	onnit	aŋŋi
↕	duso	dusna	duspi	dustɛ	dusiŋi
←	ono	onna	onobi	tono	onoŋi
·→	pɛsi	pɛsna	pɛspi	pɛstɛ	pɛsiŋi
↗↘	evi	evna	evibi	tavi	eviŋi
✻	ɛmɛmɛ	ɛmɛna	ɛmɛbi	omɛt	ɛmɛŋi

Table 1. Inflections for the Verbs of Motion.

ɪɛnada ludɪdɛn omɛt.

“I put on the cloak.”

Dara sume kari tikuluna.

“I know a woman named Dara.”

Ain Zibi sume dove tidoluna.

“Also I know a man named Zibi.”

Dara sume kari tikuluna.

“I know a woman named Dara.”

Ain Zibi sume dove tidoluna.

“Also I know a man named Zibi.”

Dara sume kari tikuluna.

“I know a woman named Dara.”

Ain Zibi sume dove tidoluna.

“Also I know a man named Zibi.”

Dara sume kari tikuluna.

“I know a woman named Dara.”

Ain Zibi sume dove tidoluna.

“Also I know a man named Zibi.”

Kudobajuna.

“ _____ likes _____.”

Kudobajuna.

“_____ likes _____.”

tidoluna

“I know (a man)”

Kudobajuna.

“_____ likes _____.”

tidoluna

“I know (a man)”

Kudobajuna.

“_____ likes _____.”

tidoluna

“I know (a man)”

Kudobajuna.

“_____ likes _____.”

tidoluna

“I know (a man)”

Kudobajuna.
“_____ likes him.”

tidoluna
“I know (a man)”

Kudobajuna.
“_____ likes him.”

tikuluna
“I know (a woman)”

Kudobajuna.

“_____ likes him.”

tikuluna

“I know (a woman)”

Kudobajuna.

“_____ likes him.”

tikuluna

“I know (a woman)”

Kudobajuna.

“_____ likes him.”

ti kuluna

“I know (a woman)”

Kudobajuna.
“She likes him.”

tikuluna
“I know (a woman)”

ASPECT

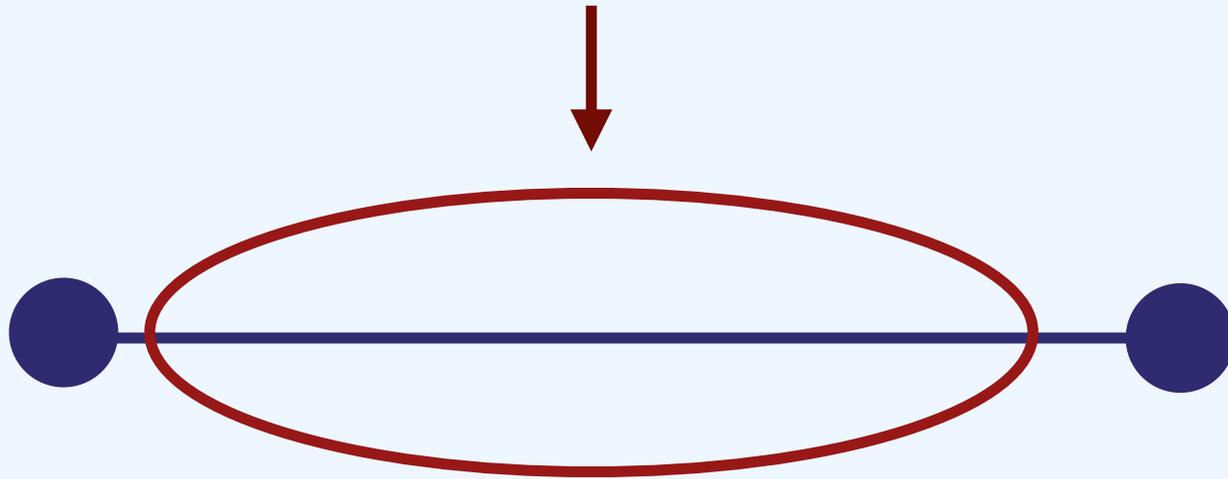
Aspect: The part of the action one focuses on, and/or how it's viewed.



starts to break



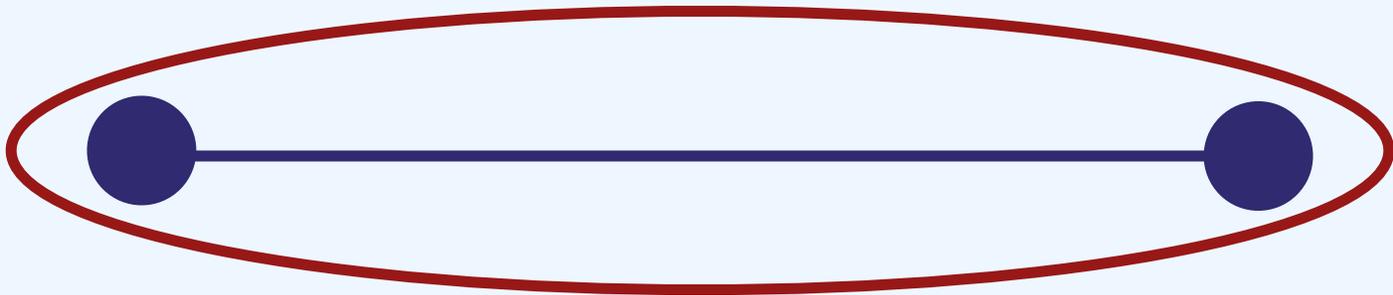
is breaking



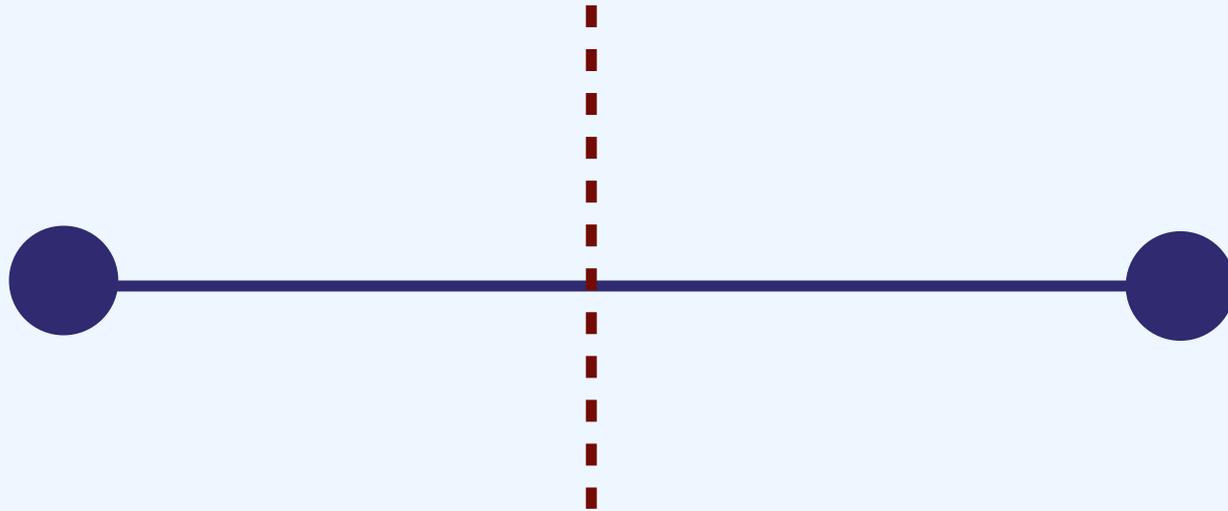
is broken



breaks/broke



stops breaking



Boundedness: Whether an action has an obvious endpoint or not.

**Bounded: Has an implicit
endpoint.**

**Unbounded: Has no implicit
endpoint.**

Eat: unbounded
Eat an apple: bounded

**Change of State: Whether
the affected argument
undergoes some
appreciable change of state.**

Eat: unbounded, no change
Eat an apple: bounded,
change (apple gets eaten)

**Love: unbounded, no
change**

**Remember: bounded, no
change**

Grow: unbounded, change

Break: bounded, change

Languages are variously sensitive to these things.

Finnish

Söin pullaa.

/ate pulla-PART/

**“I ate (but didn’t finish) some
pulla bread.”**

Finnish

Söin pullan.

/ate pulla-ACC/

“I ate (and finished) the pulla
bread.”

Spanish

Leí un libro.

/read-PRET a book/

“I read (and finished) a
book.”

Spanish

Leía un libro.

/read-IMP a book/

“I read a book (for a while).”

Spanish

Leía un libro cuando...

/read-IMP a book when/

“I was reading a book
when...”

Complete vs. Incomplete

E 'ai ana au.
“I was eating.”
“I will be eating.”

Ua 'ai au.

“I ate.”

“I have eaten.”

“I will have eaten.”

Digression

I ate.

I have eaten.

Digression

I have eaten. = I ate and you
should care about that.

Digression

Anterior: Past action with present relevance (according to the speaker, I guess).

Digression

I have eaten.

Digression

I **have** eaten.



Present tense possession

Digression

Perfective as past tense *and*
anterior: MAYBE IF I'M
TELLING YOU IT'S
RELEVANT.

Complete vs. Incomplete
Replacing Tense: If an
action has been completed,
it is *necessarily* in the past.
Why have a past?

Ua ‘ai au i ka lā ‘āpōpō.
/PERF eat I to the day next/
“I will have eaten tomorrow.”

Logic: If I'm using the perfective *and* using the future adverb "tomorrow", what else could I mean?

Start Point
past vs. non-past
complete vs. incomplete

**From there, add more stuff
by evolving, or by using the
same morphology in
different contexts.**

**Bounded, Change
Completed: broke
Incomplete: was breaking**

Bounded, Change
Completed: broke

Incomplete: was breaking

breaking was slow

**Unbounded, Change
Completed: grew
Incomplete: was growing**

endpoint imagined (adult?)

Unbounded, Change

Completed: grew

Incomplete: was growing

Unbounded, No Change
Completed: love???
Incomplete: love

Unbounded, No Change **but no longer?**

Completed: love???

Incomplete: love

Bounded, No Change
Completed: remembered
Incomplete: was
remembering??

Bounded, No Change
Completed: remembered

Incomplete: was
remembering??

remembering a process?

**New forms can emerge from
the edge cases.**

**Bounded, Change,
Completed
broke**

**Unbounded, Change,
Completed
grew up**

My little sister grew.

**My little sister became taller
over a prespecified period of
time.**

My little sister grew up.

**My little sister became an
adult (the unstated yet
accepted endpoint of growth
in humans).**

Often
 $V \rightarrow V + \text{Prep}$
Unbounded \rightarrow Bounded

Perhaps you can use your cases or adpositions or another strategy to mark this change. Or not.

EVOLVING ASPECT

**Same formation for past vs.
non-past used for complete
vs. incomplete.**

Also: Word for “finish”,
“complete” *very* common for
completed aspect. (And yes,
usually “finish” is basic.)

For incomplete, common lexical sources are “stay”, “still”, “now”, “here”, “hold”, “maintain”, etc.

Another option (also for progressive): to be at, to be located at, to be in, locative copula + V/participle.

Inceptive
emagon “to have”
mazemagon “to get”

Inceptive

Sources: “start”, “begin”,
“come”, “go”, etc.

Cessative

adarimba “to serve”

adarimbopsa “to stop serving”

Cessative

Sources: “stop”, “cease”,
“finish”, “complete”, “end”,
etc.

Completed vs. Cessative

I sang.

I stopped singing.



Tonight

(1) PA on evolving TMA

Teonaht by Sally Caves

1st Pers. "eat"	Form 1	Form 2
Future	ennives	esri ennive
Habitual	ri ennivom	omi ennive
Anterior	i eniveljar	jari ennive
Im. Fut.	ri enivead	adri ennive
Pst. Hab.	elri ennivom	olmi ennive

ASTAPORI VALYRIAN

5,000 years before the present, the Valyrian Freehold conquered the Ghiscari Empire. High Valyrian replaced Ghiscari as the language of Ghis.

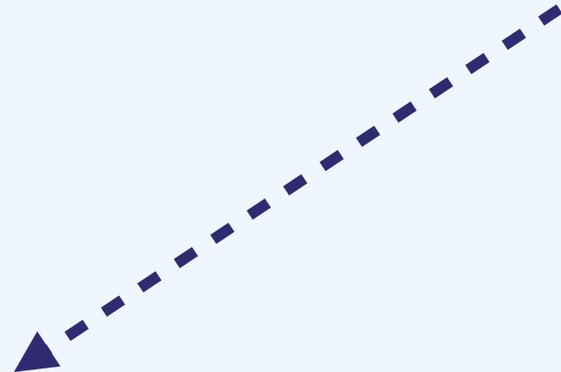
In Astapor and the other cities, Ghiscari words mixed with High Valyrian grammar and produced a creole that became Astapori Valyrian.



High Valyrian

Ghiscari

Astapori Valyrian



Background

High Valyrian Verbs

High Valyrian
Subject Agreement with
Person and Number
7 Tense/Aspect Combos
2 Modes
2 Voices

High Valyrian Tense/Aspect
Present
Past Incomplete
Anterior (Past/Present)
Future
Habitual (Past/Present)

High Valyrian Modes

Indicative

Subjunctive

High Valyrian Voices

Active

Passive

High Valyrian

Present	Singular	Plural
1st Pers.	vestran	vestri
2nd Pers.	vestraꝛ	vestraꝛt
3rd Pers.	vestras	vestris

High Valyrian

1st Pers.	Indicative	Subjunctive
Present	vestran	vestron
Past Inc.	vestrilen	vestrilon
Ant. Pres.	vestretan	vestreton

High Valyrian

1st Pers.	Indicative	Subjunctive
Ant. Past	vestreten	vestreton
Future	vestrinna	vestrilun
Hab. Prs.	vestrin	vestrun
Hab. Past	vestretin	vestretun

High Valyrian

Present 1st Pers.	Indicative	Subjunctive
Active	vestran	vestron
Passive	vestraks	vestroks

Copula

High Valyrian

Present	Indicative	Subjunctive
1st Pers.	iksan	iksi
2nd Pers.	iksaː	iksaxt
3rd Pers.	issa	issi

Low Valyrian

Present	Indicative	Subjunctive
1st Pers.	skan	ski
2nd Pers.	ska	skat
3rd Pers.	sa	si

High Valyrian

Present	Indicative	Subjunctive
1st Pers.	ilan	ili
2nd Pers.	ilaː	ilaxt
3rd Pers.	ilza	ilzi

Low Valyrian

Present	Indicative	Subjunctive
1st Pers.	lan	li
2nd Pers.	la	lat
3rd Pers.	las	lis

sagon → sayo
ilagon → layo

sayo → equative copula
layo → locative copula

Nominal Copula
zi tova sa me ragero.
“The boy is a friend.”

Adjectival Copula

zi tova sa kreni.

“The boy is (always) happy.”

zi tova las kreni.

“The boy is happy (atm).”

Locative Copula

zi tova las vi linto be.

“The boy is on the house.”

Agreement

Present	Indicative	Subjunctive
1st Pers.	vetran	vetri
2nd Pers.	vetra	vetrat
3rd Pers.	vetras	vetris

Agreement

Present	Indicative	Subjunctive
1st Pers.	sindin	sindi
2nd Pers.	sindi	sindit
3rd Pers.	sindis	sindizi

Agreement patterns *resisted*
sound changes where
nominal paradigms
accelerated them.

Result: Verb agreement more or less in tact, while noun cases disappeared.

Tense/Aspect

Many High Valyrian Tense/
Aspect Combinations Kept;
Some Replaced; Some
Destroyed.

Tense/Aspect

HV

LV

Present → Present

Future → Subjunctive

Imperfect → Imperfect

Prs. Complete → Preterite

Tense/Aspect

HV

LV

Past Complete → ∅

Pres. Habitual → Conditional

Past Habitual → ∅

Tense/Aspect

High Valyrian

ziȝot vestrakon sytili:bas.

“She should tell her.”

Tense/Aspect

Low Valyrian

zi vetrozlivas.

“She will tell her.”

Low Valyrian Future

Present	Indicative	Subjunctive
1st Pers.	vetrozlivan	vetrozlivi
2nd Pers.	vetrozliva	vetrozlivat
3rd Pers.	vetrozlivas	vetrozlavis

Modality, Etc.

The composite passive voice and subjunctive mode of High Valyrian were *both* lost.

Modality, Etc.

**As mentioned, the High
Valyrian future became the
Low Valyrian subjunctive
(now just used in the
present).**

Modality, Etc.

The passive was replaced by
a prolix expression.

Modality, Etc.

ma.ze.'ma.go → maz.'ma.ɣo
“to obtain”

Modality, Etc.

mazman doerari.

“I am served.”

Modality, Etc.

Other prolix expressions
used for progressive and
anterior.

Questions?

MODALITY AND FRIENDS

Modality: Anything that's not explicitly tense or aspect.

Valence = next week. Don't worry about causatives, passives, or applicatives yet.

“Verby” Bunch
Infinitive
Participle
Gerund

**Infinitive
saber
(to) know**

Infinitive

I want to know it.

You may know it.

Infinitive

Bare form of the verb;
nominalization (gender
marker, etc.); “time”, “way”,
“style”, etc.

Participle = Adjectival Form
Gerund = Nominal Form

**Participle > Adjectival
Morphology**

**Gerund > Nominal
Morphology**

“Aspecty” Bunch
Durative/Continuous
Momentane
Habitual
Gnomic
Repetitive

Durative, Continuous, etc.
look at vs. stare
to “keep/continue” xing
to x again and again

**Durative, Continuous, etc.
“stay”, “be at”, reduplication,
vowel lengthening, “still”,
“hold”, “maintain”, etc.**

Momentane
walk vs. step out
look vs. glance

Momentane
“once”, “quick”, etc.

Habitual

I ate a hot dog yesterday.

I ate hot dogs while I was at
Berkeley.

Habitual

Present/Imperfect > Habitual
“stay”, “keep”, “long”, etc.

Gnomic
Birds fly.
Dogs bark.

Gnomic

Present > Gnomic

Lack of morphology that
would ordinarily be present.

Same as Habitual.

Repetitive
I redid did it.
I hammered at it.
I pumped the bellows.

Repetitive
“Again”, “new”, “back”,
“return”, etc.

“Have to” Bunch
Permissive
Weak Obligation
Strong Obligation

Permissive
I let him leave.
You may leave.

Permissive

“Leave”, “loose”, “drop”,
“give”, “power, might, etc.”
(same as Potential—or *from*
Potential)

Weak Obligation

I should eat. (I don't *have* to,
but I probably should.)

Weak Obligation
“Owe”, “debt”, etc.
(something where *someone else* requires you to do something.)

Strong Obligation
I have to eat. I must eat.

Strong Obligation

“Power, might, etc.” (same as Potential), possession, “debt”, “owe”, etc.

“Can” Bunch
Potential (Event)
Potential (Ability)

Potential (Event)
We might leave.
It can happen.

Potential (Ability)
I can lift four kittens.

Potential (Either)

(1) “Power”, “might”,
“strength”

(2) “Know”, “see” (in the
sense of knowing *how* to do
something)

**“Cause I Said So” Bunch
Hortative
Imperative**

Hortative

Let's go!

Let's make cats our rulers!

**Imperative
Go!
Eat!**

Imperative

Bare form of verb; affective change (like vocative); some verb like “do” or “make” or “go”.

Hortative

Imperative; some non-finite form plus a dative/allative; auxiliary with suggestability; “yes/no”.

The **hortative** ( [/ˈhɔːrtətɪv/](#); abbreviated HORT) is a group of **semantically** similar **deontic modalities** in some **languages**.

Hortative modalities encourage or urge. In English, there are seven hortative modalities: the adhortative, exhortative, suprahortative, cohortative, dehortative, inhortative, and infrahortative. *[citation needed]* They differ by intensity, attitude (for or against), and—in the case of the cohortative—**person**. *[citation needed]*

Contents [\[hide\]](#)

1 Behavior

Imperative-hortative systems [\[edit \]](#)

Many languages have imperative-hortative systems in which modalities dealing with commands and encouragement are grouped together. This is not the case in English and results in some disagreement among linguists^[*who?*].

Imperatives and hortatives both involve the expression of a wish

“Maybe” Bunch
Optative
Subjunctive
Conditional

Optative

May we feast on mulberries!

I hope to eat mulberries!

Subjunctive
I hope he comes.

Conditional

If you go, I'll go.

He would like to do that.

**All these “moods” are crazy.
Every single language uses
every single one differently.
There is no standard
definition or usage of ANY of
them.**

Sources

“Want”, “hope”, future,
antiquated verb forms,
potential, past tense of any of
these...

Evidentiality Indirectivity

Evidentiality: Indicating how likely to be true the information one is presenting is.

Indirectivity
Turkish
geldi “he came”
gelmiş “he must have come”

Evidentiality

Witness vs. Non-Witness

First-hand vs. Second/Third

Saw vs. Heard

No Evidence, but Inferred

Evidentiality

Quechua

-m(i) = experienced

-tfr(a) = inferred

-f(i) = hearsay

MA 6

- Figure out your copulae.
- Decide on past/non-past or complete/incomplete.
- Build out as desired.

For “Augments”

- Must be composite.

- Must show source.

- Must explain how it interacts with other elements.

- Must show what happens when it fails to apply.

-en ≈ inchoative

**It darkened quickly after 8
p.m.**

Source is actually -en
causative (PIE *-no; opaque
before that).

When It Fails

dark = adj.

darken = grow dark

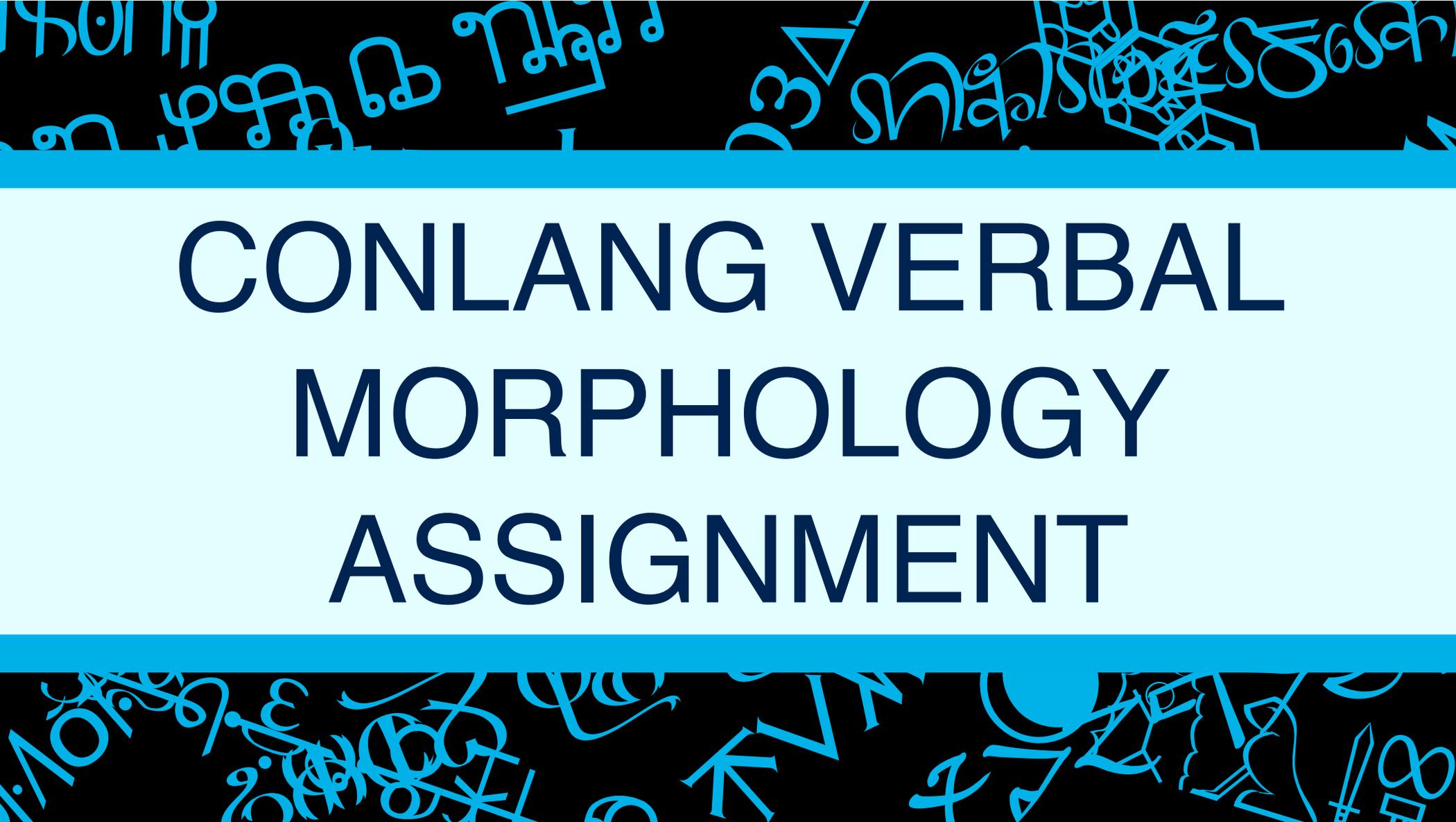
bizarre = adj.

bizarren = grow bizarre

Repair Strategy

The movie got/grew/became
bizarre.





CONLANG VERBAL MORPHOLOGY ASSIGNMENT





LINGUISTICS 183

WEEK 4

Spokaans by Rolandt Tweehuysen

Jân kette ef mimpit ón Elsa.

“Jan gives the book to Elsa.”

Jân ef mimpit kette ón Elsa.

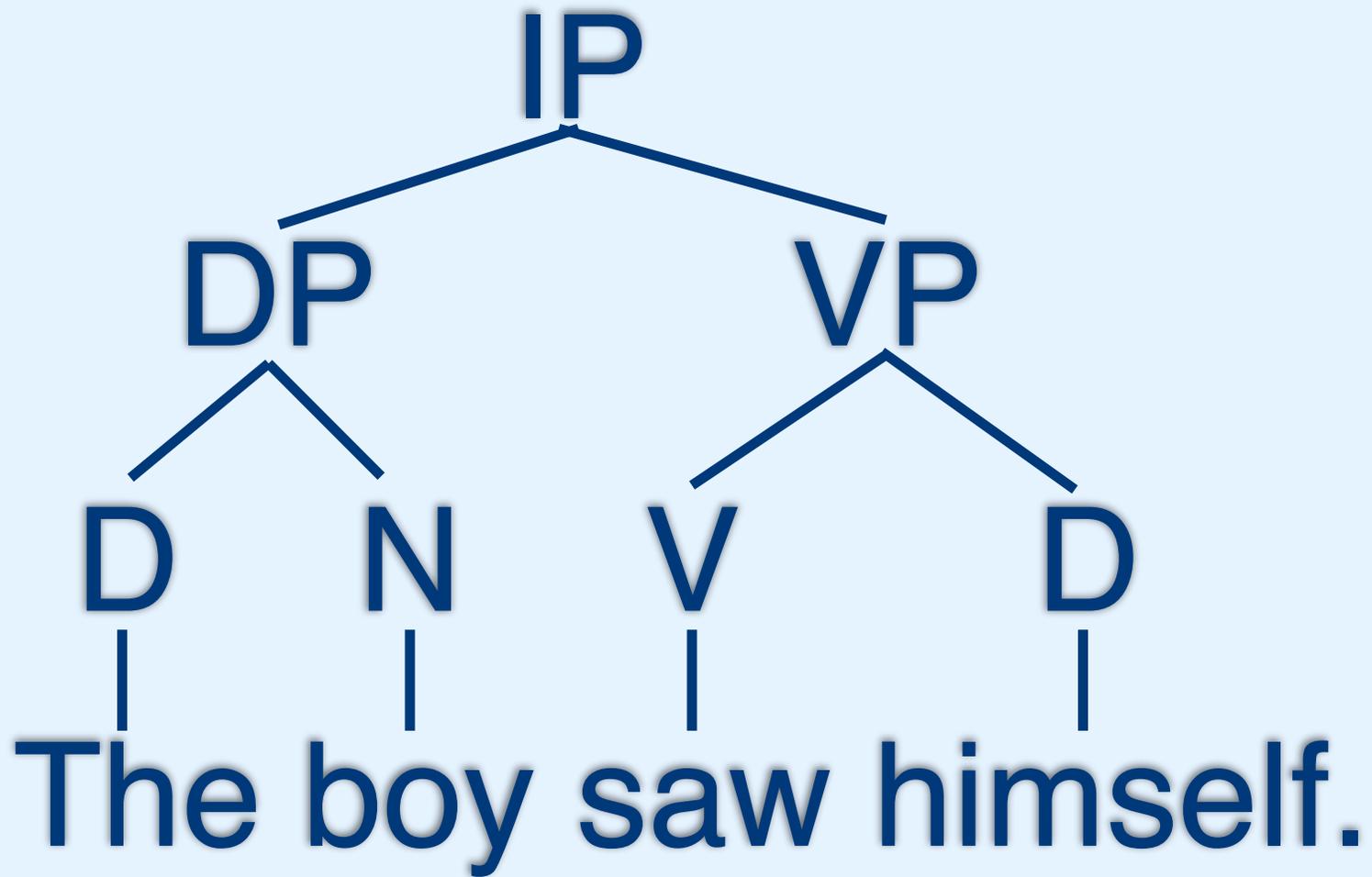
“Jan gave the book to Elsa.”

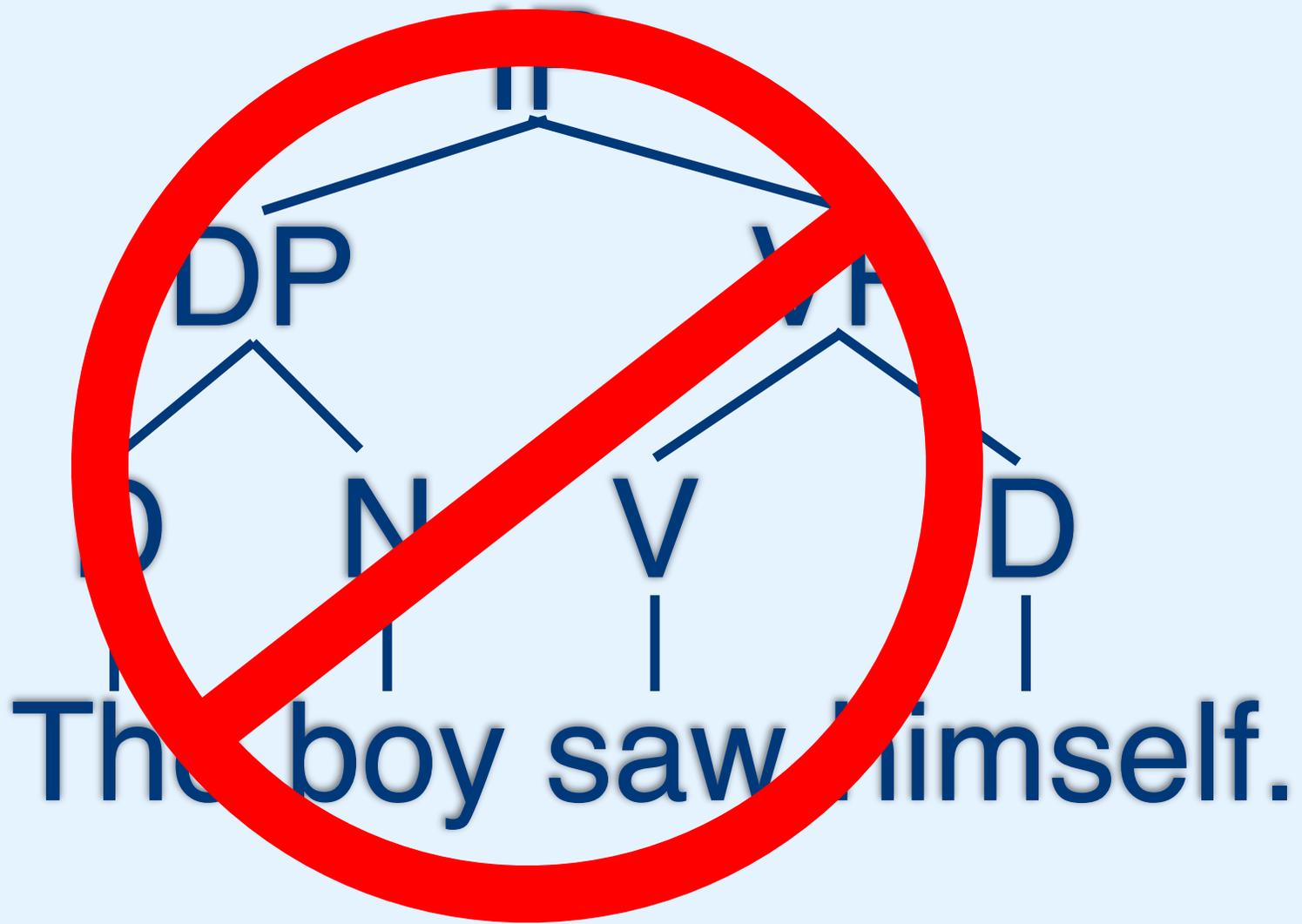
Kette Jân ef mimpit ón Elsa.

“Jan will give the book to Elsa.”

SYNTAX AND PRAGMATICS

The boy saw himself.



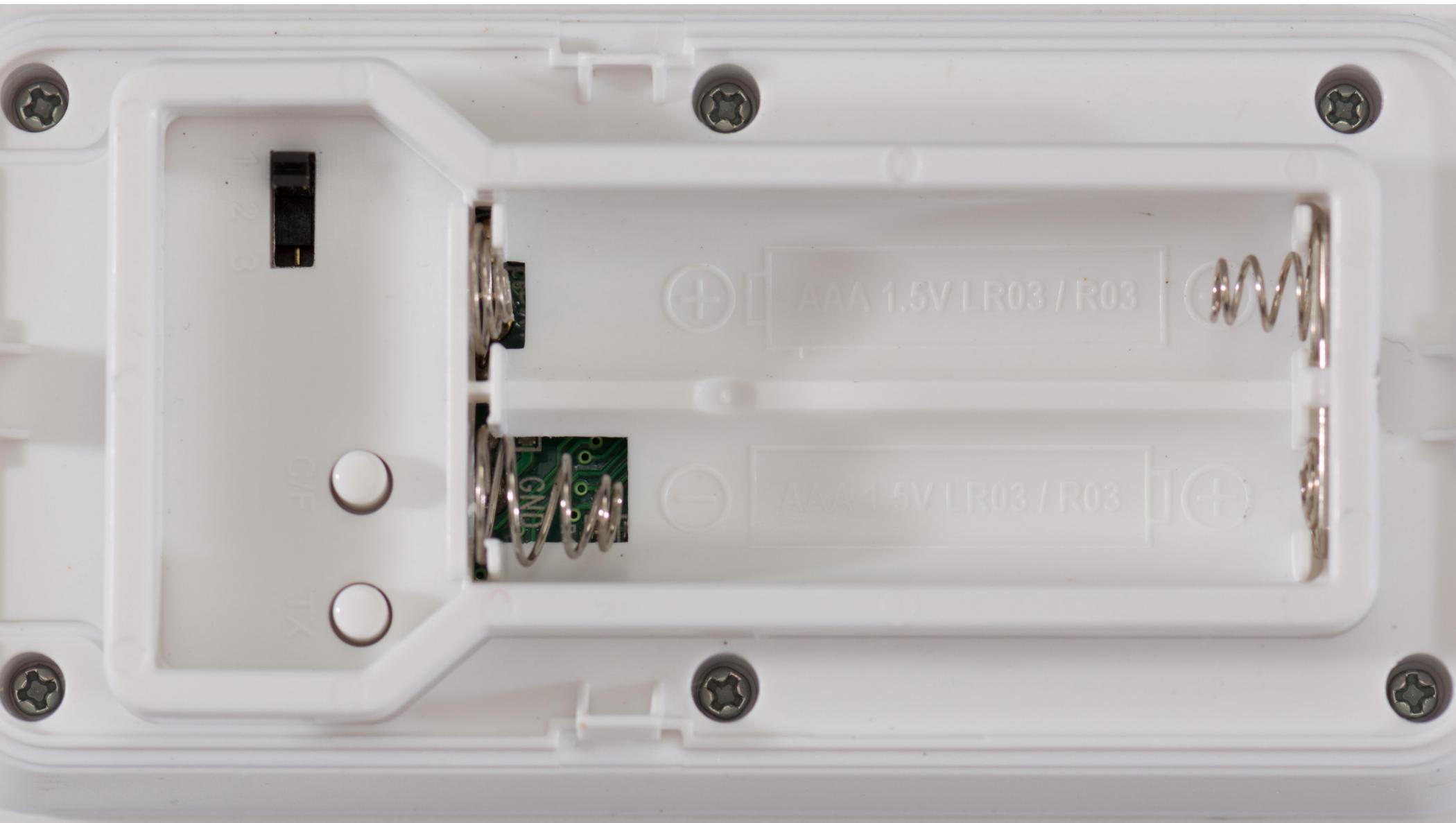


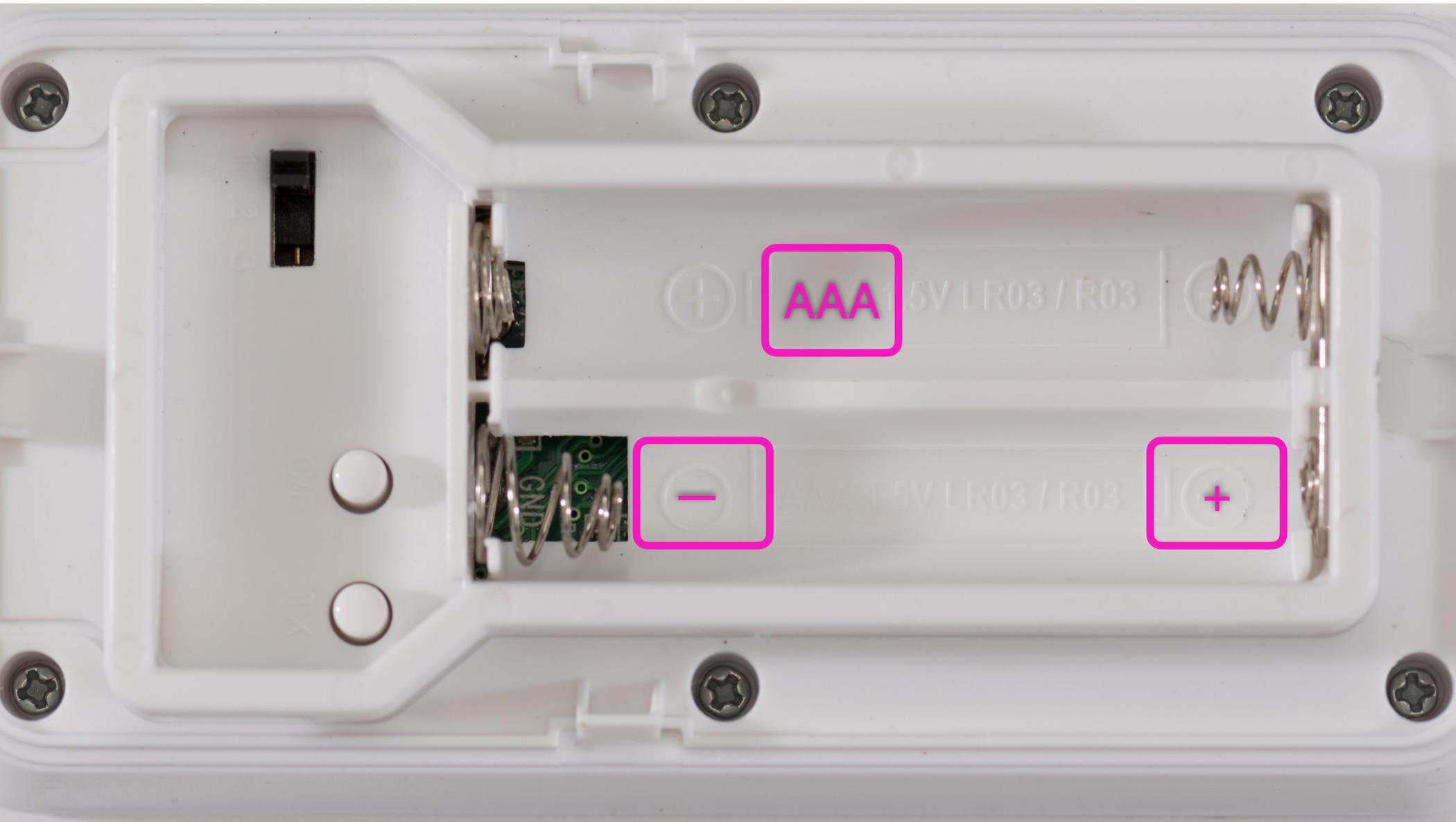
The happy cat slept.
*Happy the cat slept.
*Happy cat the slept.
*Happy slept cat the.
*Slept cat happy the.

**Valency
Relativization
Subordination
Questions
Topicalization**

VALENCY

**Valency: What arguments
can appear with which
verbs.**





**Intransitive: One argument
(monovalent).**

**Transitive: Two arguments
(divalent/bivalent).**

**Ditransitive: Three
arguments (trivalent).**

**The cat ate the steak.
I put the cat in the rocket.**

eat { α [NOM]_{eater}, (β [ACC]_{eaten}) }

put { α [NOM]_{putter}, β [ACC]_{puttee},
PREP γ []_{location} }

**The cat V the steak.
NP ate NP.**

The cat ate the steak.
The cat licked the steak.

The cat ate the steak last
Saturday on a park bench
with a pigeon.

The cat licked the steak last
Saturday on a park bench
with a pigeon.

The cat danced last
Saturday on a park bench
with a pigeon.

Languages allow verbs to do things to/with the arguments they specify, and to add to or decrease their number.

**Valency Reducing: Getting
rid of a core argument.**

**Valency Increasing: Adding
a core argument.**

Valency Reducing Passivization Antipassivization

$V \{ \alpha[C_x], \beta[C_y] \}$

$$V' \{ a[C_x] \}$$

Passivization

I saw him.

NOM V ACC

Passivization

~~I~~ saw him.

~~NOM~~ V ACC

Passivization

I saw him.

NOM V ACC



Passivization
He was seen.
NOM PASS V-AGR

Antipassivization

Sena toru val.

The boy ate the apple.

ERG V ABS

Antipassivization

Sena toru val.

The boy ate the apple.

ERG V AFS

Antipassivization

Sena toru val.

The boy ate the apple.

ERG V ABS

Antipassivization
Sen torule.
The boy ate.
ABS V-ANT

Passivization

The boy saw the girl and
ran.

Passivization

The girl was seen by the boy
and ran.

Antipassivization

The boy saw the girl and
ran.

See = transitive (seer =
ergative, seeeee =
absolutive)

Run = intransitive (runner =
absolutive)

**Therefore in ergative-
absolutive languages,
coordination is with
transitive objects and
intransitive subjects.**

Antipassivization

The boy saw the girl and
ran.

Antipassivization

The boy saw of the girl and
ran.

I came, I saw, I conquered.

I came, I saw, I conquered.

**I came, I was seen, I was
conquered.**

**Passives apply to direct
objects mostly; sometimes
others.**

I gave an apple to the boy.
The apple was given to the
boy.

The boy was given an apple.

The boy was given an apple.
*The boy was given.

**Antipassives apply to
ergative arguments.**

IF you can optionally reintroduce the removed argument, it's done with an oblique strategy.

I was seen *by the bird*.
He shot *at the student*.

Not usually done with a special case. Reintroduced agents use more agentive morphology (instrumental, etc.)...

**Reintroduced absolutes
use more patientive
morphology (partitive,
allative, dative, etc.).**

Generally core cases are not used (nominative, ergative, absolutive, accusative).

Sources for Passives
“Eat”, “fall”, “get”, “suffer”,
“see”, reflexive, third person
plural.

Sources for Passives
Nzua a-mu-mono.
John they-him-saw.
“They saw John.”

Sources for Passives

Nzua a-mu-mono (kwa meme).

John they-him-saw (by me).

“John was seen (by me).”

**Sources for Antipassives
Reflexives, “do”, “go”,
sources for intransitives.**

**Source may suggest
marking for reintroduced
argument.**

Antipassive Example

I hugged the fish.

Antipassive Example

I did-hugging.

Antipassive Example
I did-hugging to the fish.

Digression

Usual Passive

I eat a fish.

A fish is eaten by me.

Digression

I have him bound. → I have
bound him.

Digression

Present Completed State →
Anterior → Past Tense

Digression

Usual Passive

I eat a fish.

A fish is eaten by me.

Digression

A fish is eaten by me.

“In the present, a fish is in the state of having been eaten by me.”

Digression

I eat a fish. → Present

A fish is eaten by me. → Past

Digression

BUT

**With the loss of the passive
as a regular morphological
construction, what does this
look like?**

Digression

I eat a fish. → Present

A fish is eaten by me. → Past

Digression

I eat a fish. → Present

A fish is eaten by me. → Past

Digression

A eat P. → Present

S is eaten A. → Past

Digression

The result is split ergativity:
Accusative in the present,
ergative in the past.

Digression

Happened in Hindi,
Georgian, and many others.

**Valency Increasing
Causativization
Applicativization**

**Causativization: When
someone makes someone
do something.**

$V \{ \alpha[C_x] (\beta[C_y]) \}$

$V' \{ \gamma[C_x], \alpha[C_{\{x/y/z\}}] (\beta[C_y]) \}$

Causativization

I pet the cat.

The dog made me pet the
cat.

Causativization
The pot is black.
I blackened the pot.

Causativization

I made the pot.

I made him.

I made him eat a vegetable.

Causativization

I made the pot.

I made him.

I made him **eat a vegetable.**

Luo

Koth no-miyo wa-bedo e
tiend yath.

“The rain made us stay at
the foot of the tree.”

Luo

Koth **no-miyo wa-bedo** e
tiend yath.

no = 3SG miyo = give

wa = 1PL bedo = stay

Subordination vs. Non-Subordination

Causee Groups with Matrix vs. Groups with Subordinate Clause

High Valyrian
qurdot pa:letille go:vile:dan.
/table-DAT crown-ACC v/
“I put the crown under the
table.”

Twí

o-de né nnípa fòro bépow.

/he-take his men ascend
mountain/

“He makes his men ascend
the mountain.”

Twí

o-de né nnípa fòro bépow.

V

OBJ

V

OBJ

“He makes his men ascend
the mountain.”

Sources for Causatives

“Take”, “give”, “make”, “do”,
“force”, etc.

Applicativization: When a non-core argument is raised to a *non-nominative/ absolutive* core argument

**I ran faster than him.
I outran him.**

I outran him.
*I outran.

$V \{ \alpha[C_x] (\beta[C_y]) \}$

$$V' \{ \alpha[C_x], \gamma[C_y] (\beta[C_y]) \}$$

Yagua

sɟchitírɣa javanu quiichitya.

“He poked the meat with a
knife.”

Yagua
sj̣chitíṭyara quiichiy.
“He poked something with a
knife.”

Yagua
sɔ̃chitítɨyara quiichiy.
“He jabbed the knife.”

Sometimes...

Intransitive + X = Causative

Transitive + X = Applicative

Seko Padang
jambu mirène'.
“The guava fell.”

Seko Padang
Matius marrène'ing jambu.
“Matthew dropped the
guava.”

Seko Padang
Yeni mangala kinanne.
“Jenny is getting rice.”

Seko Padang
Yeni mangalaing kinanne:
adinna.

“Jenny is getting rice for her
brother.”

Sometimes...

He played basketball.

She outplayed him.

*She outplayed him
basketball.

But Sometimes...
Umugóre arakore
umuhuungu igitabo.
“The woman read the boy
the book.”

Types of Applicatives
Benefactive/Malefactive,
Instrumental, Locative,
Comitative, Allative,
Purposive...

Applicatives \approx Cases

Sources of Applicatives \approx Sources of Cases/ Adpositions

**Noun → Adposition →
Adverb → Applicative**

ADVERBS

Adverbs: Modify the action of the sentence in some way (sometimes also adjectives).

Adverb Types

- Temporal
- Locative
- Manner

Locative

Often basic in the same way demonstratives are (so if “this” and “that” are basic, “here” and “there” will be).

Locative
Others derived from cases
(either fossilized or never
fully realized).

Locative
ahead
aside
abroad
afoot
ashore

Locative
an (i.e. “on”) + N

Temporal

Some basic (words for
“now”, “today”, “yesterday”,
“tomorrow”, “then” often
basic).

Temporal

If not, formed from cases, or via metaphorical extension (e.g. “after” and “before”).

Manner
quickly
well
awesomely

Manner
ADJ + SUFFIX
PREFIX + ADJ
ADJ

Manner

Many languages make *no distinction whatsoever* between adjectives and manner adverbs

Manner

For affixes: “body”, “like”,
“way”, “mind”, “style”, “type”,
etc.

Manner
Spanish
la niña rápida
el niño rápido

Manner
Spanish
rapidamente
*rapidamente

Manner
Spanish
rapida mente

Manner Spanish

mente > mente (L.) > mens

Manner
Spanish
mens = feminine

Manner
Spanish
mente = ablative

Manner

Spanish

**rapida mente = from/of a
quick mind**

Manner Spanish

Adverb always formed on
feminine adjective because
it modified feminine noun
originally.

Tonight

- (1) PA16: Create 10 *tradable nouns* (info on site).
- (2) Radio reporter coming tomorrow.

Prydonian High Gallifreyan by kiwikami

Kì Tsar cì kìsimb ca kataigr, **kaskì** kì *Xròk* ca kahòrs.

“The lion scratches the tiger **that** *bites* the horse.”

Kì Tsar cì kìsimb ca kataigr, **kìskì** kì *Xròk* ca kahòrs.

“The lion **that** *bites* the horse scratches the tiger.”

Kì Tsar cì kìsimb ca kataigr, **kìska** kì *Xròk* cì kìhòrs.

“The lion scratches the tiger **that** the horse *bites*.”

WORD ORDER

SOV

SVO

VSO

VOS

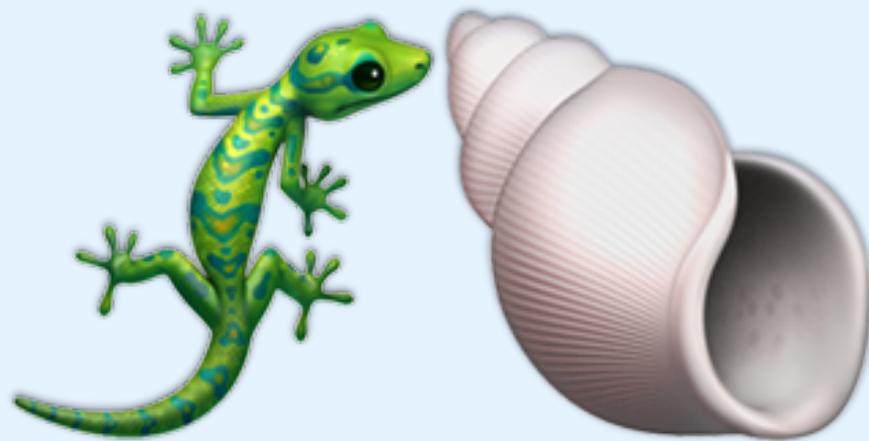
OVS

OSV

SOV	41%	VOS	2%
SVO	35%	OVS	1%
VSO	7%	OSV	0.3%

SOV	41%	VOS	2%
SVO	35%	OVS	1%
VSO	7%	OSV	0.3%

No Dominant Order ~14%!



(1) The thing you're talking about.

(2) What you're saying about it.

N-MOD

Rock

**Rock a big one, as it turns
out**

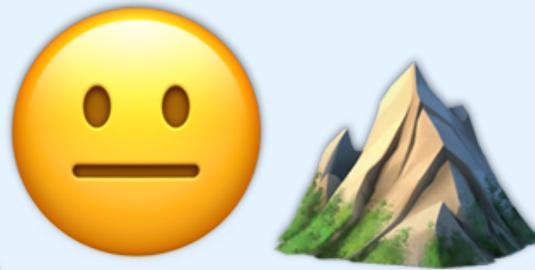
V-O
Eating
Eating an acorn, as it
happens

V-O
N-MOD

O-V
MOD-N

Modifiers
Adjectives
Possessors
Relative Clauses

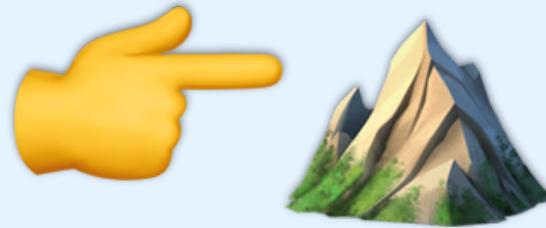
Adpositions follow suit *because* they usually come from verbs modifying objects or nouns possessed by other nouns.



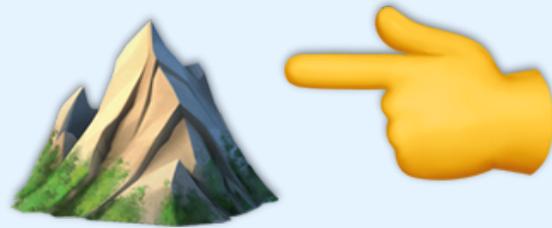
face (of the) mountain
in front of the mountain
 $P-N < N-MOD$



moutain('s) face
the mountain in front
N-P < MOD-N



touch mountain
to the mountain
P-N < V-O



mountain touch
the mountain to
N-P < O-V

Determiners (that, the, a, this, etc.) often treated like heads in syntax.

DET-N = head-initial
N-DET = head-final

Oedipus Rex

Oedipus, who is the king, as
it happens

**I saw that man.
I saw that one, and it
happened to be a man.**

Relative Clause-Noun Order

R-N

N-R

Relative Clause-Noun Order

R-N 17% N-R 70%

There are constraints on language that exist simply because of the way humans are and perceive time.

Heavy Shift: Big stuff tends to get pushed off to the end, chronologically.

I gave him the book.
I gave the book to him.

I gave him the book I was telling you about the other day that my friend Jackie was absolutely *raving* about.

I gave the book I was telling
you about the other day that
my friend Jackie was
absolutely *raving* about to
him.

**It's too long! We forget what
the hell verb it was!**

Relative clauses, by definition, tend to be longer and more complex than simple nouns (they're little clauses, after all).

Thus, this is quite common:

SOV

N-P

MOD-N

G-N

N-REL

**Also the reason why you
see alternate possessive
strategies.**

**He's the son of that guy I
was telling you about the
other day.**

**He's that guy I was telling
you about the other day's
son.**

This stuff isn't *impossible*,
just harder to process.
Easier to do something
different.

Like everything else, word order can change over time.

Things that drive word order change:

- Loss of case.
- Emphasis.
- Deemphasis.

Latin
SOV
Case

Romance
SVO
No Case

Spanish

La mujer le llamó al director.

Deemphasis: Taking a full NP and pushing it later in the clause.

Spanish

La mujer le llamó al director.
She called him, the director.

**Notice: Spanish pronouns
still have case!**

Spanish

La mujer el director llamó.

Potentially ambiguous!

Spanish

La mujer le llamó.

*Not ambiguous, but now we
don't know who she called!*

Spanish

La mujer le llamó al director.

¡Perfecto!

**Emphasis: Taking a full NP
and pulling it out to first
position.**

Him I like!

“Hooray!” the boy said/said
the boy.

First position is always privileged and always a potential slot for emphasis because it's the first thing you say.

Dothraki

Tih mahrazh khales.

/saw man-NOM khal-ACC/

“The man saw the khal.”

Dothraki

Mahrazh tih khales.

/man-NOM saw khal-ACC/

“The man saw the khal.”

French
grand homme “great man”
homme grand “tall man”

All three of these things
CAN happen, but they never
NEED to happen.

Questions?



Questions

Yes/No Questions

WH-Questions

Yes/No Questions or Polar Questions: Questions that call for an answer of “yes” or “no”, usually.

**Are you going to the sock
hop?**

**Do you enjoy talking about
sock hops?**

Question Particle
Verb Form
Both
Intonation
Word Order Change

Question Particle

Katabat haḥḏa al-kitāb.

“She wrote this book.”

Hal katabat haḥḏa al-kitāb?

“Did she write this book?”

Question Particle

Kono-hon o kakimashita.

“She wrote this book.”

Kono-hon o kakimashita ka?

“Did she write this book?”

Question Particle Sources
Words like “whether/if”,
“yes”, “no”, “perhaps/
maybe”, “come”, “or”.

**Are we going to the store,
or...?**

Verb Form
eʎ'e-čó-y
/go-PRES-Q/
“Are you going?”

**Verb Form Sources
Similar to “conditional” or
other “optative”-style
modalities. Also same as
question particles.**

Intonation

Mi mamá me llamó ayer.

¿Mi mamá me llamó ayer?

Word Order Change

Ich habe jetzt vier Bücher.

Habe ich jetzt vier Bücher?

**Verb is pulled out in front
(result of emphasis).**

WH-Questions: Questions that have a word that has a “w” and “h” in it in English: where, what, who, when, why, how.

Intonation often differs:
Did you eat the crackers?
Who ate the crackers?
The cat ate the crackers.

**Two major placements for
WH-Words:
(1) Sentence-initially
(2) In situ**

Spanish

Pregunté a Ernesto.

¿A quién preguntaste?

¿Preguntaste a quién?

Many languages *allow* WH-words to be in situ (with a meaning difference); some require it.

Who(m) did you talk to?
You talked to *who(m)*?

**The “movement”, again, just
emphasis: Initial position is
privileged.**

**Restrictions on two WH-
words usually reducible to
restrictions on two points of
emphasis.**

Placement

WH-Word Initial: 29%

WH-Word Elsewhere: 68%

Mixed Placement: 3%

Sources for WH-Words
Usually a basic “WH”-y
word. It’s then built into
others.

Sources for WH-Words

Many languages don't distinguish "what" and "who" *or* "what" and "which".

Sources for WH-Words
Other WH-words usually
reducible to “what time”,
“what place”, “what way”,
“what one”, etc.

RELATIVE CLAUSES

Relative Clause: A full sentence whose function is to describe another noun.

**¡El carro, que me vendió, es
un limón!**

**“The car that he sold me is a
lemon!”**

¡El carro, que me vendió, es
un limón!

“The car that he sold me is a
lemon!”

Relative clause *usually* has
a role for the target of
relativization.

the squirrel that I saw

Relative Clause

the squirrel that I saw

Target of Relativization

Strategies for ToR Gap Resumptive Pronoun Internally Headed

the squirrel that I saw ___

Gap Strategy

the squirrel that I saw ___

Resumptive Pronoun

the squirrel that I saw him

Internally Headed

I saw the squirrel ran away.
My daughter loves I saw the
squirrel.

Unrelated

The cat my mother talked to
my aunt is happy.

The cat there's a TV show is
happy.

Accessibility Hierarchy

Subject/Absolutive > Direct

Object/Ergative > Indirect

Object > Oblique > Genitive

> Object of Comparative

the cat that saw me
the cat I saw
the cat I gave a fish
the cat for whom I slave
the cat whose tail is long
the cat I'm larger than

the cat that saw me
*the cat I saw

the cat that saw me
the cat that I saw it

Agreement with Gap
the cat that I saw ___
the cat whom I saw ___

that = invariant
who = case marked

Relative Pronouns =
generally agree with case/
gender/number of the role of
the *embedded* clause.

The cat that I saw is happy.

Subject

Direct Object

The cat that I saw is happy.

Direct Object (Like Embedded Clause)

The cat whom I saw is happy.

Pronoun Placement

The cat whom I saw is happy.

Pronoun Placement

The cat I saw whom is happy.

Relative Clause Placement

Havzi me tih anha layafa.

/cat that saw I is-happy/

“The cat I saw is happy.”

Relative Clause Placement

Havzi me tih anha layafa.

/cat that saw I is-happy/

“The cat I saw is happy.”

Relative Clause Placement

Ūndan lue kēli kirine issa.

/I-saw whom cat happy is/

“The cat I saw is happy.”

Relative Clause Placement

Ūndan lue kēli kirine issa.

/I-saw whom cat happy is/

“The cat I saw is happy.”

Relative Clause Word Order

Havzi me tih anha layafa.

/cat that saw I is-happy/

“The cat I saw is happy.”

Relative Clause Word Order

Havzi me tih anha layafa.

/NOM COMP V NOM V/

“The cat I saw is happy.”

Old Dothraki
Tih anha hrazef.
/saw I horse/
“I saw the horse.”

Modern Dothraki
Anha tih hrazef.
/I saw horse/
“I saw the horse.”

Relative clauses often (not always, but often) preserve old word order.

German

Der Hund, der mich sah, ist
freundlich.

German
SOV > SVO

Relative Clause Decisions

(1) Are my relative clauses going to come *before* or *after* my targets of relativization?

Relative Clause Decisions
(2) Are my relative clauses
going to use a gap, a
resumptive pronoun, or be
internally-headed?

Relative Clause Decisions

(3) Are relative clauses going to use an invariant complimentizer or a relative pronoun?

Relative Clause Decisions

(4) How many nominal arguments in the hierarchy can be relativized?

Complementizer Sources

“That”, “this”, “the”, WH-word
(e.g. “which” or “where”),
“for”, nominalization, genitive.

Complementizer Sources

The man of my seeing.

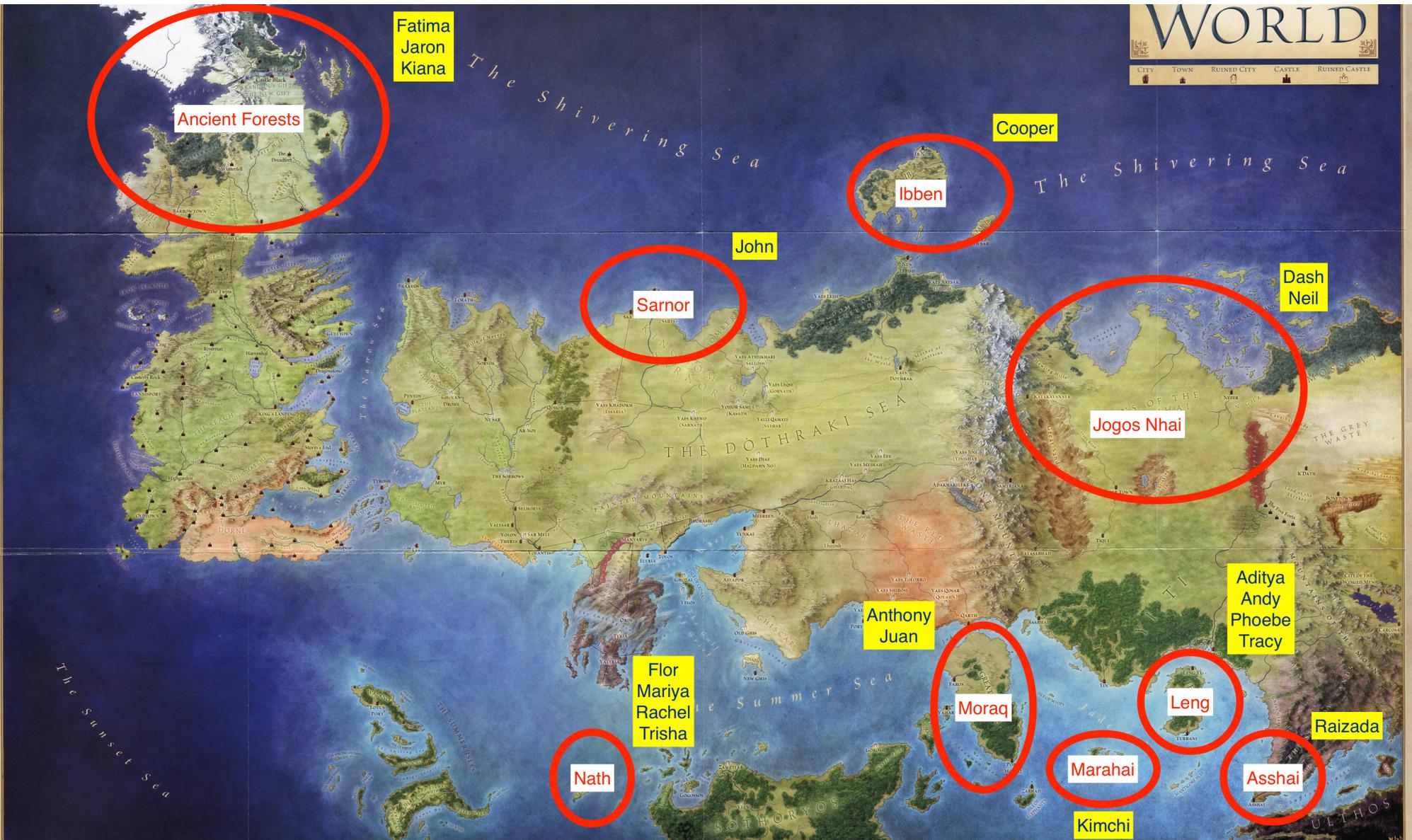
The man seen by me.

Relative Pronoun

“That”, “this”, “the”, WH-word (e.g. “who” or “what”), older pronouns no longer used.

Eternally Confusing

Give it to me, who(?)
want(s?) to have it.



Fatima
Jaron
Kiana

Ancient Forests

Cooper

Ibben

John

Sarnor

Dash
Neil

Jogos Nhai

Aditya
Andy
Phoebe
Tracy

Anthony
Juan

Flor
Mariya
Rachel
Trisha

Nath

Moraq

Marahai

Leng

Raizada

Asshai

Kimchi

Tonight

(1) PA: Write up your new nouns!

Okuna by Matt Pearson

Na *halmà* totsait teunyi.

“S/he put *the book* on the table.”

Hi Motlama totsait teunyi.

“Motla put it on the table.”

To Motlama *halmà* teunyi.

“Motla put *the book* there.”

Japanese

o:kadzi ga kindzo no kodomo
{ni/nijotte} okita.

“The fire happened because
of the neighborhood child.”

Japanese
takeji ga petto no inu ni
shinareta.

“Takeshi had his pet dog die.”

Japanese
takeji ga petto no inu ni
finareta.
“Takeshi was died by pet
dog.”

Japanese

takeji ga petto no inu ni
shinareta.

/Takeshi NOM pet GEN dog
OBL died/

Borrowing

Word meaning dependent on
how the borrowers *use* the
word.



Borrowing

Sometimes a language will adopt a new phoneme (e.g. genre). Most times it will not.

Borrowing

If borrowing a word that's already present, it will take on a specialized sense.





Borrowing

Sometimes an English word
doubles up to clarify.

Borrowing salsa sauce

**Borrowing
the alcohol
the algebra
el alhambra**

Borrowing

attorney-general
attorney-generals

Borrowing

tamal ~ tamales

tamale ~ tamales

Grice's Maxims

These are rules all speakers have in their heads as defaults. When flouted, they trigger various effects.

Grice's Maxims

Maxim of Quantity

Maxim of Quality

Maxim of Relation

Maxim of Manner

Maxim of Quantity

Have you done your MA?

Maxim of Quantity

I've downloaded it and have started to really go through it, and I have kind of a lot of it almost done, and I'm feeling pretty good about it!

Maxim of Quantity

No.

Maxim of Quantity

Wow, your brother got married in Vegas? That's so exciting! What was the wedding like?

Maxim of Quantity

Good.

Maxim of Quantity

It was cool! There was a juggler, a magician, three Elvises, and they bungee-jumped off the Stratosphere when they said “I do!”

Maxim of Quantity

When the maxim of quantity is flouted, it's because the *truth* is the simple answer, but the circumstances aren't simple.

Maxim of Quality

Are you excited about the
new Disturbed album?

Maxim of Quality

I'm breathless with
anticipation...

Maxim of Quality

No.

Maxim of Quality

When the maxim of quality is flouted on purpose, it's usual for the sake of irony or sarcasm.

Maxim of Relation

I really want Top Dog, but I forgot my wallet!

Maxim of Relation

I've got a five.

Maxim of Relation

I have five dollars, which is enough to pay for one Top Dog, so I'll loan you this five dollars to purchase a Top Dog, and you can repay me.

Maxim of Relation

This maxim is flouted *constantly*, because we often do not need someone to explain every single detail of an utterance.

Maxim of Relation

“I’m against picketing, but I don’t know how to show it.”

-Mitch Hedberg

Maxim of Relation

It's funny, because if you're opposed to something, you picket it. But if you're against picketing, then you won't picket it.

Maxim of Relation

So if you show opposition by picketing something, how do you oppose picketing? It's logically impossible.

Maxim of Relation

In short: It's cooler when *you* figure out how a statement is relevant.

Maxim of Manner

Do you want to go to Baja
Sonora or Papa Pilo's?

Maxim of Manner

Yes.

Maxim of Manner

Papa Pilo's.

The Cooperative Principle

Topicalization

Subordination

Negation

Topicalization: Pulling something out in front that you're talking about (when it ordinarily wouldn't be there, usually).

Him I know.

Topic - Comment

Qu'est-ce que c'est que ça?

Qu'est-ce que c'est que ça?
What is it that it is that that is?

Est-ce que tu as mangé?

Est-ce que tu as mangé?
Is it that you have eaten?

Topicalization Done With Intonation It-Cleft Special Particle

Him I like.

Digression

All my friends are penguins.

My friends all are penguins.

My friends are all penguins.

It's mulberries I like.

What do I like?

I.Sahondra no nanapaka ity
hazo ity.

“It was Sahondra who cut this
tree.”

I.Sahondra **no** nanapaka ity
hazo ity.

“It was Sahondra who cut this
tree.”

Japanese
ga = nominative
o = accusative
wa = topic

Japanese
Who are you?
wataji wa de:bido desu
/I TOP David am/

Japanese

Who is David?

wataji ga de:bido desu

/I NOM David am/

Topicalization Sources
Demonstratives, deictics,
articles, words that end up
meaning “about” or
“regarding”, pronouns.

It-Cleft Specifically

Dummy equative clause (it is x, he is x, it has x, comes x, etc.)

Subordination: When some clause crucially depends on another clause.

Often introduced by before,
after, because, if, so, that,
when, while, etc.

While you were dancing.

I played an entire game of
Risk while you were dancing.

While you were dancing I
played an entire game of
Risk.

I hope (that) you go to the store to get more ice cream.

I want (that) you go to the store to get more ice cream.

**I want you to go to the store
to get more ice cream.**

**I want him to go to the store
to get more ice cream.**

hope ~ want

I want a book.
I want {him/her/it}.

I hope a book. (???)
I hope {it/him/her}. (???)

I want him to...
I hope that...

Subordination Possibilities

I hope (that) he comes.

Ojalá que venga.

I hope for his coming.

Be Aware...
“Before”, “after”, “if”, “lest”,
“while”, etc.

Dothraki

Hash me jada, hash anha
vaddrivak mae.

“If he comes, then I will kill
him.”

Dothraki

Kash me remek, kash anha
fich sajoes mae.

“While he was sleeping, (—) I
took his horse.”

Non-Subordinating Coordination

“And”, “but”, “or”, “so”...

Coordinating Conjunctions

“I walked to the store and he stayed home.”

Coordinating Conjunctions

“I petted a cat for 20 minutes,
but you’ll go to Idaho in the
spring for cockroaches.”

and \approx but

“And” = these two things are related and go together.

“But” = these two things contrast and go together.

**Negation: Saying
something's not happening,
etc.**

**I don't eat onions.
I'm not eating onions.
I eat no onions.**

**There are negative words
and actual negative
grammatical particles/affixes/
words.**

**I never eat onions.
I do not eat onions.**

**Crucial: How you do negation
will determine whether or not
the grammar changes in
negation.**

German

Ich weiß. “I know.”

Ich weiß nicht. “I don’t know.”

German

Ich habe einen Hund.

“I have a dog.”

Ich habe keinen Hund.

“I don't have a dog.”

German

Ich habe ein Boot.

“I have a boat.”

Ich habe kein Boot.

“I don't have a boat.”

Spanish
**Tengo dos pájaros en mis
pantalones.**

Spanish

**No tengo dos pájaros en mis
pantalones.**

Spanish
Tengo unos lápices.

Spanish
No tengo lápiz.

Finnish

En puhu suomea.

Et puhu suomea

Ei puhu suomea.

Negation Strategies

Negative Particle

Negative Verb

Negative Adverb

Negative Particle/Adverb

For particle, decide
placement.

For adverb, it goes where
adverbs go.

Negative verbs generally inflect fully for tense, aspect, and modality, and agree the way other verbs do.

Sources of Negation

Words like “lack”, “leave”, “to abandon”, “to lose”, “to miss”, “to let”, etc. Also “without” and other abessive sources.

Sources of Negation
Also words for the smallest
part of something.

French

Je ne mange rien.

Je ne vais pas.

Je n'écris point.

Sources of Negation

Negative particle sometimes basic. Also sometimes a word meaning “there isn’t” is basic.

Turkish

Yatakta kitaplar var.

Yatakta kitaplar yok.

“There are(n’t) books on the
bed.”

Fulfulde
o waasii debbo makko.
/he lost wife his/
“He lost his wife.”

Fulfulde
ko miin waasi amde.
/FOC me NEG dance-INF/
“It’s me who didn’t dance.”

Fulfulde
ko miin waasi amde.
/FOC me NEG dance-INF/
“It’s me who lost dancing.”

Notice!

When negation comes from a transitive verb, the main verb is in the infinitive.

Tonight

(1) PA: More animals!

(2) MA7!

Qpyn | gài by Henrik Theiling

səχqʁqʈaxɣhàwkài.

“Do not eat yellow snow.”

səχqʁqʈaxɣhàwkài.

“Do *NOT EVER* eat yellow snow!”

səχqʁqʈaxèhàwkài.

“You should *TOTALLY* eat yellow snow!”

One More Thing...

Negative Verb Forms

Swahili

Ninasoma Kiswahili.

“I am studying Swahili.”

Tunasoma Kiswahili.

“We are studying Swahili.”

Swahili

Sisomi Kiswahili.

“I am not studying Swahili.”

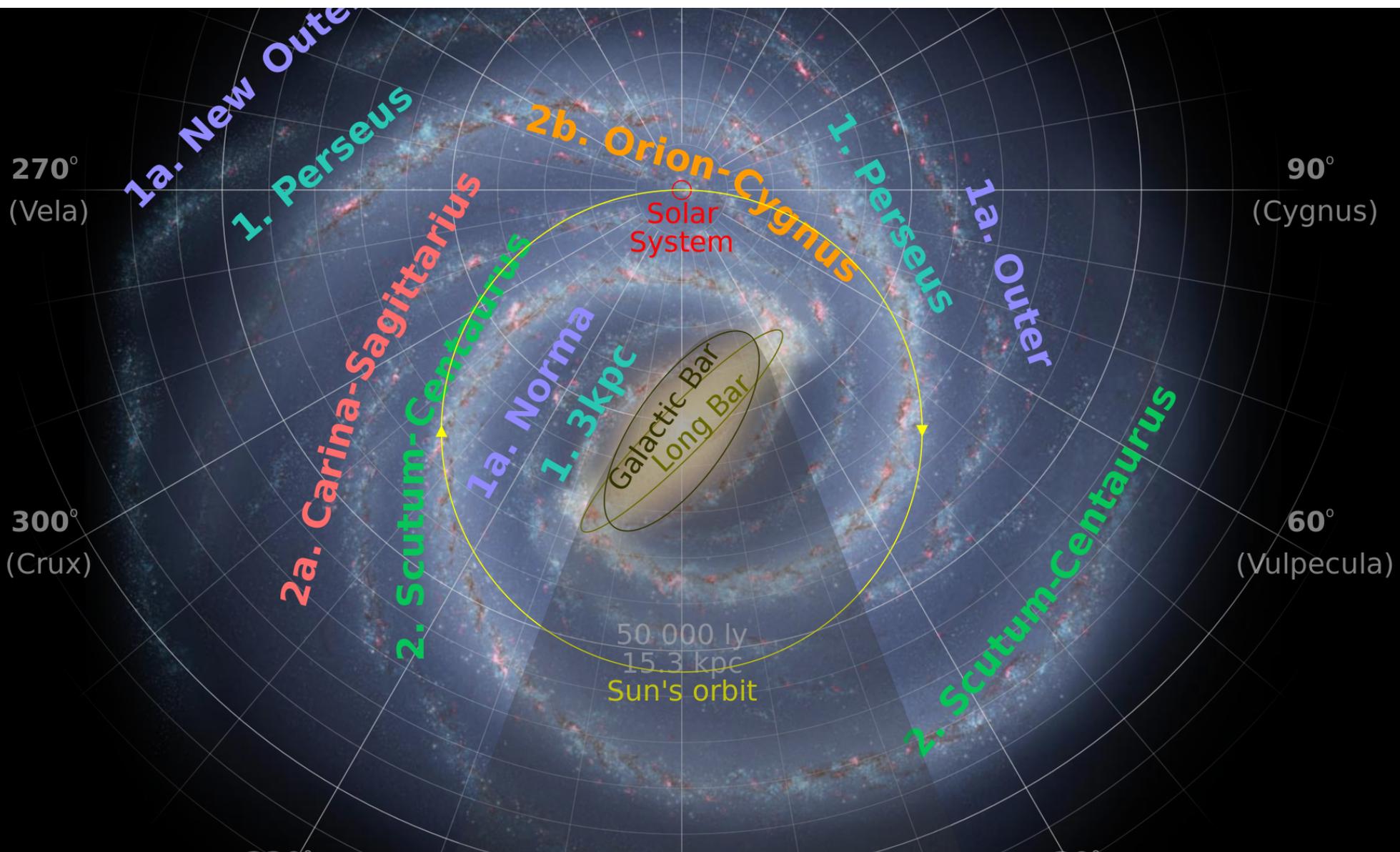
Hatusomi Kiswahili.

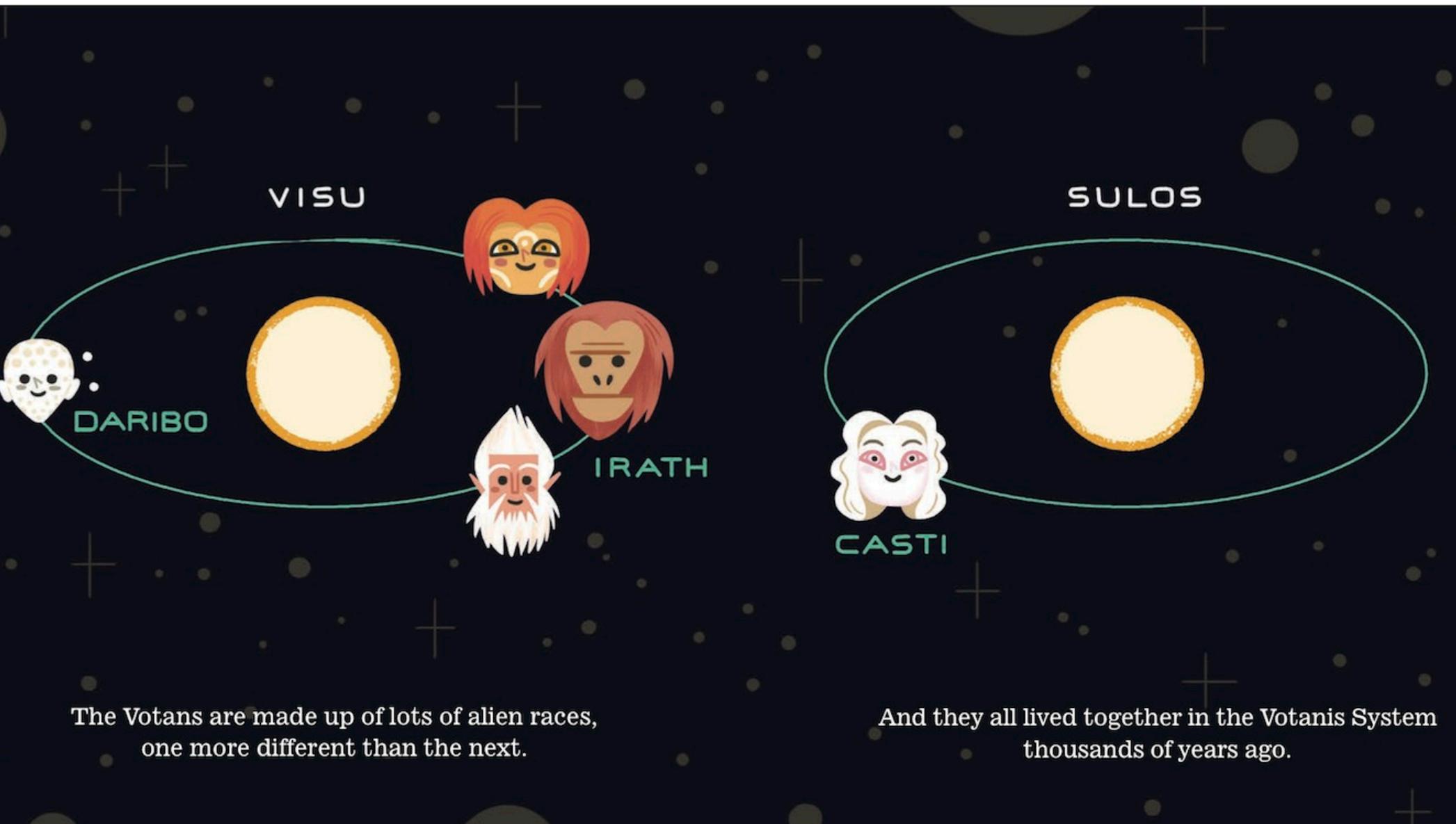
“We aren’t studying Swahili.”

Perfectly possible to have a negative verb form. Same evolution: Just make it a verbal affix.

IRATHIENT

Irathient is the language of the Irathient people, from the planet now called Casti. They reject technology, for the most part, and prefer a more nomadic existence.





The Votans are made up of lots of alien races,
one more different than the next.

And they all lived together in the Votanis System
thousands of years ago.



Head-Initial

VOS

NA

NR

NG

PN

Transitive

❖ ზეტა ეტუ ულიკე ზმაინე. ❖

zeta ettu ulike zmaine.

“The woman is watching the
river.”

Transitive

❖ ოსტეტი ოსტეტი ზეტი ოსტეტი ოსტეტი ❖

zeta ettu ulike zmaine.

“The woman is watching
the river.”

Agreement

✦ Երեկոյն ինկե՛տ յարարեալս ✦

εζεγνη εηελιγε zmaine.

“The woman is sleeping.”

Agreement

✦ ʔhɛgnə ɛnɛlɪgə honumɛ ✦

ahɛgnə ɛnɛlɪgə honumɛ.

“The stranger is sleeping.”

Agreement

✦ anεgnə·enεlige·inagna ✦

anεgnə enεlige inagna.

“The family is sleeping.”

	Front	Central	Back
High	i		u
Low	ɛ	ə	ɑ

	Front	Central	Back
High	i	ə	u
Low	ɛ		a

Passive

❖ ზეტა ეტუ ულიკე ზმაინე ❖

zeta ettu ulike zmaine.

“The woman is watching the
river.”

Passive

✦ ႳႱႱႱႱႱႱႱႱႱႱႱႱ ✦

twa uttu ulike.

“The river is being watched.”

Verb Change
εττϋ → υττϋ

Auxiliary Change
zeta → twa

Causative

❖ Երեւոյնքն յարարեմքն ❖

uzεgnə elu zmainε.

“The woman feeds.”

Causative

❖ Երեկոսօնդպրճաբնիւծնազարկոբ ❖

uzεgnə tipasku εluhε zmaine.

“The woman feeds the bird.”

Auxiliary Change
εζεγνῆ → υζεγνῆ

Verb Change
ελυ → ελυθε

Word Order Change

AVS → AOVS

Applicative

❖ Երեւոյն ինքն ազգարեւոյն ❖

εζεγνη ελουε zmainε.

“The woman is eating for
someone.”

Applicative

❖ Երեկոյն շուկայի վրէժն ազգորհոյն

ezegno skir eluhe zmaine.

“The woman is eating for the
boy.”

Verb Change
εΙυ → εΙυηε

Word Order Change

AVS → AOVS

**Verbal suffix denotes special
argument comes before it.
Context determines what its
role is.**

Yes/No Question

❖ Եղբայրս ունի քանի որսեր
ezegnə skir eluhε zmainε.

ezegnə skir eluhε zmainε.

“The woman is eating for the
boy.”

Yes/No Question

ገጠናዬ ስርዓታዬ ከገጠኑ ጋር ለምን ስላለች?

ezegnə skir eluhε zmainε?

**“Is the woman eating for the
boy?”**

WH-Question

ገጠናዬ ለማንኛውም ሰው ለምን ይቆይ?

εζεγνη haze eluhe zmaine?

“Who is the woman eating
for?”

Negation

❖ Երեւոյնքն չապրիւնքն չապրիւնքն

ezegnoḅ elu zmaine mεmε.

“The woman is not eating.”

Relative Clauses

❖ Երեւոյնքն ինքն ինքն
ezegnə elu zmaine.

ezegnə elu zmaine.

“The woman is eating.”

Relative Clauses

❖ ገብጽ ላይ ያለውን ባህርይ ገብጽ

εζεγνη ελυ ζmainε ζututtun
ulike ζvoηε.

“The woman who watched
the river is eating.”

ToR Change
zmainε → zmainθ

Verb Change

Aux+Agr/Tns V → V+Agr/Tns

Gap for ToR

**Adjective at end which
agrees with ToR (-on).**

Relative Clauses

❖ Երեկոսօնը շոգ արեւը
ezegno elu zmaine tuzuttune

ulike zvonε.
“The woman whom the river
is watching is eating.”

Relative Clauses

❖ ገብጽ ላይ ያለውን ባህርይ ገብጽ

εζεγνη ελυ ζmainε ζututtun
ulike ζvoηε.

“The woman who watched
the river is eating.”

Relative Clauses

❖ ἡ ἄνθρωπος ἣν ἑώρακε ὁ ἄνθρωπος

εξεγνη ἐλὺ ζμαινῆ ζυτὺττυν
υλῖκε ζνοηε.

“The woman who watched
the river is eating.”

Adjectives

zmaine

“woman”

tipasku

“bird”

Adjectives
zmainə zupimε
“beautiful woman”

tipasku tipima
“beautiful bird”

Relative Clauses

❖ ገብጽና ደቡብ አረቢያ ገብጽ
ezegnə elu zmaine zututtun

ulike.

“The woman who watched
the river is eating.”

Relative Clauses

«Ἐξ ἑνὸς ἑλὸς ἡμῶν ἡ ἀλλοτρίωτις»

εξεγνη ἐλου ζμῆνῆ ἡ αὐτὸν ἡ
ὕλη ἡ ὄνητις ζῶντις.

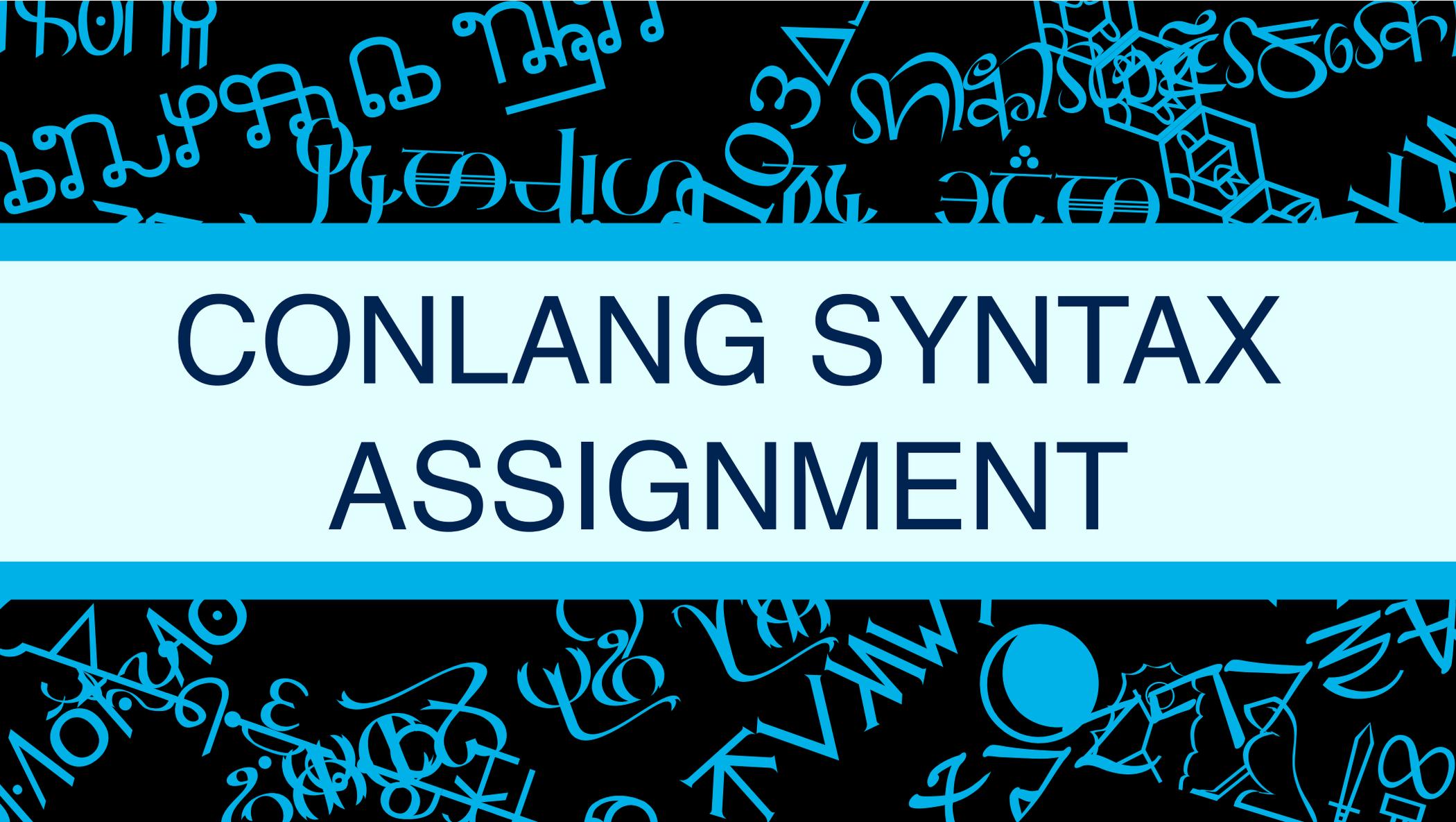
“The woman for whom the stranger
watched the river is eating.”

Questions?

Tonight

(1) PA: Find a non-Roman
writing system.

(2) MA8



CONLANG SYNTAX ASSIGNMENT





LINGUISTICS 183

WEEK 5

Elephant's Memory by Timothy Ingen Housz



"Do you hear the frog shout?"

"I am so happy that you are pregnant"

ORTHOGRAPHY

Orthography > *ortho-*
“correct” + *graph-* “write”

Orthography: The way a group of speakers use a writing system to record their language.

Writing system: A system of glyph shapes mapped to sounds and a method for combining them and writing them down.

Glyph: The smallest whole unit of a writing system.

Glyph

あ 璽 a 𐄂 𐄃 \$ 🐼

Writing System

あうふげれまぱボドロワ
ヱンザガカホラ、ロギヤジ
両世聖扈改那鄆好伶下七爾

Writing System
あああああ。

あ
あ
あ
あ
あ。

Orthography

食べました

*たべました

*タベマシタ

*食べまシた

Romanization
tabemasita
tabemashita
tabemashta
tah-bay-mosh-tah

食べました
tabemashita
/ta.be.ma.si.ta/
['ta.be.ma.ʃi.ta]
“ate”

食べました

tabemashita

/ta.be.ma.si.ta/

['ta.be.ma.ʃi.ta]

“ate”

食べました

tabemashita

/ta.be.ma.si.ta/

['ta.be.ma.ʃi.ta]

“ate”

dothrakhqoyi
/do.θrax.qo.ji/
[ˈd̪ʁ.θrax.qɔ.ji]
“bloodrider”

Orthography

Below is the orthography for Thawayan. This includes all graphemes as defined in the language's phonology settings - excluding the non-distinct graphemes/polygraphs.

Orthography										
'!n	' n	' n	'‡n	'!n	'@n	!!	!!'	!!g	!!h	!!n
/ˈ!n/	/ˈ n/	/ˈ n/	/ˈ‡n/	/ˈ!n/	/ˈ@n/	/!!/	/!!'/	/!!g/	/!!h/	/!!n/
!!q	!!q'	!!qh	!!x	!!x'	ḃ	ḋ		'	g	h
/!!q/	/!!q'/	/!!qh/	/!!x/	/!!x'/	/ḃ/	/ḋ/, [ˈd̪z] ¹	/ /	/ '/	/ g/	/ h/
n	q	q'	qh	x	x'		'	g	h	n
/ n/	/ q/	/ q'/	/ qh/	/ x/	/ x'/	/ /	/ '/	/ g/	/ h/	/ n/
q	q'	qh	x	x'	‡	‡'	‡g	‡h	‡n	‡q
/ q/	/ q'/	/ qh/	/ x/	/ x'/	/‡/	/‡'/	/‡g/	/‡h/	/‡n/	/‡q/
‡q'	‡qh	‡x	‡x'	!	!'	!g	!h	!n	!q	!q'
/‡q'/	/‡qh/	/‡x/	/‡x'/	/!/	/!'/	/!g/	/!h/	/!n/	/!q/	/!q'/
!qh	!x	!x'	@	@'	@g	@h	@n	@q	@q'	@qh
/!qh/	/!x/	/!x'/	/@/	/@'/	/@g/	/@h/	/@n/	/@q/	/@q'/	/@qh/
@x	@x'	g!!h	g!!q	g!!x	g h	g q	g x	g h	g q	g x
/@x/	/@x'/	/g!!h/	/g!!q/	/g!!x/	/g h/	/g q/	/g x/	/g h/	/g q/	/g x/



Orthography

Below is the orthography for Qaati. This includes all graphemes as defined in the language's phonology settings - excluding the non-distinct graphemes/polygraphs.

Orthography									? Qaati
Aa	Çç	Ẁẁ	Ẃẃ Ẅẅ	Cc	Ć ć	Dd	?	Gg	
/ä/	/ç/	/x/	/xʷ/	/tʃ/	/tʃʰ/	/d/	/ʔ/	/k/	
Ii	Jj	Kk	KW kw	Ll	Ł ł	Mm	Nn	Ń ń	
/i/	/j/	/k/	/kʷ/	/l/	/lʰ/	/m/ ¹	/n/	/nʰ/	
Pp	Qq	Q' q'	QW qw	Ss	SH sh	Tt	TL tl	TS ts	
/p/	/q/	/qʰ/	/qʷ/	/s/	/ʃ/	/tʰ/	/tʰ/	/tʰ s/	
TŚ tś	TŁ tł	TŁ' tł'	Ww	Xx	XW xw	Zz	Łł		
/tʰ s'/	/tʰ/	/tʰ/	/w/	/x/	/xʷ/	/z/	/ʎ/		

* Unknown alphabetical order

1. Contrastive only at the beginning of words

» [Distribution](#)



Orthography

Below is the orthography for Peyatic. This includes all graphemes as defined in the language's phonology settings - excluding the non-distinct graphemes/polygraphs.

Orthography										 Peyatic
Aa	Ââ	Êê	Ôô	ƆƆ	Bb	Cc	Dd	Ee	Ff	
/ɑ/	/æ:/	/e:/	/ɔ:/	/ð/	/b/	/ʃ/	/d/	/ɛ/	/f/	
Gg	Hh	Ii	Jj	Kk	Ll	Mm	Nn	Oo	Pp	
/g/	/:/	/i/	[j]	/k/	/l/	/m/	/n/	/o/	/p/	
Rr	Ss	Tt	Uu	Vv	Ww	Yy	Zz			
/ʀ/	/s/	/t/	/u/	/v/	[w]	/y/	/z/, [s] ¹			
✖ Unknown alphabetical order										

1. z becomes s after a voiceless stop

» Distribution

Articles

Latest 8 related articles listed below.

[Peyatic Verbs](#)

Peyatic Verbs don't decline for person or number, but they d...

10-Sep-16 15:31

[Peyatic Morphological Rules](#)

Peyatic word merging is regulated through the following morp...

01-Sep-16 16:38

Orthography

Below is the orthography for Koman. This includes all graphemes as defined in the language's phonology settings - excluding the non-distinct graphemes/polygraphs.

Orthography									 Koman
Aa	Ää	Üü	Bb	Cc	Dd	DH dh	Ee	Gg	
/a/	/æ/	/y/	/b/	/d͡ʒ/	/d/	/ð/	/e/	/g/	
Hh	Ii	Jj	Kk	KH kh	Ll	Mm	Nn	NG ng	
/h/	/i/	/ʒ/	/k/	/h/	/l/	/m/	/n/	/ŋ/	
Oo	Pp	Rr	Ss	Tt	TH th	Uu	Vv	Ww	
/o/	/p/	/r/	/s/	/t/	/θ/	/u/	/β/, /β̞/	/w/	
Yy	Zz	Ōō	Şş	Ūū	Āā	Ēē	Ğğ	Īī	
/j/	/z/	/oː/	/ʃ/	/uː/	/ɑ/	/ə/	/ɸ/	/iː/	

* Unknown alphabetical order

» Distribution



[privacy](#) | [FAQs](#) | [rules](#) | [statistics](#) | [graphs](#) | [donate](#) | [api \(indev\)](#)

Viewing CWS in: [English](#) | Time now is 18-Jun-17 23:07

Orthography

Below is the orthography for Čihken. This includes all graphemes as defined in the language's phonology settings - excluding the non-distinct graphemes/polygraphs.

Orthography								 Čihken
Aa <i>/ɑ/, [p̚]¹</i>	Áá <i>/ɑ:/</i>	Ææ <i>/æ/</i>	Éé <i>/e:/</i>	Íí <i>/i:/</i>	Óó <i>/o:/</i>	Úú <i>/u:/</i>	Ýý <i>/e:/</i>	BH bh <i>/ʌ/, [v̥]²</i>
Cc <i>/t̚ s/</i>	CC cc <i>/t̚ s:/</i>	ÆÉæ <i>/æ:/</i>	Dd <i>/d̚/, [d̚]³, [d̚ʰ]⁴</i>	DD dd <i>/d̚:/, [d̚:]⁵</i>	Ee <i>/e/, [ø]⁶</i>	Gg <i>/g/, [g̚]⁷, [g̚ʰ]⁸</i>	GG gg <i>/g:/, [g:]⁹</i>	HD hd <i>/h̚d̚/</i>
HDD hdd <i>/h̚d̚:/</i>	HG hg <i>/h̚g/</i>	HGG hgg <i>/h̚g:/</i>	HK hk <i>/h̚k/</i>	HKK hkk <i>/h̚k:/</i>	HT ht <i>/h̚t̚/</i>	HTT htt <i>/h̚t̚:/</i>	Ii <i>/i/, [y]¹⁰</i>	Kk <i>/k/, [k̚]¹¹, [k̚ʰ]¹²</i>
KK kk <i>/k:/, [k:]¹³</i>	LI <i>/l/, [l̥]</i>	LL ll <i>/l:/, [l:]</i>	Nn <i>/n̚/, [n̚]</i>	NN nn <i>/n̚:/, [n̚:]</i>	Oo <i>/o/</i>	PH ph <i>/f/</i>	Ss <i>/h̥/</i>	Tt <i>/t̚/, [t̚]¹⁴, [t̚ʰ]¹⁵</i>
TT tt <i>/t̚:/, [t̚:]¹⁶</i>	Uu <i>/u/, [ʉ]¹⁷</i>	Yy <i>/ø/, [ø̥]¹⁸, [ø̥]¹⁹</i>	Ŋŋ <i>/ŋ/, [ŋ]</i>	ŊŊ ŋŋ <i>/ŋ:/, [ŋ:]</i>	Šš <i>/ʃ/</i>	Čč <i>/t̚j̥/</i>	ČČ čč <i>/t̚j̥:/</i>	Ðđ <i>/θ/</i>

✖ Unknown alphabetical order

1. after labiodentals
2. word initially
3. before front vowels
4. word initially
5. before front vowels
6. after labiodentals

The Alphabet:

Letter Name Pronunciation

A, a	a	pronounced as 'ah' [a] when stressed, or 'uh' [ə] when unstressed
B, b	bi	[b] same as in English
C, c	ci	pronounced as [k], except before e and i, where it sounds like ch [tʃ] in church.
D, d	di	[d] same as in English
E, e	e	pronounced as 'eh' [ɛ] when stressed, or [ə] when unstressed
F, f	fi	pronounced as [v], silent as a final letter
G, g	gi	same as in English: the hard sound as in gas [g], except before e and i where it has the soft sound as in general [dʒ]
H, h	ach	very lightly sounded, if at all [h]
I, i	i	pronounced as 'ee' [i] when stressed, or 'ih' [ɪ] when unstressed
K, k	ka	[k] same as in English
L, l	el	[l] same as in English
M, m	em	[m] same as in English
N, n	en	[n] same as in English
O, o	o	[ɔ] pronounced as 'aw' or 'augh'
P, p	pi	[p] same as in English
R, r	er	trilled [r] as in Spanish or Italian
S, s	es	pronounced as [z] between vowels, otherwise as ss [s]
T, t	ti	[t] same as in English
U, u	u	[ɨ], a central unrounded vowel, like 'i' pronounced in the middle of the mouth. It can be long or short.
W, w	dubl w	same as in English, sometimes used as a vowel pronounced as 'oo' as in boot when stressed [u], or 'oo' as in book when unstressed [ʊ].
Y, y	i greg	pronounced as 'ee' [i]

Brithenig

Spoken on Earth in an alternate timeline where the Romans (with their alphabet) stay in England.

Other Artlangs

Some universe where Earth doesn't exist, let alone the Romans or their alphabet.

**Brithenig
Romanization =
Orthography**

**Its construction is part of the
fiction and an artistic choice.**

Other Artlangs
An exercise in
pointlessness.

If the romanization has no existence within the fictional universe, it's for *US*—those in the real world. It should not involve “creativity”.

**Creativity is for the actual,
real orthography.**

.i iâpabla xén ta igém êcmig vilc ol,ta
fnân ol kirotedon ta délvèdén ûmro.

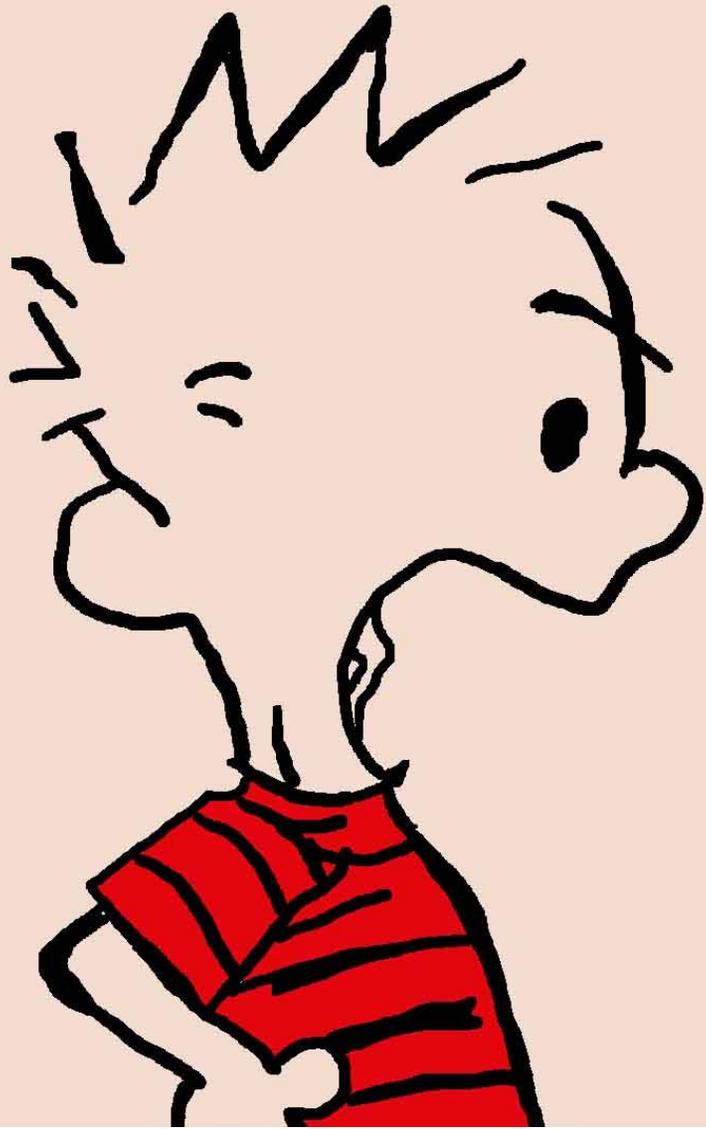
[i iɑ̃[̄]abla ksen ta igem ø^smig vil^s olta
fnan ol kirotædon ta delvɛden ūmro]

Maxims of Orthography
Encode Language
Be Easy to Write
Be Easy to Read
Be Unambiguous

Encode Language

I'm the expert?





Encode Language

I'm the expert?

I'm the expert?

I'm the expert!

Encode Language

	PROS	CONS
ALL INTONATION	Fully Explicit	Hard to Use
BASIC STUFF	Easy to Use	Ambiguous

Be Easy to Write

鸚

Be Easy to Write

北京的名胜很多，一个人就是在这儿呆上几个星期，离开时也没能把主要的景点看完。

Be Easy to Write

The sights of Beijing are so numerous that one can spend several weeks here and leave without having seen all of the important ones.

Be Easy to Write

Chinese = 40 characters

English = 132 characters

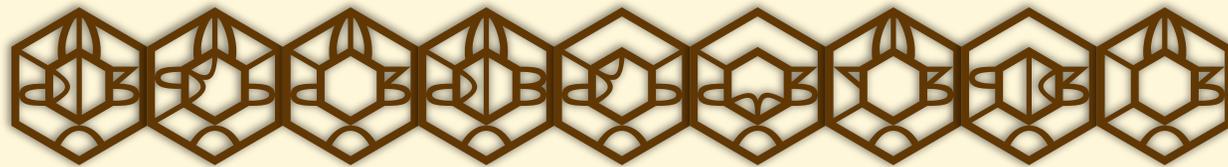
Be Easy to Write

	PROS	CONS
COMPLEX GLYPHS	Compact	Hard to Learn/Use
SIMPLE GLYPHS	Easy to Learn/Use	Lengthy

Be Easy to Read

David J. Peterson

Be Easy to Read



Be Easy to Read

Glyphs that are different shapes are more easily distinguished, which tends to make them easier to read.

Be Easy to Write

	PROS	CONS
UNIFORM GLYPHS	Easier to Write	Harder to Read
VARIED GLYPHS	Easier to Read	Harder to Write

Be Unambiguous

there

their

they're

there're

Be Unambiguous

dher

Be Unambiguous

Dher thriy cats in may ruwm.

Be Easy to Write

	PROS	CONS
PHONETIC SPELLING	Predictable Spelling	Potentially Confusing
LEXICAL SPELLING	Richer Signal	Irregular Spellings

WRITING AS ART



1484

1,484-1



**Good orthography
≠ pretty glyphs.**

The *system* is what makes
writing systems interesting;
not the glyphs.

TYPES OF WRITING SYSTEMS

Alphabet
Abjad
Abugida
Syllabary
Complex

Alphabet
1 Glyph = 1 Sound

Alphabet

А = /a/ Б = /b/ В = /v/ Г = /g/

Д = /d/ Е = /jε/ Ж = /ʒ/

З = /z/ И = /i/ Й = /j/ К = /k/

Alphabet

thought = /θɑt/

six = /sɪks/

говорить = /gɔvɔr'itʃ/

его = /jɛvɔ/

Гавайий = /havaɪi/

Alphabet

Only invented once. All other alphabets descended from or were inspired by that alphabet.

Abjad

1 Glyph = 1 Consonant

Abjad

Consonantal alphabet: The only ones that get *full* glyphs are consonants.

Abjad

ا = /ʔ/ ب = /b/ ت = /t/ ث = /θ/
ج = /ʒ/ ح = /ħ/ خ = /x/ د = /d/
ذ = /ð/ ر = /r/ ز = /z/ س = /s/

Abjad

كَتَبَ = /kətəbə/ “he wrote”

كُتُبُ = /kutub/ “books”

Abjad

ك ت ب

ك ت ب

Abjad

ا = /ʔ/

ي = /j/

و = /w/

ا = /aː/

ي = /iː/

و = /uː/

Abugida

**1 Glyph = 1 Consonant (But
Also Vowel Modifiers)**

Abugida

	ka	ke	ki	ko	ku
Hindi	क	के	कि	को	कु
Tamil	க	கெ	கி	கொ	கு
Cham	ꨀ	ꨁ	ꨂ	ꨃ	ꨄ

Abugida

क /ka/

କ /ka/

क् /k/

କ୍ /k/#

Syllabary
1 Glyph = 1 Syllable

Syllabary

	-a	-i	-u	-e	-o
k	か	き	く	け	こ
t	た	ち	つ	て	と
n	な	に	ぬ	ね	の

Syllabary

Japanese kana \approx Greek
alphabet

Complex
1 Glyph = ?

Complex

明天我的朋友會爲我做生日蛋糕。

Míngtiān wǒ de péngyou huì wèi
wǒ zuò shēngri dàngāo.

“Tomorrow my friends will make
a birthday cake for me.”

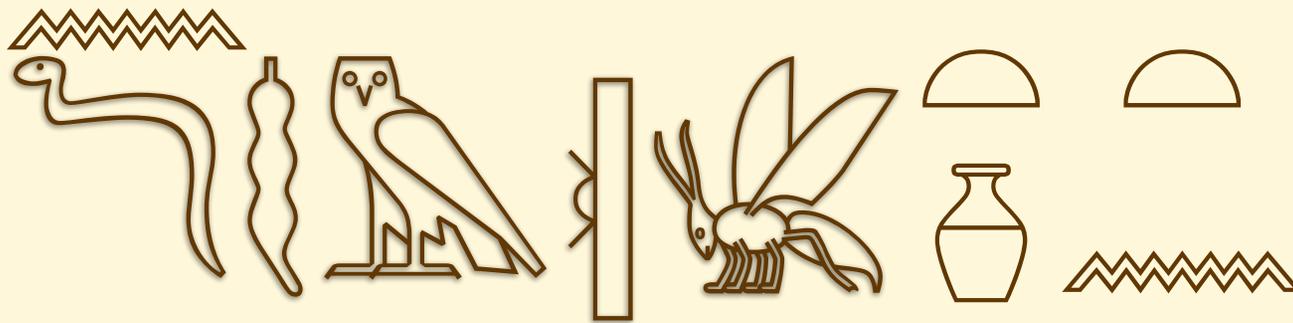
Complex

明天我的朋友會為我做生日蛋糕。

Míngtiān wǒ de péngyou huì wèi
wǒ zuò shēngri dànghāo.

“Tomorrow my friends will make
a birthday cake for me.”

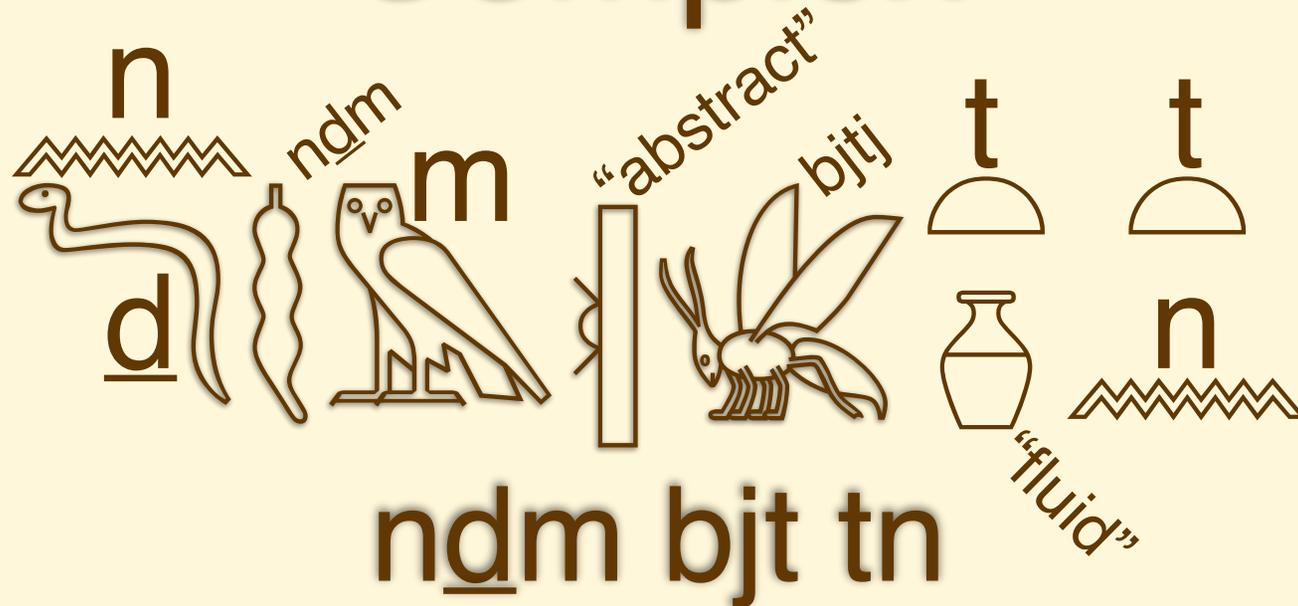
Complex



ndm bjt tn

“This honey is sweet.”

Complex



“This honey is sweet.”



Land Ho!
じょう りく
上陸!

も しま
燃える島パンクハザード

The Burning Island, Punk Hazard

Land Ho!

じょうりく

上陸!

も

しま

燃える島パンクハザード

The Burning Island, Punk Hazard

2pm for first movie (Bloodsport).
After that The Warriors.

Wasn't Father's Day last week?

Am I being trolled

June 18th. Look it up.

Lol

My dad. DID NOT CORRECT ME

I leave on Saturday morning :(

9am

You're not living life correctly.

I'm going to Disneyland here in a
few. Can I pick you guys up
something from 711 and say hey?

Maybe. Taking off. Landing at 9:15.
Daughter's asleep then.

Talk later!

Or Saturday.

Delivered



Tonight
(1) PA20 = Come up with
some pictorial sources for
glyphs!



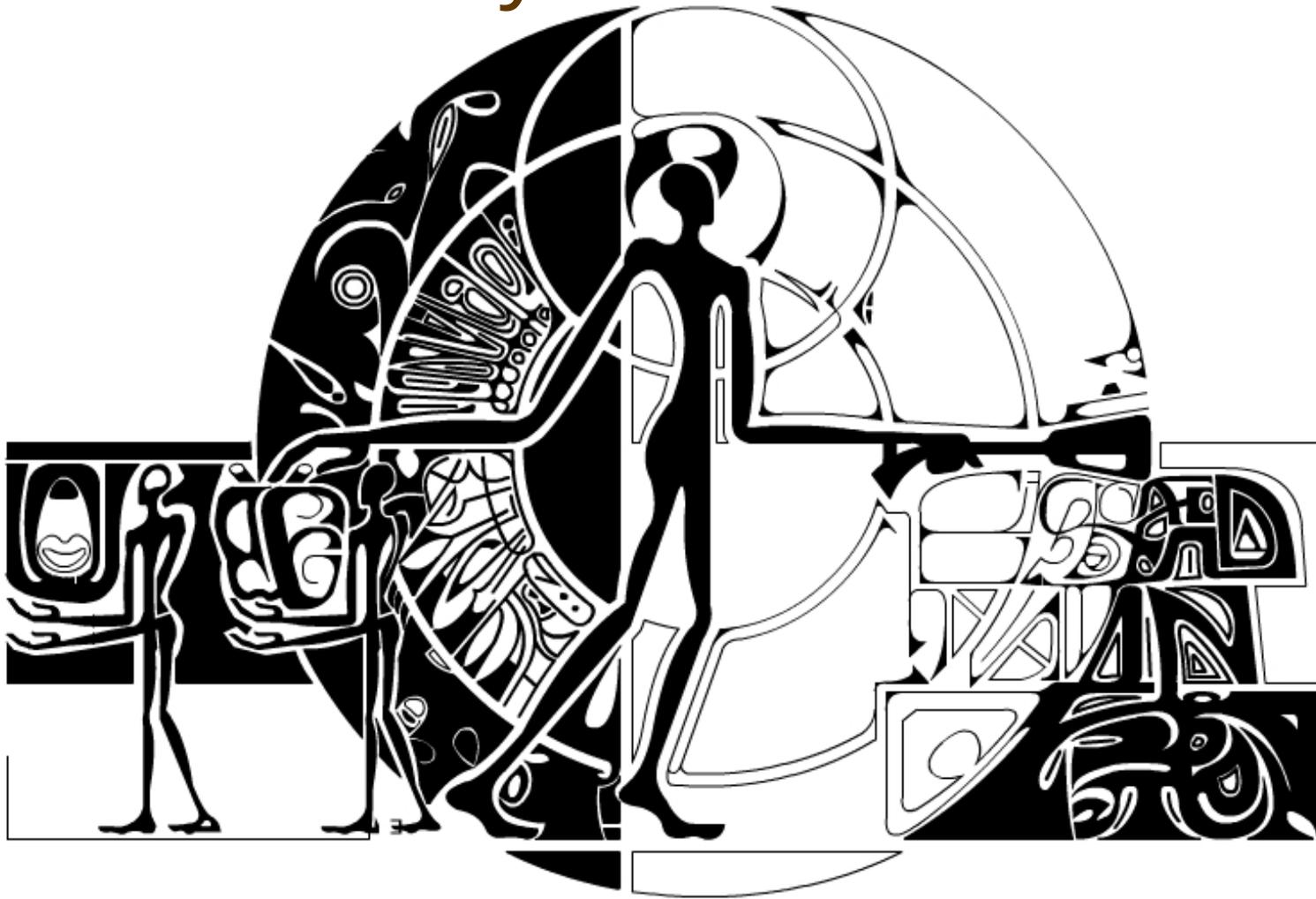








Idrani by Trent Pehrson



Tonight

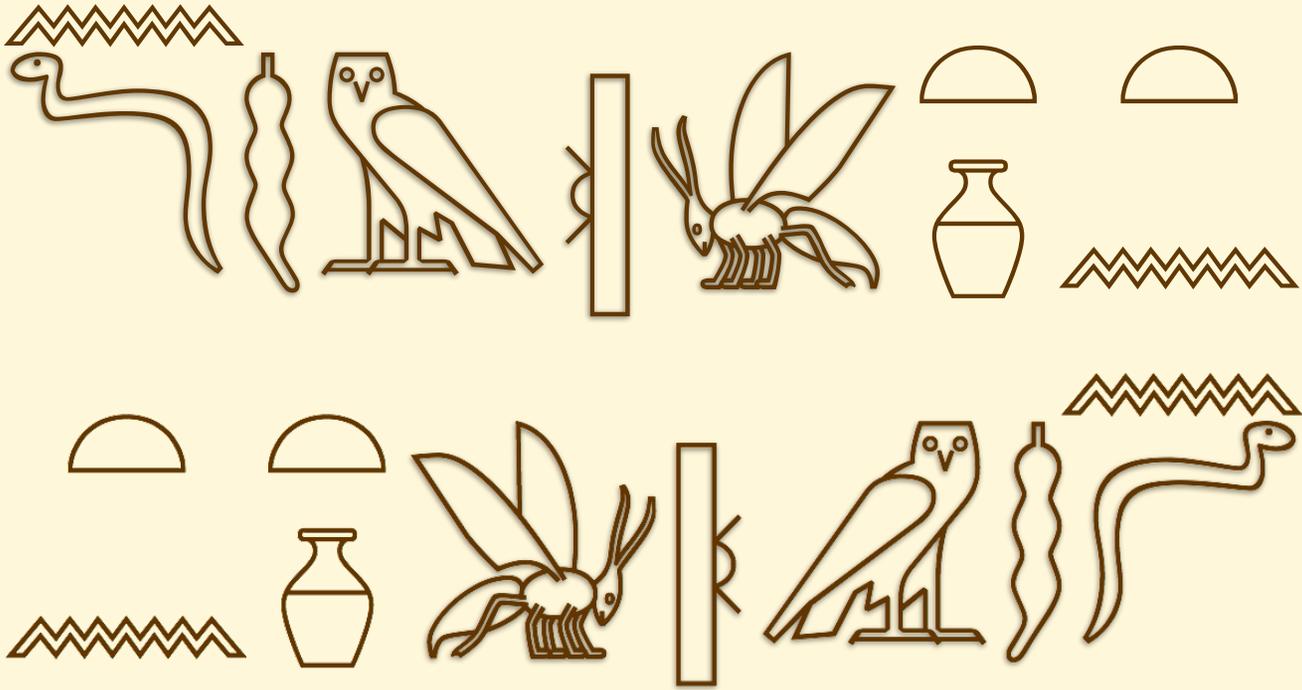
**(1) PA21 = Details of your
orthography!**

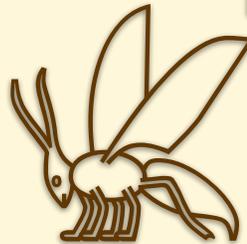
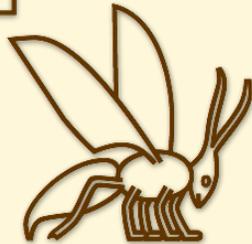
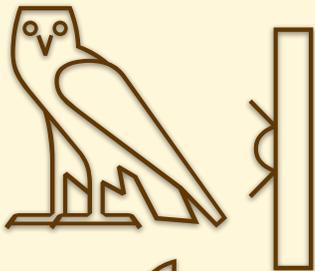
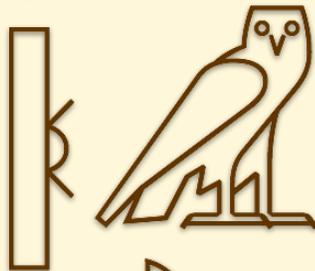
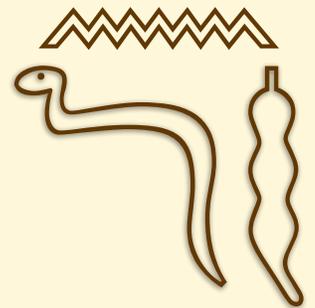
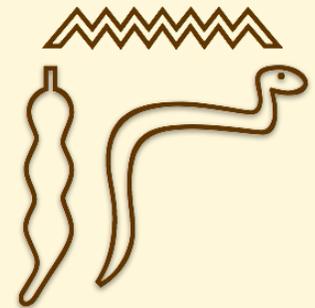
Alphabet
Abugida
Abjad

Direction of Writing

The boy read a book.

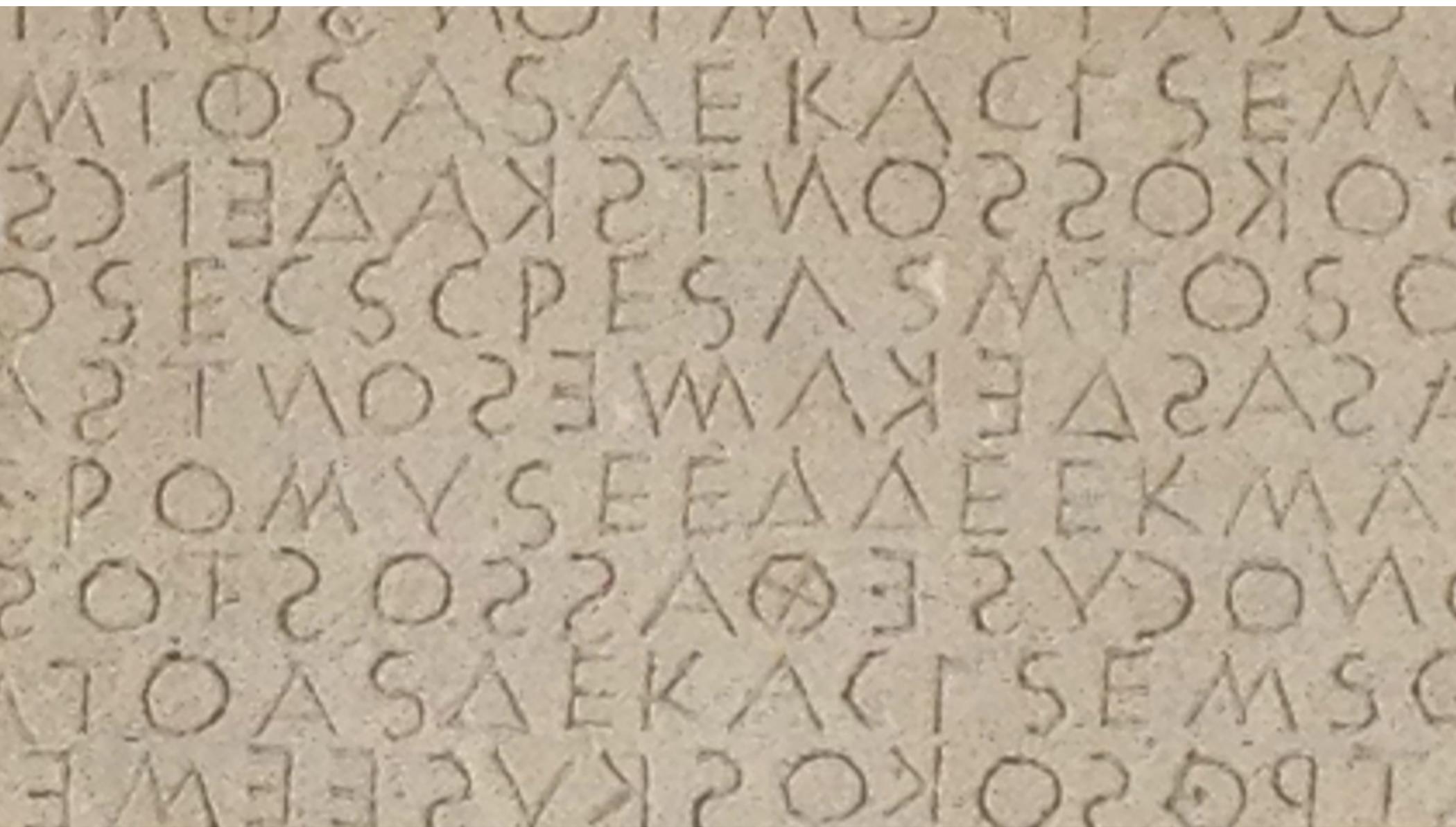
الولد قرأ كتاباً.

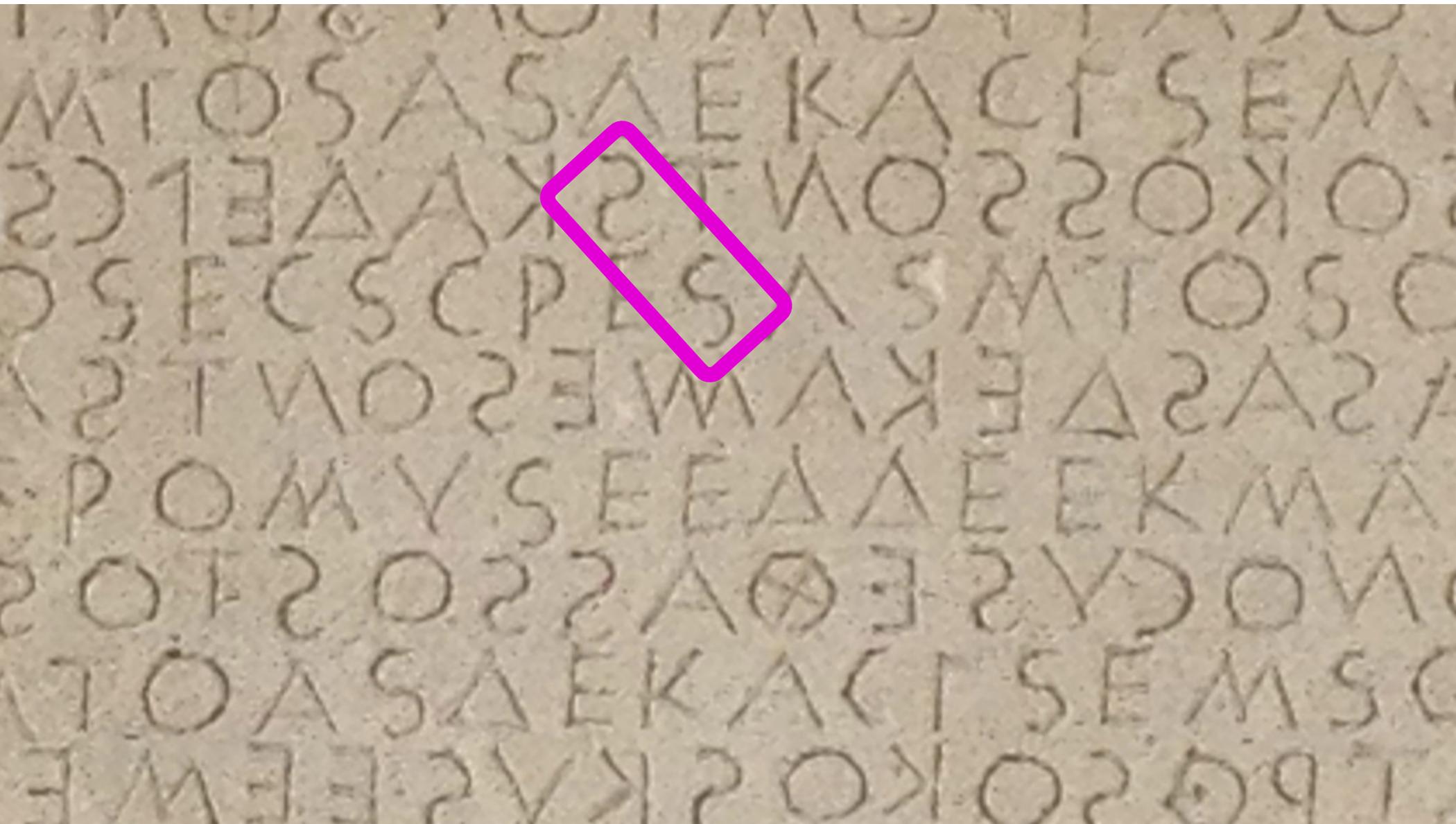








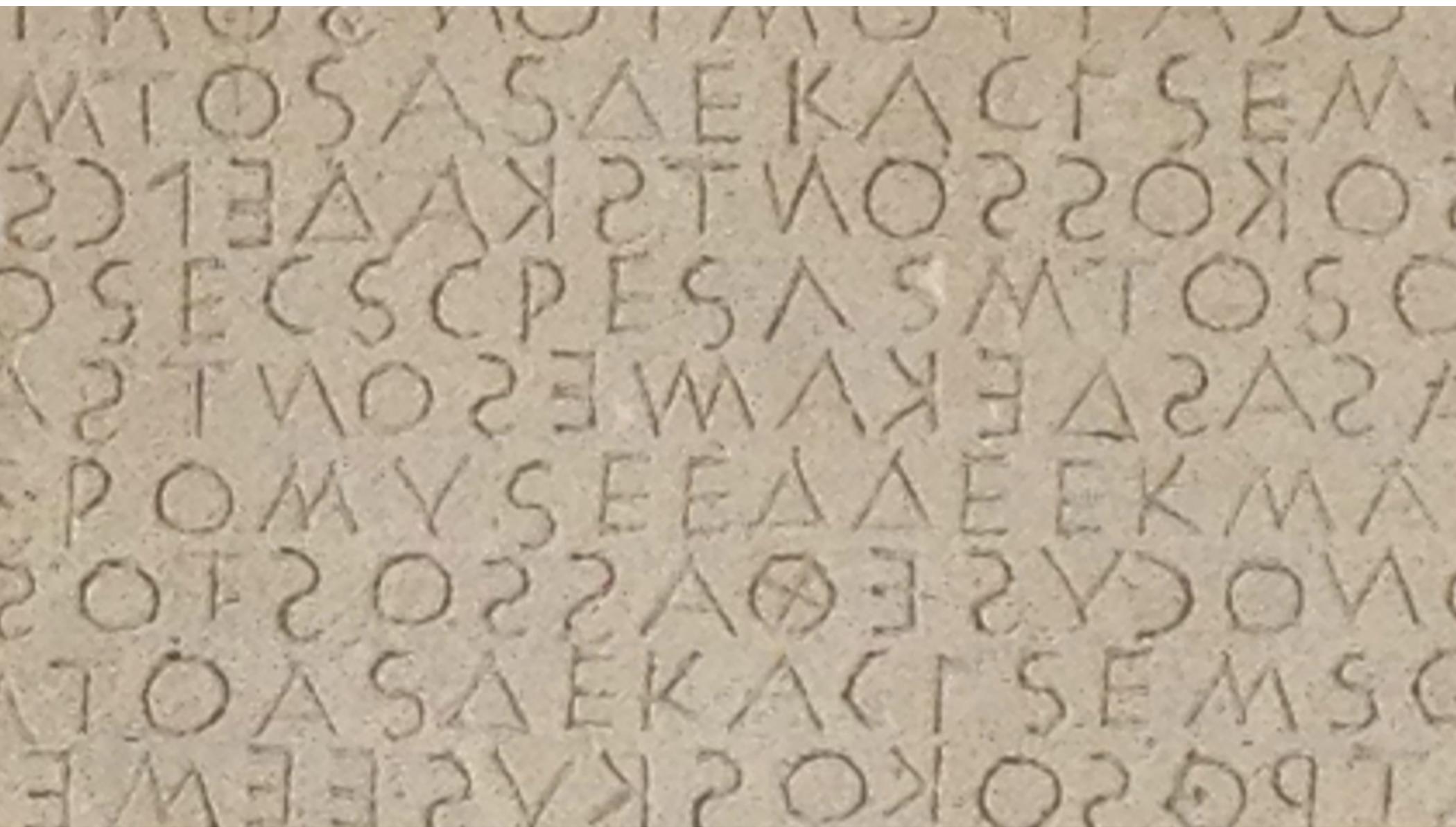




Spaces Between Words

The boy read a book.

الولد قرأ كتاباً.



ॐ श्रुवावश्रुवा श्रीवदेव
वददनावश्रुवा श्रीवदेव
वददवश्रुवा श्रीवदेव
ददवश्रुवा श्रीवदेव ॥

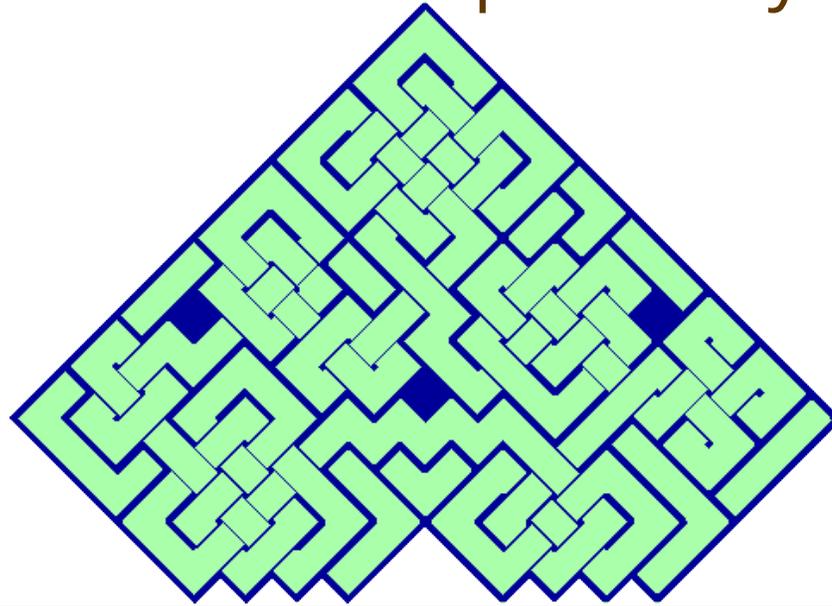
Writing Implements and Surface

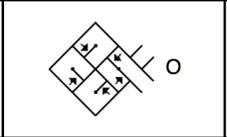
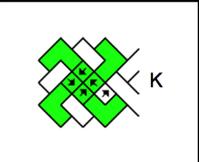
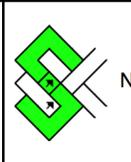
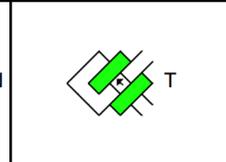
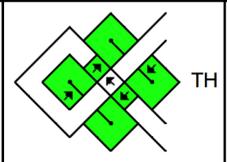
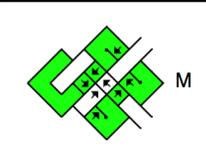
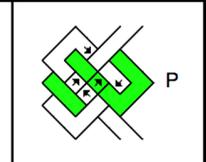
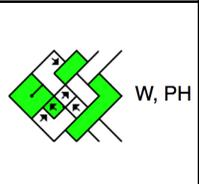
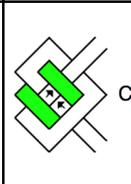
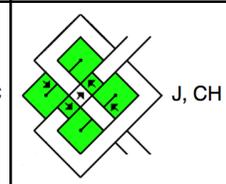
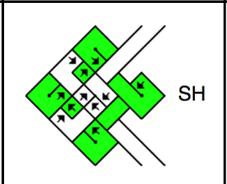
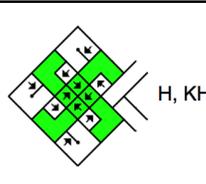
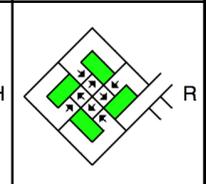




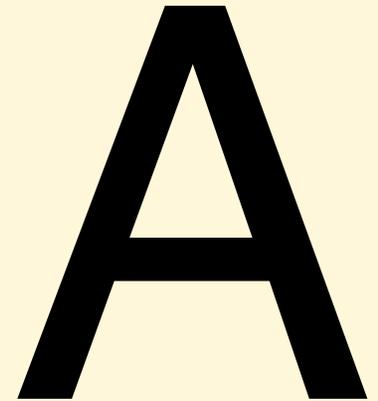
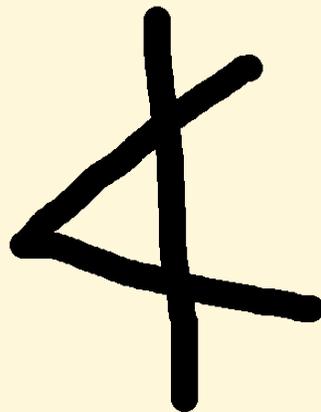
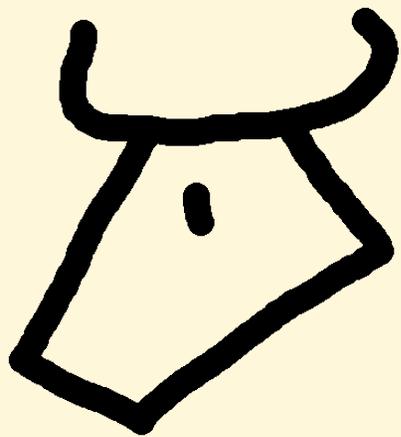


Kēlen Ceremonial Interlace Alphabet by Sylvia Sotomayor

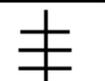
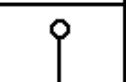
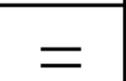
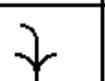
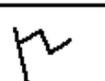
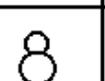
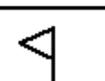
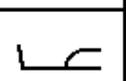
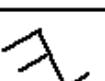
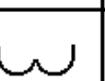
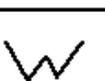
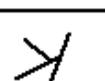
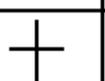


 A	 Ñ	 E	 L	 O	 I	 IE
 K	 U	 N	 T	 TH	 M	 P
 W, PH	 S	 C	 J, CH	 SH	 H, KH	 R

EVOLUTION OF WRITING



PHOENICIAN	EARLY HEBREW	EARLY ARAMAIC	EARLY GREEK	CLASSICAL GREEK	ETRUSCAN	EARLY LATIN	CLASSICAL LATIN
Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ צ ק ר ש ת י כ ל מ נ ס ע פ צ ק ר ש ת	𐤀 𐤁 𐤂 𐤃 𐤄 𐤅 𐤆 𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎 𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖 𐤗 𐤘 𐤙 𐤚 𐤛 𐤜 𐤝 𐤞 𐤟 𐤠 𐤡 𐤢 𐤣 𐤤 𐤥 𐤦 𐤧 𐤨 𐤩	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β C D E F G H I K L M N O P Q R S T V V X Y Z

	Proto-Canaanite	Early Phoenician	Greek		Proto-Canaanite	Early Phoenician	Greek
α			Α	ι			Ι
β			Β	μ			Μ
γ			Γ	ν			Ν
δ			Δ	ς			Σ
η			Ε	ο			Ο
ω			Υ	π			Π
ζ			Ζ	ς			Μ
η			Η	θ			Θ
τ			Θ	ρ			Ρ
υ			Ι	ς			Σ
κ			Κ	τ			Τ

Digression

Why “lucky duck”? Because it rhymes. Languages where those words don’t rhyme (or aren’t similar) would never have that expression.

Digression

Same with glyphs. Why *this* particular animal that happens to have a word with *this* phonetic shape?
Because it happens to.

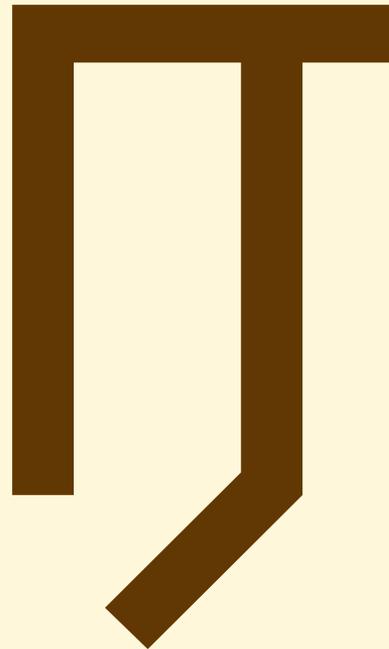
HISTORY OF TAMIL SCRIPT

நூற்றாண்டு	a ā i ī u ū e ē ai o ō	நூற்றாண்டு	K ṅ c ṅ ṭ ṇ t ṇ p m y r l v ḷ ḷ ṛ ṇ
Century	அ ஆ இ ஈ உ ஊ எ ஏ ஐ ஒ ஓ	Century	க் ங் ச் ஞ் ட் ண் த் ந் ப் ம் ய் ர் ல் வ் ழ் ள் ற் ள்
BC 3 rd C	𑌀 𑌁 :: † 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈	BC 3 rd C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒
AD 2 nd C	𑌀 𑌁 :: † 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈	AD 2 nd C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒
AD 3 rd C	𑌀 𑌁 :: † 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈	AD 3 rd C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒
AD 4 th C	𑌀 𑌁 :: † 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈	AD 4 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒
AD 5 th C	𑌀 2	AD 5 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒
AD 6 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊	AD 6 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 7 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊	AD 7 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 8 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊	AD 8 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 9 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 9 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 10 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 10 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 11 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 11 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 12 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 12 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 13 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 13 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 14 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 15 th C	† 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 15 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 15 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 16 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 16 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 17 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 17 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 18 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 18 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔
AD 19 th C	𑌀 𑌁 𑌂 𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌	AD 19 th C	𑌃 𑌄 𑌅 𑌆 𑌇 𑌈 𑌉 𑌊 𑌋 𑌌 𑌍 𑌎 𑌏 𑌐 𑌑 𑌒 𑌓 𑌔

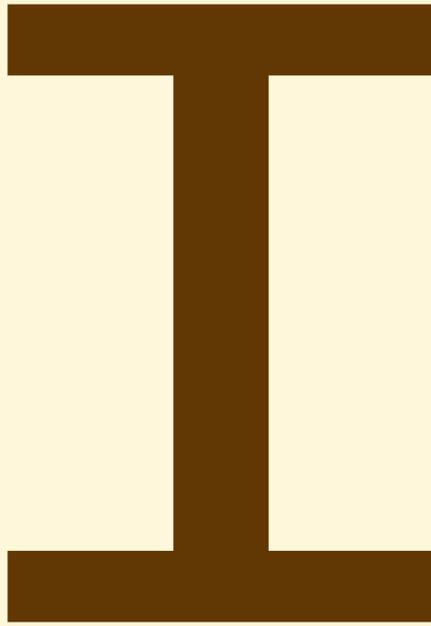
AD 2nd C



Modern



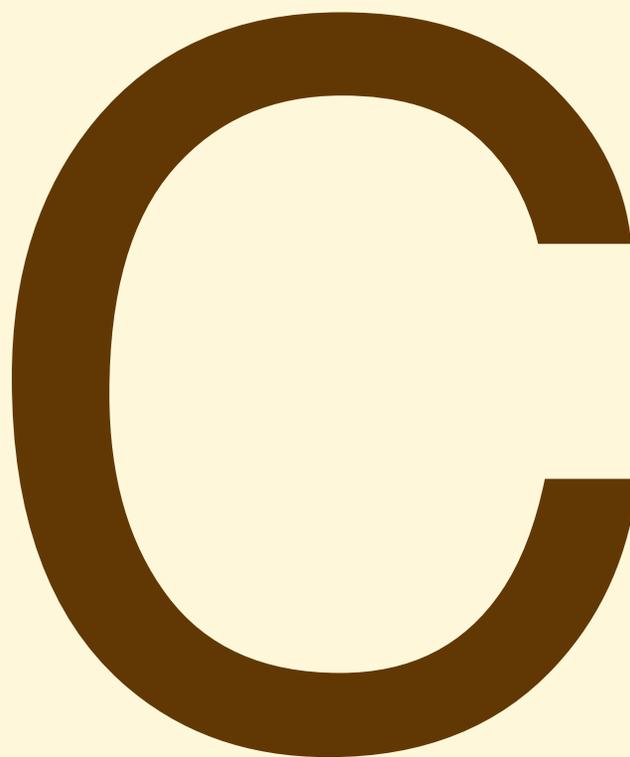
AD 2nd C



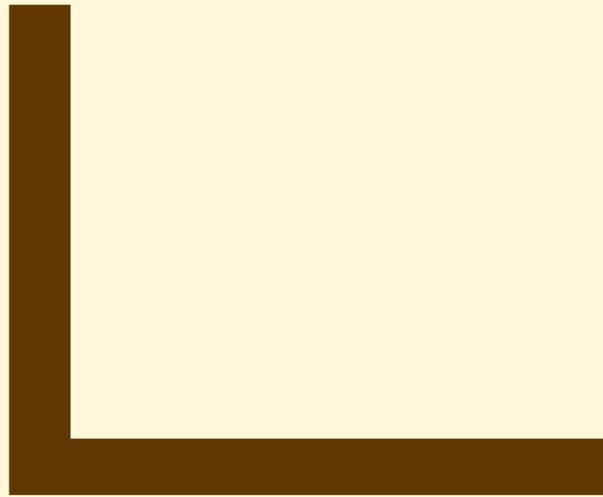
Modern

600T

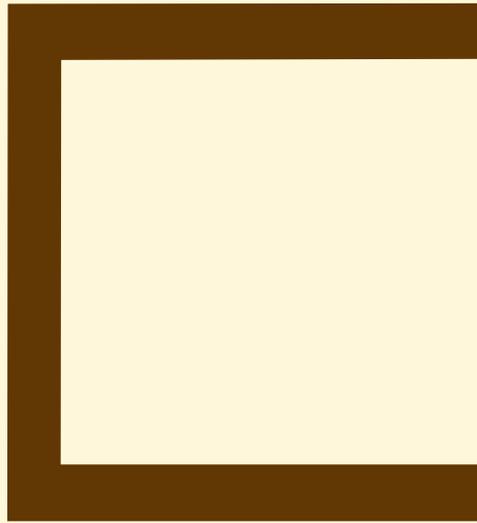
AD 2nd C



Modern



AD 2nd C



Modern

rw

C → L

□ → ▣

I → J

I → ∞

Handwritten Tamil script on a palm leaf manuscript. The text is densely packed and appears to be a historical or religious record. The script is written in a traditional style, with some characters that are characteristic of older Tamil forms. There are two circular holes visible on the leaf, which were used for threading a cord to bind multiple leaves together. On the right side of the leaf, there is a large, handwritten number '3' in a dark ink.

Most glyphs evolve from
pictographs *ultimately*.

- 1. Borrowing.**
- 2. Change of writing tools.**
- 3. Change of writers.**
- 4. Systemic change.**

Borrowing

Phoenician

𐤀 [ʔ] 𐤁 [h] 𐤂 [ħ] 𐤃 [ʕ]

Borrowing

Greek

A [a] E [e] H [eː] O[o]

Borrowing

キ

A

ケ

E

カ

H

コ

O

Borrowing Phoenician

𐤁 + 𐤅

<btj>

[beti:]

Borrowing

Mater lectionis: Using consonants to mark long vowels in an abjad.

Borrowing

Crucial: *ONLY* at the end of words (otherwise how would you know the difference between ...C# and ...CV#?).

Borrowing

Note: All Phoenician words begin with a consonant (words we think of as V-initial begin with /?/).

Borrowing

Phoenician

𐤆 [j] *or* [iː]

Borrowing

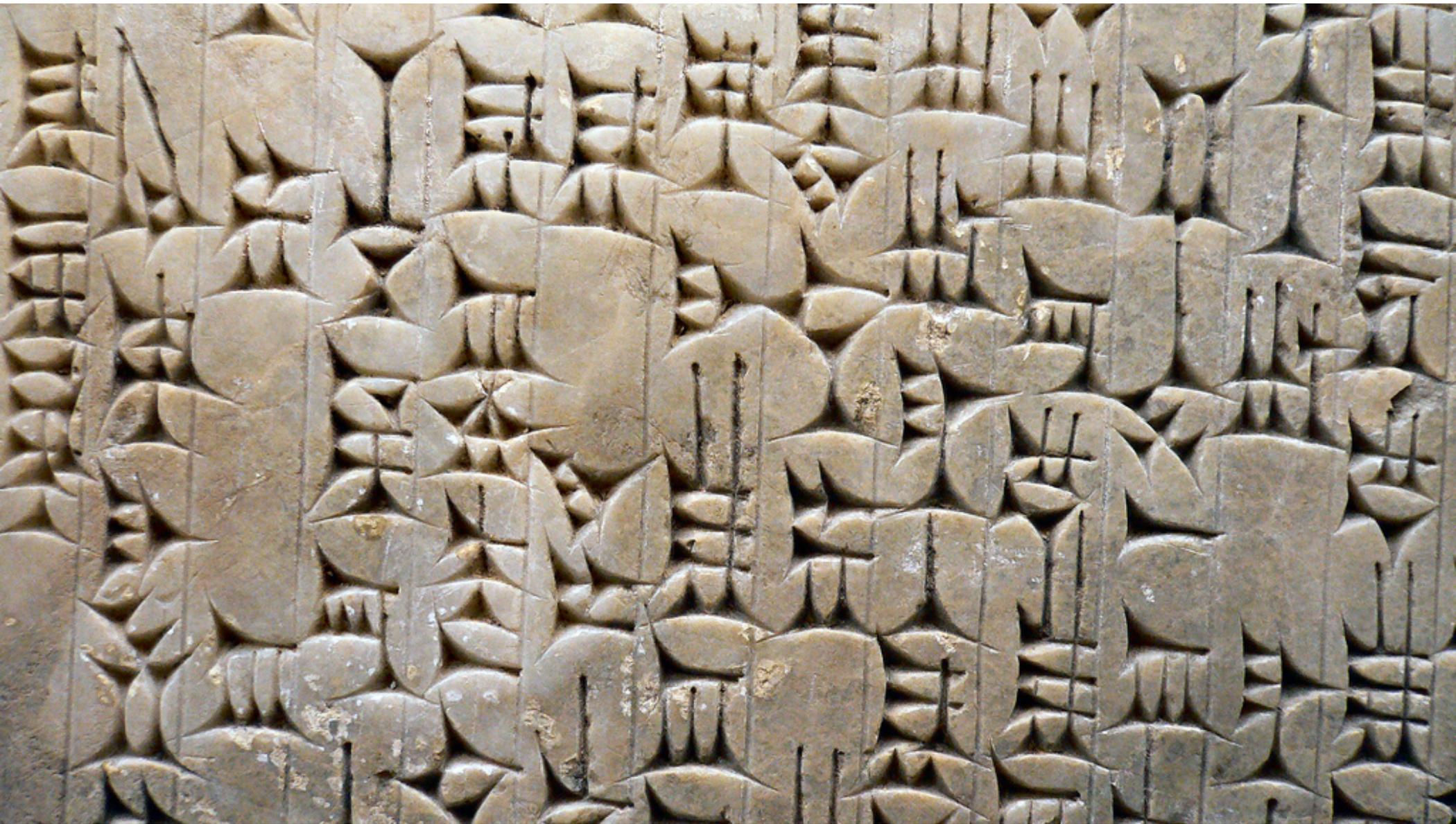
Greek

No [j], but they do have [i]
and [i̯]...

Borrowing

Greek

ζ → I



Borrowing

Cuneiform was developed for the Sumerian language.

Borrowing

The Sumerians and
Akkadians dug each other.
Had lots of dealings.

Borrowing

The Sumerians shared their purely pictographic writing with the Akkadians.

Borrowing

But...they're different
languages.

Borrowing

Sumerian = Highly
agglutinating; minimal
inflection.

Borrowing

Akkadian = Highly inflectional; not very agglutinating.

Borrowing

Sumerian Cuneiform

Word = Glyph

Sentence = Word + Word +
Word + Word

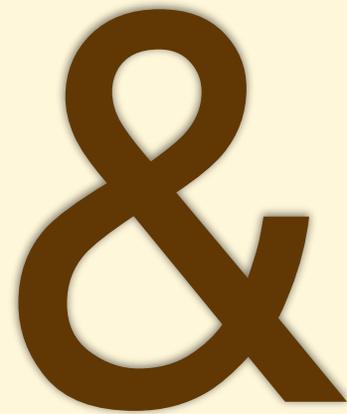
Borrowing

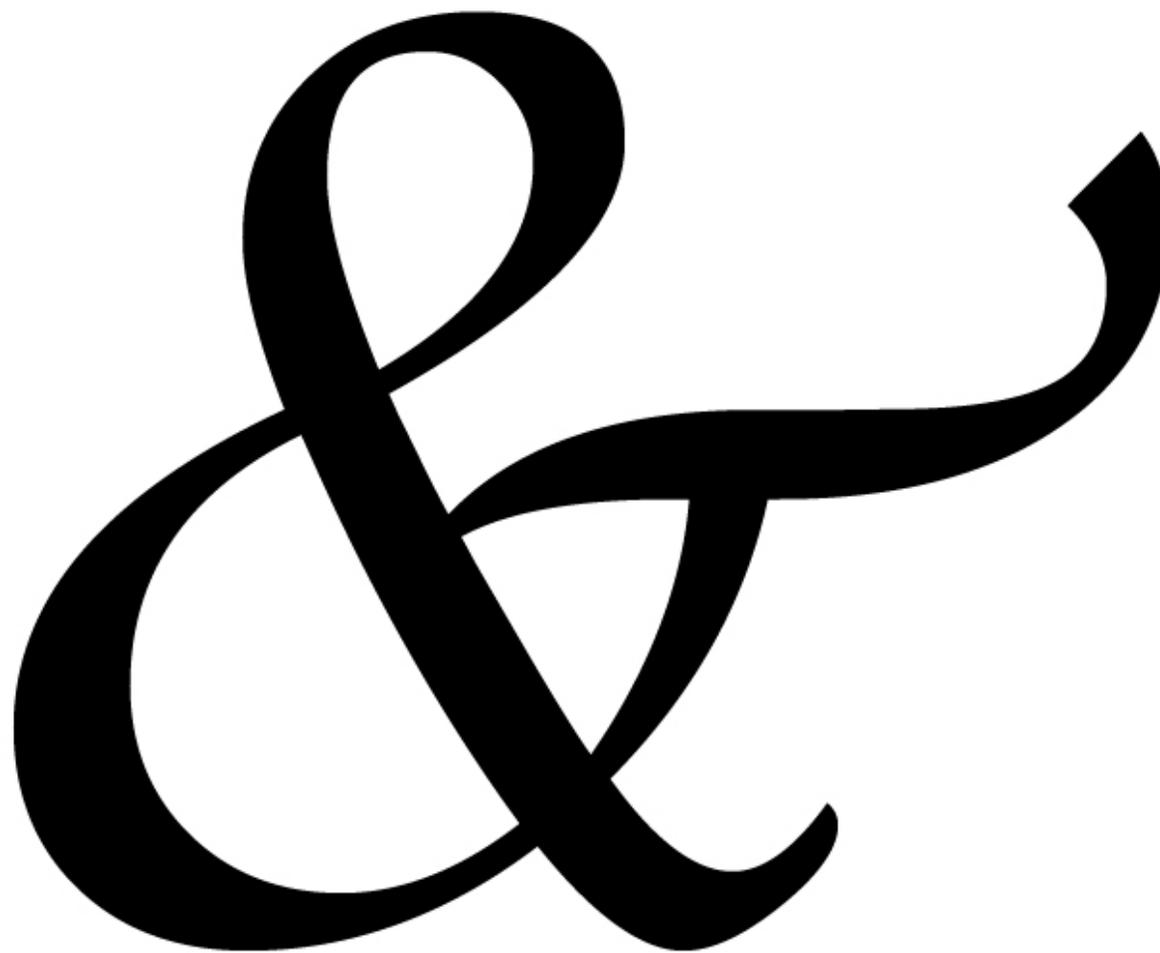
Akkadian Cuneiform

**Glyph = The Sumerian word
sounds a little like x.**

**Word = Built out of glyphs so
they sound like our word.**

Change of Writing Tools



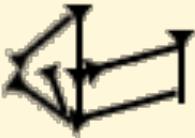
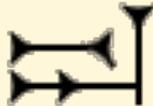




NATVS POPVLSVSQVE ROMANVS
CAESARI DIVI NERVAE F. NERVAE
IANO AVG. GERM. DACIC. CO. PO. P. P.
IM. OT. TRIB. POT. XVII. IMP. V. COS. P. P.
ECLARANDVM QVANTAE ALTI TVRRI
SET LOCVS TAN. UBVS SIT EGE

13A

15
A

	3200 BCE	3000 BCE	2400 BCE	1000 BCE
sag 'head'				
gin 'to walk'				
šu 'hand'				
še 'barley'				
ninda 'bread'				
a 'water'				





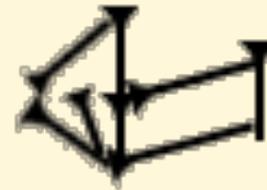
3200 BCE

3000 BCE

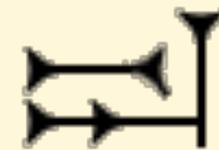
2400 BCE

1000 BCE

sag
'head'



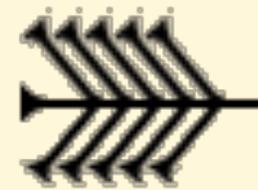
gin
'to walk'



šū
'hand'

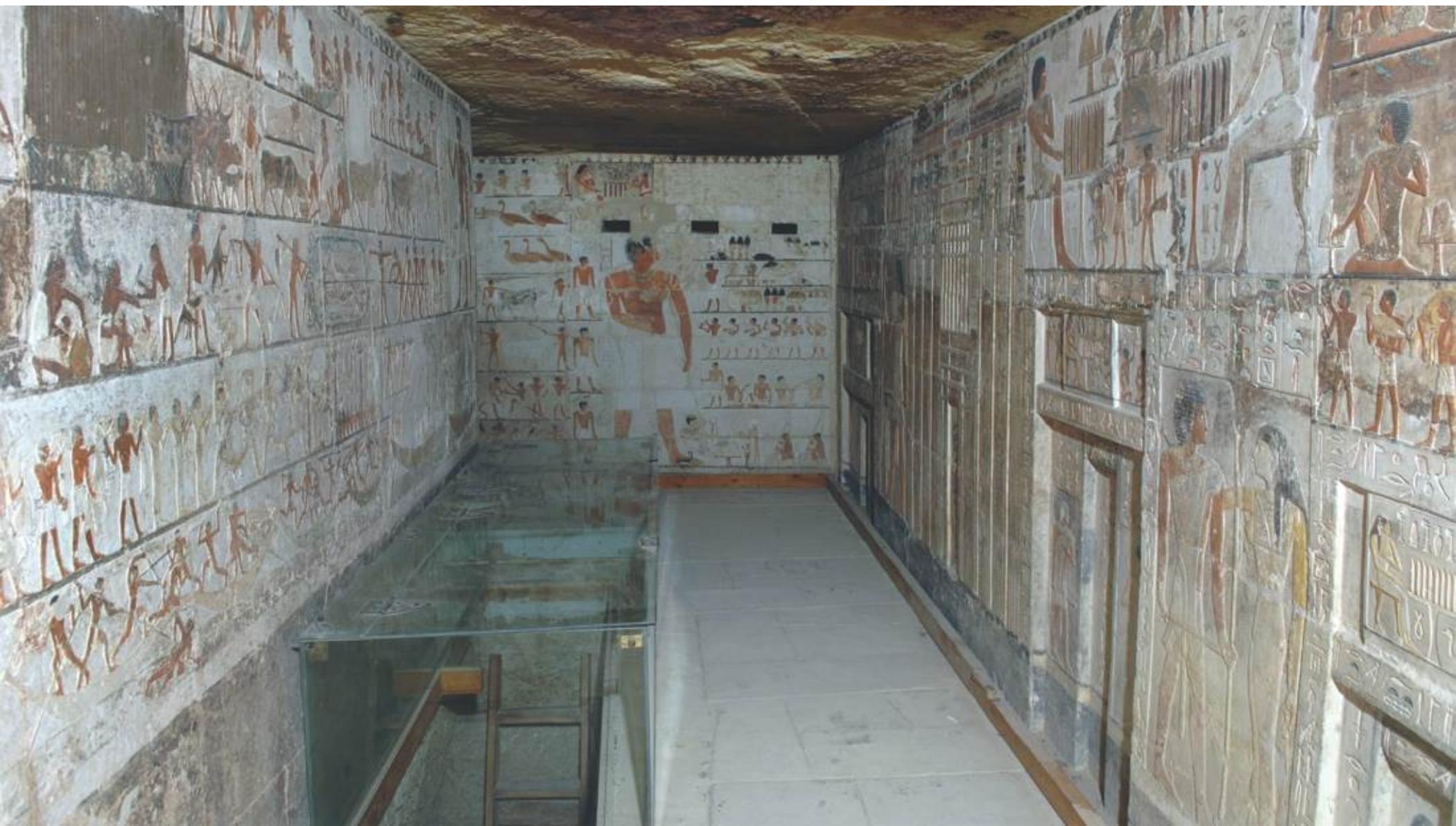


še
'barley'



Change of Writers

Who's writing in your language? What are they writing?





Handwritten text in Arabic script, likely a religious or historical document, written in black ink on a light background. The text is arranged in approximately 12 horizontal lines, showing signs of being a draft or a working manuscript. The script is dense and somewhat irregular, with varying line lengths and some overlapping characters. The text is written in a style characteristic of classical Arabic calligraphy, possibly a form of Maghrebi or Maghribi script. The content is difficult to decipher due to the cursive nature of the script and the lack of clear punctuation or diacritics.

Change of Writers

Hieroglyphs = Formal,
official, stone.

Hieratic = Economic/
administrative documents,
letters, legal briefs.

Change of Writers

A vs. a

B vs. b

C vs. c

D vs. d

Change of Writers

Monks invented Carolingian miniscule to write more quickly, and to allow the script to be read more easily.

Change of Writers

Lower case kind of jump
started the spread of the
Roman script.

Systemic Change

	3200 BCE	3000 BCE	2400 BCE	1000 BCE
sag 'head'				
gin 'to walk'				
šu 'hand'				
še 'barley'				
ninda 'bread'				
a 'water'				
ud 'day'				
mušen 'bird'				

PHOENICIAN	EARLY HEBREW	EARLY ARAMAIC	EARLY GREEK	CLASSICAL GREEK	ETRUSCAN	EARLY LATIN	CLASSICAL LATIN
Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	א ב ג ד ה ו ז ח ט י כ ל מ נ ס ע פ ק ר ש ת	𐤀 𐤁 𐤂 𐤃 𐤄 𐤅 𐤆 𐤇 𐤈 𐤉 𐤊 𐤋 𐤌 𐤍 𐤎 𐤏 𐤐 𐤑 𐤒 𐤓 𐤔 𐤕 𐤖 𐤗 𐤘 𐤙 𐤚	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β Γ Δ Ε Ζ Η Θ Ι Κ Λ Μ Ν Ξ Ο Π Ρ Σ Τ Υ Φ Χ Ψ Ω	Α Β C D E F G H I K L M N O P Q R S T V V X Y Z

PHOENICIAN	EARLY HEBREW	EARLY ARAMAIC	EARLY GREEK	CLASSICAL GREEK	ETRUSCAN	EARLY LATIN	CLASSICAL LATIN
𐤀	א	𐤀	Α	Α	Α	Α	A
𐤁	ב	𐤁	Β	Β	Β	Β	B
𐤂	ג	𐤂	Γ	Γ	Γ	𐀀	C
𐤃	ד	𐤃	Δ	Δ	𐀁	𐀁	D
𐤄	ה	𐤄	Ε	Ε	𐀂	𐀂	E
𐤅	ו	𐤅	Ϝ		𐀃	𐀃	F
𐤆	ז	𐤆	Ζ	Ζ	𐀄	𐀄	G
𐤇	ח	𐤇	Η	Η	𐀅	𐀅	H
𐤈	ט	𐤈	Θ		𐀆	𐀆	I
𐤉	י	𐤉	Ι	Ι	𐀇	𐀇	J
𐤊	כ	𐤊	Κ	Κ	𐀈	𐀈	K
𐤋	ל	𐤋	Λ	Λ	𐀉	𐀉	L
𐤌	מ	𐤌	Μ	Μ	𐀊	𐀊	M
𐤍	נ	𐤍	Ν	Ν	𐀋	𐀋	N
𐤎	ס	𐤎	Ξ		𐀌	𐀌	O
𐤏	ע	𐤏	Ο	Ο	𐀍	𐀍	P
𐤐	פ	𐤐	Π	Π	𐀎	𐀎	Q
𐤑	ק	𐤑	Ρ		𐀏	𐀏	R
𐤒	ר	𐤒	Σ	Σ	𐀐	𐀐	S
𐤓	ש	𐤓	Χ	Χ	𐀑	𐀑	T
𐤔	ת	𐤔	Υ	Υ	𐀒	𐀒	V
𐤕	י	𐤕	Υ	Υ	𐀓	𐀓	V
𐤖	י	𐤖	Υ	Υ	𐀔	𐀔	V
𐤗	י	𐤗	Υ	Υ	𐀕	𐀕	V
𐤘	י	𐤘	Υ	Υ	𐀖	𐀖	V
𐤙	י	𐤙	Υ	Υ	𐀗	𐀗	V
𐤚	י	𐤚	Υ	Υ	𐀘	𐀘	V
𐤛	י	𐤛	Υ	Υ	𐀙	𐀙	V
𐤜	י	𐤜	Υ	Υ	𐀚	𐀚	V
𐤝	י	𐤝	Υ	Υ	𐀛	𐀛	V
𐤞	י	𐤞	Υ	Υ	𐀜	𐀜	V
𐤟	י	𐤟	Υ	Υ	𐀝	𐀝	V
𐤠	י	𐤠	Υ	Υ	𐀞	𐀞	V
𐤡	י	𐤡	Υ	Υ	𐀟	𐀟	V
𐤢	י	𐤢	Υ	Υ	𐀠	𐀠	V
𐤣	י	𐤣	Υ	Υ	𐀡	𐀡	V
𐤤	י	𐤤	Υ	Υ	𐀢	𐀢	V
𐤥	י	𐤥	Υ	Υ	𐀣	𐀣	V
𐤦	י	𐤦	Υ	Υ	𐀤	𐀤	V
𐤧	י	𐤧	Υ	Υ	𐀥	𐀥	V
𐤨	י	𐤨	Υ	Υ	𐀦	𐀦	V
𐤩	י	𐤩	Υ	Υ	𐀧	𐀧	V
𐤪	י	𐤪	Υ	Υ	𐀨	𐀨	V
𐤫	י	𐤫	Υ	Υ	𐀩	𐀩	V
𐤬	י	𐤬	Υ	Υ	𐀪	𐀪	V
𐤭	י	𐤭	Υ	Υ	𐀫	𐀫	V
𐤮	י	𐤮	Υ	Υ	𐀬	𐀬	V
𐤯	י	𐤯	Υ	Υ	𐀭	𐀭	V
𐤰	י	𐤰	Υ	Υ	𐀮	𐀮	V
𐤱	י	𐤱	Υ	Υ	𐀯	𐀯	V
𐤲	י	𐤲	Υ	Υ	𐀰	𐀰	V
𐤳	י	𐤳	Υ	Υ	𐀱	𐀱	V
𐤴	י	𐤴	Υ	Υ	𐀲	𐀲	V
𐤵	י	𐤵	Υ	Υ	𐀳	𐀳	V
𐤶	י	𐤶	Υ	Υ	𐀴	𐀴	V
𐤷	י	𐤷	Υ	Υ	𐀵	𐀵	V
𐤸	י	𐤸	Υ	Υ	𐀶	𐀶	V
𐤹	י	𐤹	Υ	Υ	𐀷	𐀷	V
𐤺	י	𐤺	Υ	Υ	𐀸	𐀸	V
𐤻	י	𐤻	Υ	Υ	𐀹	𐀹	V
𐤼	י	𐤼	Υ	Υ	𐀺	𐀺	V
𐤽	י	𐤽	Υ	Υ	𐀻	𐀻	V
𐤾	י	𐤾	Υ	Υ	𐀼	𐀼	V
𐤿	י	𐤿	Υ	Υ	𐀽	𐀽	V
𐥀	י	𐥀	Υ	Υ	𐀾	𐀾	V
𐥁	י	𐥁	Υ	Υ	𐀿	𐀿	V
𐥂	י	𐥂	Υ	Υ	𐁀	𐁀	V
𐥃	י	𐥃	Υ	Υ	𐁁	𐁁	V
𐥄	י	𐥄	Υ	Υ	𐁂	𐁂	V
𐥅	י	𐥅	Υ	Υ	𐁃	𐁃	V
𐥆	י	𐥆	Υ	Υ	𐁄	𐁄	V
𐥇	י	𐥇	Υ	Υ	𐁅	𐁅	V
𐥈	י	𐥈	Υ	Υ	𐁆	𐁆	V
𐥉	י	𐥉	Υ	Υ	𐁇	𐁇	V
𐥊	י	𐥊	Υ	Υ	𐁈	𐁈	V
𐥋	י	𐥋	Υ	Υ	𐁉	𐁉	V
𐥌	י	𐥌	Υ	Υ	𐁊	𐁊	V
𐥍	י	𐥍	Υ	Υ	𐁋	𐁋	V
𐥎	י	𐥎	Υ	Υ	𐁌	𐁌	V
𐥏	י	𐥏	Υ	Υ	𐁍	𐁍	V
𐥐	י	𐥐	Υ	Υ	𐁎	𐁎	V
𐥑	י	𐥑	Υ	Υ	𐁏	𐁏	V
𐥒	י	𐥒	Υ	Υ	𐁐	𐁐	V
𐥓	י	𐥓	Υ	Υ	𐁑	𐁑	V
𐥔	י	𐥔	Υ	Υ	𐁒	𐁒	V
𐥕	י	𐥕	Υ	Υ	𐁓	𐁓	V
𐥖	י	𐥖	Υ	Υ	𐁔	𐁔	V
𐥗	י	𐥗	Υ	Υ	𐁕	𐁕	V
𐥘	י	𐥘	Υ	Υ	𐁖	𐁖	V
𐥙	י	𐥙	Υ	Υ	𐁗	𐁗	V
𐥚	י	𐥚	Υ	Υ	𐁘	𐁘	V
𐥛	י	𐥛	Υ	Υ	𐁙	𐁙	V
𐥜	י	𐥜	Υ	Υ	𐁚	𐁚	V
𐥝	י	𐥝	Υ	Υ	𐁛	𐁛	V
𐥞	י	𐥞	Υ	Υ	𐁜	𐁜	V
𐥟	י	𐥟	Υ	Υ	𐁝	𐁝	V
𐥠	י	𐥠	Υ	Υ	𐁞	𐁞	V
𐥡	י	𐥡	Υ	Υ	𐁟	𐁟	V
𐥢	י	𐥢	Υ	Υ	𐁠	𐁠	V
𐥣	י	𐥣	Υ	Υ	𐁡	𐁡	V
𐥤	י	𐥤	Υ	Υ	𐁢	𐁢	V
𐥥	י	𐥥	Υ	Υ	𐁣	𐁣	V
𐥦	י	𐥦	Υ	Υ	𐁤	𐁤	V
𐥧	י	𐥧	Υ	Υ	𐁥	𐁥	V
𐥨	י	𐥨	Υ	Υ	𐁦	𐁦	V
𐥩	י	𐥩	Υ	Υ	𐁧	𐁧	V
𐥪	י	𐥪	Υ	Υ	𐁨	𐁨	V
𐥫	י	𐥫	Υ	Υ	𐁩	𐁩	V
𐥬	י	𐥬	Υ	Υ	𐁪	𐁪	V
𐥭	י	𐥭	Υ	Υ	𐁫	𐁫	V
𐥮	י	𐥮	Υ	Υ	𐁬	𐁬	V
𐥯	י	𐥯	Υ	Υ	𐁭	𐁭	V
𐥰	י	𐥰	Υ	Υ	𐁮	𐁮	V
𐥱	י	𐥱	Υ	Υ	𐁯	𐁯	V
𐥲	י	𐥲	Υ	Υ	𐁰	𐁰	V
𐥳	י	𐥳	Υ	Υ	𐁱	𐁱	V
𐥴	י	𐥴	Υ	Υ	𐁲	𐁲	V
𐥵	י	𐥵	Υ	Υ	𐁳	𐁳	V
𐥶	י	𐥶	Υ	Υ	𐁴	𐁴	V
𐥷	י	𐥷	Υ	Υ	𐁵	𐁵	V
𐥸	י	𐥸	Υ	Υ	𐁶	𐁶	V
𐥹	י	𐥹	Υ	Υ	𐁷	𐁷	V
𐥺	י	𐥺	Υ	Υ	𐁸	𐁸	V
𐥻	י	𐥻	Υ	Υ	𐁹	𐁹	V
𐥼	י	𐥼	Υ	Υ	𐁺	𐁺	V
𐥽	י	𐥽	Υ	Υ	𐁻	𐁻	V
𐥾	י	𐥾	Υ	Υ	𐁼	𐁼	V
𐥿	י	𐥿	Υ	Υ	𐁽	𐁽	V
𐦀	י	𐦀	Υ	Υ	𐁾	𐁾	V
𐦁	י	𐦁	Υ	Υ	𐁿	𐁿	V
𐦂	י	𐦂	Υ	Υ	𐂀	𐂀	V
𐦃	י	𐦃	Υ	Υ	𐂁	𐂁	V
𐦄	י	𐦄	Υ	Υ	𐂂	𐂂	V
𐦅	י	𐦅	Υ	Υ	𐂃	𐂃	V
𐦆	י	𐦆	Υ	Υ	𐂄	𐂄	V
𐦇	י	𐦇	Υ	Υ	𐂅	𐂅	V
𐦈	י	𐦈	Υ	Υ	𐂆	𐂆	V
𐦉	י	𐦉	Υ	Υ	𐂇	𐂇	V
𐦊	י	𐦊	Υ	Υ	𐂈	𐂈	V
𐦋	י	𐦋	Υ	Υ	𐂉	𐂉	V
𐦌	י	𐦌	Υ	Υ	𐂊	𐂊	V
𐦍	י	𐦍	Υ	Υ	𐂋	𐂋	V
𐦎	י	𐦎	Υ	Υ	𐂌	𐂌	V
𐦏	י	𐦏	Υ	Υ	𐂍	𐂍	V
𐦐	י	𐦐	Υ	Υ	𐂎	𐂎	V
𐦑	י	𐦑	Υ	Υ	𐂏	𐂏	V
𐦒	י	𐦒	Υ	Υ	𐂐	𐂐	V
𐦓	י	𐦓	Υ	Υ	𐂑	𐂑	V
𐦔	י	𐦔	Υ	Υ	𐂒	𐂒	V
𐦕	י	𐦕	Υ	Υ	𐂓	𐂓	V
𐦖	י	𐦖	Υ	Υ	𐂔	𐂔	V
𐦗	י	𐦗	Υ	Υ	𐂕	𐂕	V
𐦘	י	𐦘	Υ	Υ	𐂖	𐂖	V
𐦙	י	𐦙	Υ	Υ	𐂗	𐂗	V
𐦚	י	𐦚	Υ	Υ	𐂘	𐂘	V
𐦛	י	𐦛	Υ	Υ	𐂙	𐂙	V
𐦜	י	𐦜	Υ	Υ	𐂚	𐂚	V
𐦝	י	𐦝	Υ	Υ	𐂛	𐂛	V
𐦞	י	𐦞	Υ	Υ	𐂜	𐂜	V
𐦟	י	𐦟	Υ	Υ	𐂝	𐂝	V
𐦠	י	𐦠	Υ	Υ	𐂞	𐂞	V
𐦡	י	𐦡	Υ	Υ	𐂟	𐂟	V
𐦢	י	𐦢	Υ	Υ	𐂠	𐂠	V
𐦣	י	𐦣	Υ	Υ	𐂡	𐂡	V
𐦤	י	𐦤	Υ	Υ	𐂢	𐂢	V
𐦥	י	𐦥	Υ	Υ	𐂣		

Systemic Change

As with reduplication and vowel lengthening, there are iconic/affective changes in scripts.

Systemic Change

Latin

ŷ ō ó ŵ é

Systemic Change

Modern Latin

ū ō ē

Systemic Change

Other Romance

á é í ó ú

Systemic Change

Common affective strategies:
Ascending/descending line,
dot, writing a character larger
or smaller, inversion, etc.

Systemic Change

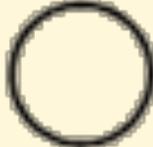
Basically: *Something* to indicate “this is the same, but different kind of”.

Systemic Change

Most often applied to stress,
vowel length, tone,
intonation—secondary
features (not voicing, etc.).

Systemic Change

Sumerian

	1	10	60	600	3,600	36,000
3000 BCE						
2500 BCE						

Systemic Change

Latin

annus

/annus/

Spanish

año

/año/

Systemic Change

Latin

*nn

Spanish

n

Systemic Change

Old Spanish
nⁿ
ñ

Spanish
ñ

Systemic Change

Old German

Mutter

Muetter

German

Mutter

Mütter

Systemic Change

Old German

Mutter

M^etter

German

Mutter

Mütter

Systemic Change

German
Goethe

Systemic Change

$j \succ i$

$i \succ l$

$w \succ vv$

$u \succ v$

Systemic Change

æ > ae

œ > oe

ÿ > ij

ю > lou

Systemic Change

ou [u]
iou [ju]

Systemic Change Tamil

பி [pi] ~ ஃபி [fi]

ஐ [dʒi] ~ ஃஐ [zi]

SPELLING

Spelling: How users match symbols to their language.

Spellings are standardized first by scribes (may differ by scribe).

**Spellings are further
standardized when writing
spreads amongst all
classes.**

Important: It *REALLY*
matters what the language
sounds like at the time that
spellings are standardized!

knight [knixt]

**Why didn't it change?
Because no one was in
charge.**

**Now, though, no one
accepts variants spellings—
even if they're understood.**

The Nites of the Round Table

**Spanish has mostly kept up
with pronunciation changes,
because they literally
change them.**

Real Academia Española ruled, among other things, that LL and CH wouldn't be separate letters in 1994.

**More progressive than the
Academie Française.**

Generally, when a word's spelling is standardized, it's hard to change.

**Also, when writing develops,
sounds that are in the
language at that time tend to
be encoded (so proto-
systems, not modern).**

General Maxim
Words are spelled how
they're pronounced.

Spanish

tu ~ tú

si ~ sí

que ~ qué

mi ~ mí

French

cent [sã] “one hundred”

sang [sã] “blood”

sens [sã] “(I) feel”

sans [sã] “without”

Syllabic Spelling

/kotan/

Syllabic Spelling

こたん

<ko-ta-n>

/kotan/

Syllabic Spelling

कोतन

<ko-ta-na>

/kotan/

Syllabic Spelling

कोतन्

<ko-ta-n>

/kotan/

Syllabic Spelling

कोतँ

<ko-tã>

/kotan/

Syllabic Spelling

/kotan/

	-a	-e	-i	-o	-u
k-	𐌰	𐌱	𐌲	𐌳	𐌴
t-	𐌵	𐌶	𐌷	𐌸	𐌹
n-	𐌺	𐌻	𐌼	𐌽	𐌾

Syllabic Spelling

𑌕𑌗𑌕𑌎

<ko-ta-na>

/kotana/

Syllabic Spelling

𐌀𐌿𐌽

<ko-ta-ne>

/kotan/

Syllabic Spelling

𑌕𑌗𑌕

<ko-ta-na>

/kotan/

Syllabic Spelling

ᑕᑖᑎᑦ

<ko-ta-nä>

/kotana/

Syllabic Spelling

Synharmonic Deletion



$CV_xCV_x\# \rightarrow CV_xC\#$

Syllabic Spelling

Synharmonic Cancellation



$CV_xCV_x\# \rightarrow CV_xCV_x\#$

Syllabic Spelling

elika

Syllabic Spelling

ऐलिक

<e-li-ka>

Syllabic Spelling

**Vowel Carrier: Empty
consonant that houses
vowels.**

Syllabic Spelling

Usual culprits: ? and h.

Syllabic Spelling

	-a	-e	-i	-o	-u
∅	अ	ए	इ	ओ	उ
k	क	के	कि	को	कु
p	प	पे	पि	पो	पु
t	त	ते	ति	तो	तु

Syllabic Spelling

Tamil

க = ka கா = kā

கி = ki கீ = kī

கு = ku கூ = kū

Syllabic Spelling

Tamil

கெ = ke கே = kē

கொ = ko கோ = kō

கை = kai கௌ = kau

Practice

	LAB	COR	PAL	VEL	GLOT
STOP	b	t		k	
FRIC	f	s			h
NASAL	m	n			
APPR		l	j	w	

Intervocalic Voicing

	LAB	COR	PAL	VEL	GLOT
STOP	b	t/d		k/g	
FRIC	f/v	s/z			h
NASAL	m	n			
APPR		l	j	w	

Intervocalic Voicing

*bata → bada

*akena → agena

*safi → savi

*meso → mezo

Loss of Initial Unstressed V

*akena → *agena → gena

*itina → *idina → dina

Loss of Geminates

*tosa → *toza → toza

*tossa → *tossa → tosa

Order

- (1) Proto-Stage
- (2) Intervocalic Voicing
- (3) #V Ø (Unstressed)
- (4) Degemination

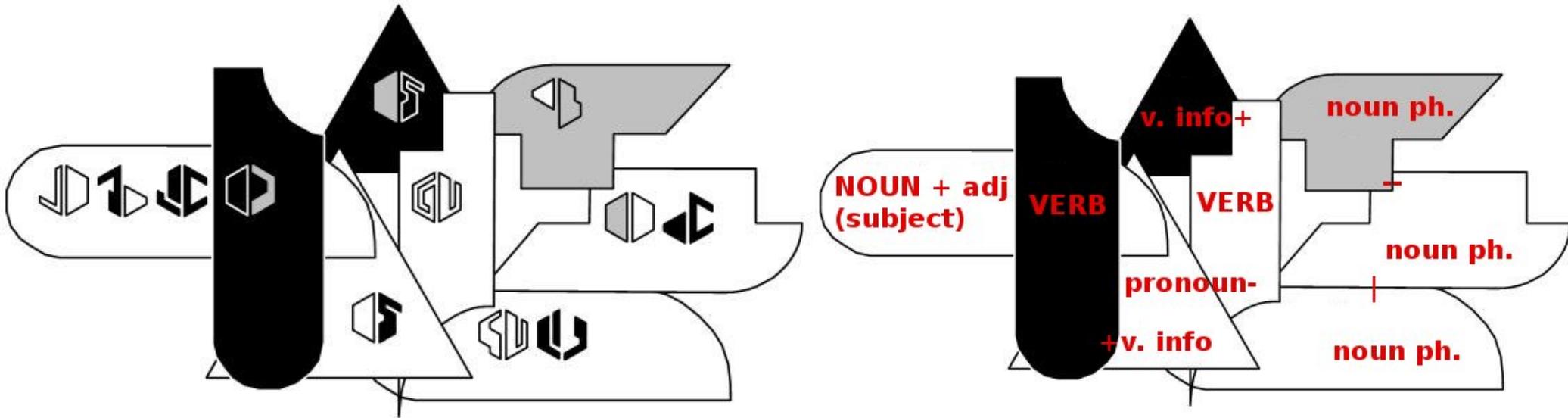
Tonight

**(1) MA9 = Orthography. May
require physical paper!
(Those who have tablets,
that can work well!)**

Ilaksh by John Quijada

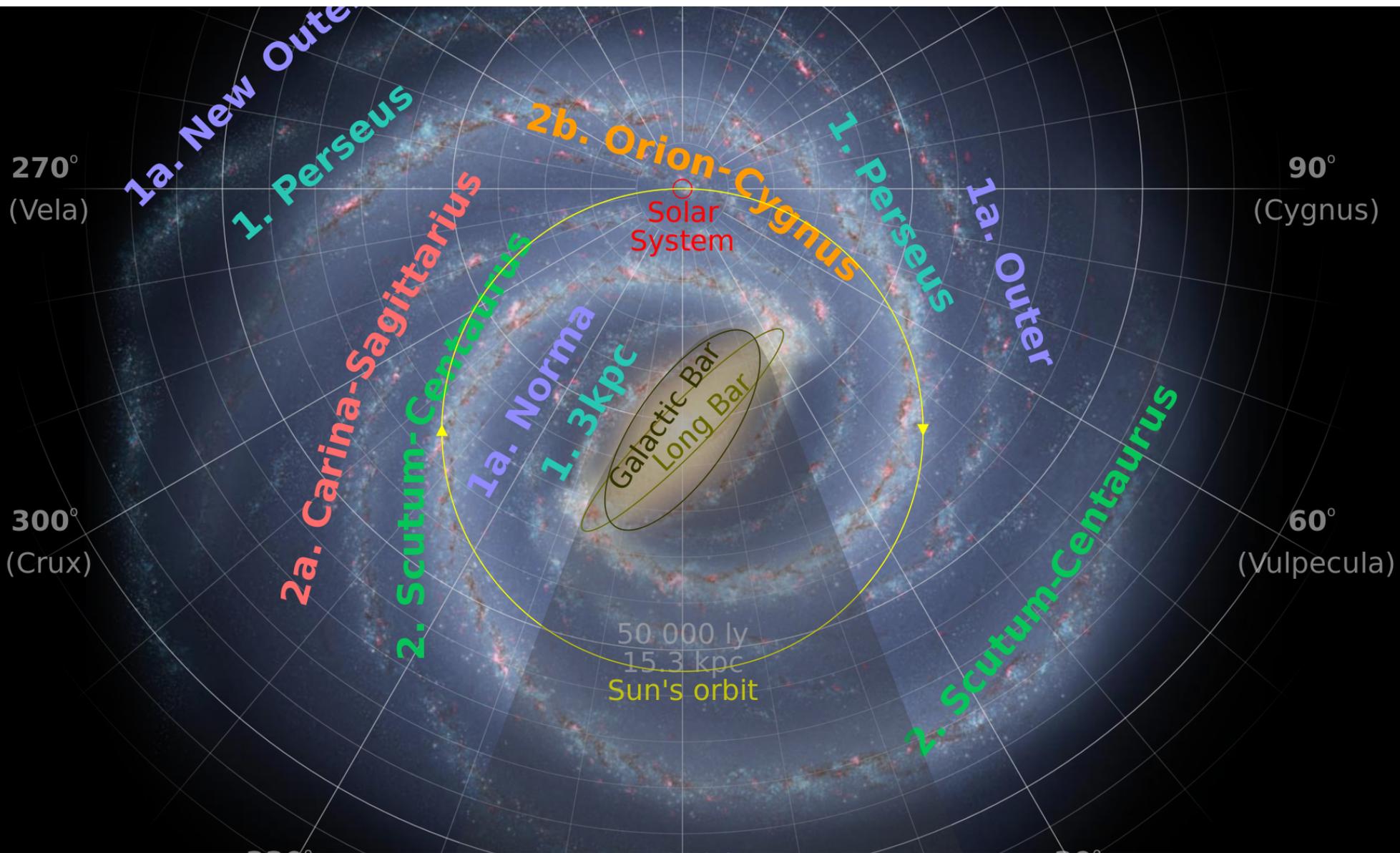


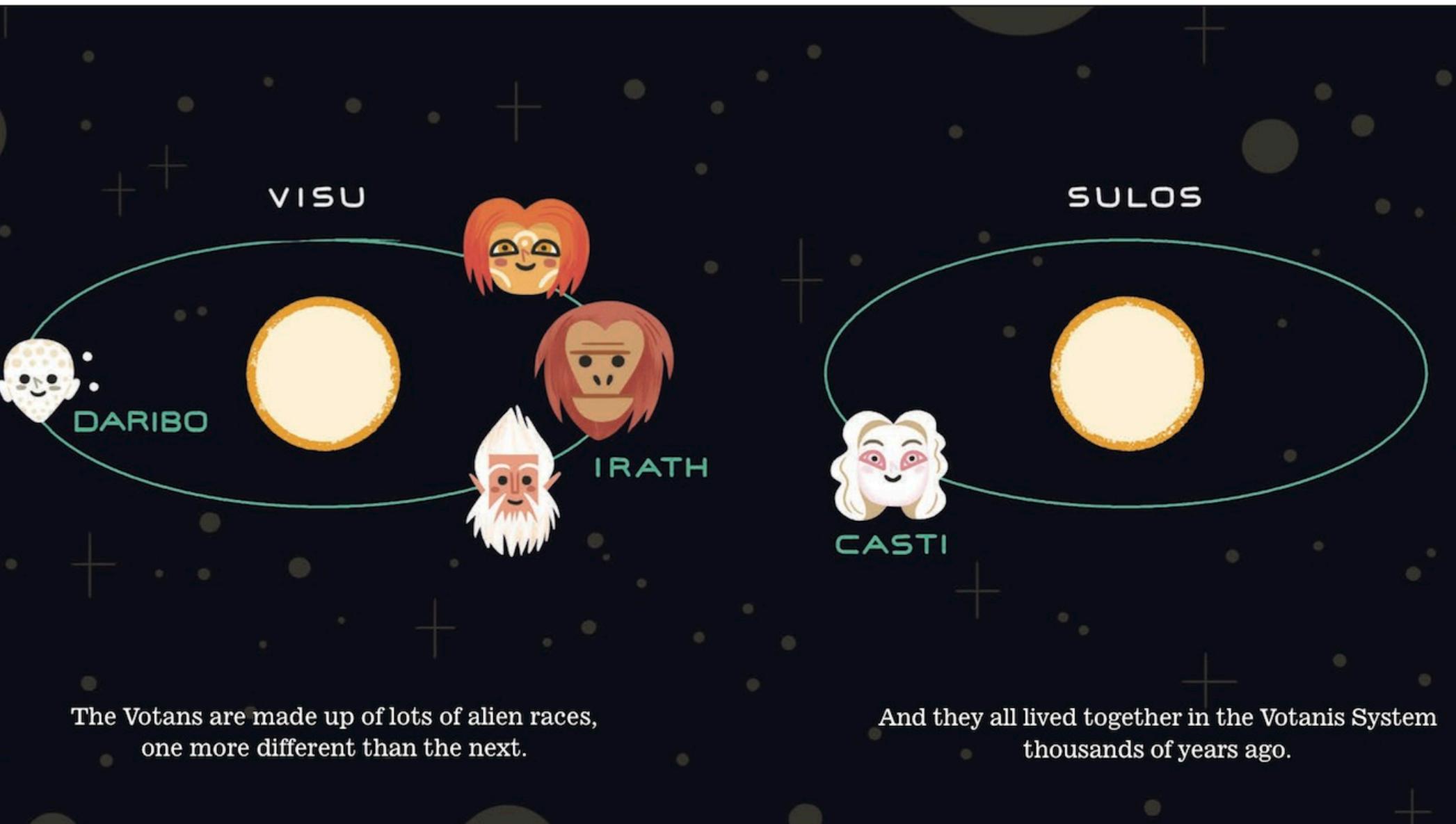
Ilaksh by John Quijada



CASTITHAN

Castithan is the language of the Castithan people. They're the political and cultural force in their galaxy, who believe their place is at the center of the universe.





The Votans are made up of lots of alien races,
one more different than the next.

And they all lived together in the Votanis System
thousands of years ago.

Castithan writing system is an
abugida called
['fa.dʒi.zwa.li.no]. It's written
from left to right with spaces
between words.

ဖက်ညီစာအုပ်

<fā-ti-z^hwa-lī-nu>

[^hfa.dzi.zwa.li.no]

ᖃᖃᖃᖃᖃᖃ

<fā-ti-z'wa-lī-nu>

['fa.dzi.zwa.li.no]

Sample Sentences

•နိဗ္ဗာန်တော်ကို အရှင်တော်ကောင်းတို့၏ နှစ်ခြင်းမှုကို အတုအမူပြု၍

<nī-s^hi-ba-na ka-sa i-la-k'a no ri-^mbā zju-la-wa>

['ni.fi.va.nak.sa 'je.la.ka no 'zem.ba 'zu.la.wa]

/forgiveness-TOP you ABL beg please/

“I beg your forgiveness.”

Sample Sentences

◦ 𐌲𐌳𐌰𐌿 𐌲 𐌲𐌳𐌰 𐌲 𐌲𐌳𐌰 𐌲 𐌲𐌳𐌰 𐌲 𐌲𐌳𐌰 ◦

<fā-ⁿde-t'a kī lī-ru ^ŋgu vo-sa-pā di>

['fan.de.ta ki 'li.raŋ.go 'vos.pa dze]

/love and liro-INS swear EMPH/

“I swear by our love and *liro*.”

Quotidian time = n

$p = \wedge$ $b = | \wedge$ $+p' = \text{diamond}$ $+b = \square$ $+mb = A$ $m = \text{box}$ $a = \emptyset$
 $t = \Upsilon$ $d = | \Upsilon$ $+t' = \text{H}$ $+d = \text{HC}$ $+nd = \text{F}$ $n = \text{X}$ $i = -$
 $k = \lrcorner$ $g = \square$ $+k' = \lrcorner$ $+g = \text{H}$ $+ng = 7$ $in = \text{V}$ $u = \wedge$
 $f = \equiv$ $v = \text{E}$ $a := \text{B}$
 $\text{th}^x = \text{I}$ $\text{th}^g = \text{II}$ $i := =$
 $s = <$ $z = K$ $+s' = \text{Z}$ $+z = \text{M}$ $u := \hat{\wedge}$
 $h = \ominus$

$m+b$
 $n+d$
 $N+g$
 $n+g+g$

$Y = \text{fine}$
 $W = \text{fine}$

$l = X$ $r = \gamma$
 2^m 2^y 2^z 2^k 2^v 2^w 2^u
 $69, 0$ $-34, -69$ $6E$ $6E$ $6E$ $6E$ $6E$
 g^a g^b g^c g^d g^e g^f g^g

Original system chiseled on stone for ornamental reasons and burial texts. (Above ground pedestals.)

**Later scrolls developed
(thinnish paper).**

Handwritten blue characters: 7, 7, 7, 7, 7, 7

Handwritten blue characters: 7, 7, 2, 3, 2, 4

Printed brown characters: 7, 7, 2, 3, 2, 4

1673

Handwritten blue characters: 7 7 7 7 =

Handwritten blue characters: 7 7 7 7

Handwritten brown characters: 7 7 7 7

Handwritten blue symbols in two rows. The top row contains four symbols: a simple 'H' shape, an 'H' shape with a small upward-pointing triangle to its right, a 'F' shape, and an 'F' shape with a small upward-pointing triangle to its right. The bottom row contains four symbols: a stylized 'P' shape, a stylized 'Q' shape, a stylized 'P' shape, and a stylized 'Q' shape.

Handwritten brown symbols in two rows. The top row contains four symbols: a stylized 'P' shape, a stylized 'Q' shape, a stylized 'P' shape, and a stylized 'Q' shape. The bottom row contains four symbols: a stylized 'P' shape, a stylized 'Q' shape, a stylized 'P' shape, and a stylized 'Q' shape.

Phonological Change

The writing system was created at a time before some large scale phonological changes.

Phonological Change

Original Vowels

a aː

i iː

u uː

Phonological Change

Original Diphthongs

ai au

ia iu

ua ui

Phonological Change

High Vowel Reduction

*V → [-high] / _#

*i, *u → je, wo / ' _

Phonological Change

Diphthong Loss

*ai, *au → e, o

*V_x[+high] → [-voc] / _V_y

Phonological Change

Loss of Long Vowels

*V: > V

Result

Original Set

ka ki ku

kā kī kū

kau kai kia kiu kua kui

Result

Final Set

ka {ki/ke/kje} {ku/ko/kwo}

ka ki ku

ko ke kja kju kwa kwi

Phonological Change

Original Set

p p' t t' k k'

s s' z z'

b b d d' g g'

^mb ⁿd ^ŋg

Phonological Change

Intervocalic Lenition

*C[-emph, +voice] → [+cont]

&

*C[-emph] → [+voice] / V_V

Phonological Change

Intervocalic Lenition

*C[+cont, -strident, -back] →
h / V_V

*C[+cont, +back] → ∅ / V_V

Phonological Change

Loss of Pre-Nasalized Stops

$*n\text{C} \rightarrow \text{C} / \# _$

$*n\text{C} \rightarrow n\text{C} / \text{V} _$

Phonological Change

Loss of Emphatic Consonants

*C → [-emph]

Phonological Change

Original Set

p p' t t' k k'

s s' z z'

b b d d' g g'

^mb ⁿd ^ŋg

Phonological Change

Modern Set

{p/b} p {t/d} t {k/g} k

{s/z} s z z

{b/v} b {d/ð} d {g/h} g

{b/mb} {d/nd} {g/ŋg}

Phonological Change

Also Palatalization for Non-
Emphatic Coronals

*t, *d, *s, *z → tʃ, dʒ, ʃ, ʒ

Modern System

	-a	-ā	-i	-ī	-u	-ū
p	ᵿ	ᵿᵿ	ᵿᵿ	ᵿᵿ	ᵿᵿ	ᵿᵿ
p'	ᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ
b	ᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ	ᵿᵿᵿ
b	ᵿᵿᵿ	ᵿᵿᵿᵿ	ᵿᵿᵿᵿ	ᵿᵿᵿᵿ	ᵿᵿᵿᵿ	ᵿᵿᵿᵿ

Modern System

	-e	-o	-ja	-ju	-wa	-wi
p	ပြ	ပှ	ပာ	ပု	ပွ	ပိ
p'	ပြဲ	ပှဲ	ပာဲ	ပုဲ	ပွဲ	ပိဲ
b	ပံာ	ပံာ	ပံာ	ပံာ	ပံာ	ပံာ
b	ပံဲ	ပံဲ	ပံဲ	ပံဲ	ပံဲ	ပံဲ

Phonological Change

*C[+lab]^w → C

Result

ᠨ	pa	
ᠨ᠎ᠠ	pā	
ᠨᠠᠩ	pwa	= [pa]
ᠨᠠᠢ	p'a	
ᠨᠠᠨ	p'ā	
ᠨᠠᠨᠠ	p'wa	

Modern System

	-a	-ā	-i	-ī	-u	-ū
m̥	ᳵ	ᳶ	᳷	᳸	᳹	ᳺ
f	᳼	᳽	᳾	᳿	᳻	᳼
v	᳽	᳾	᳿	᳻	᳼	᳽
∅	ᳶ	᳷	᳸	᳹	ᳺ	᳻

Modern System

	-e	-o	-ja	-ju	-wa	-wi
^m b	ႁႃ	ႁႣ	ႁႤ	ႁႥ	ႁႦ	ႁႧ
f	ႁႣ	ႁႤ	ႁႥ	ႁႦ	ႁႧ	ႁႨ
v	ႁႤ	ႁႥ	ႁႦ	ႁႧ	ႁႨ	ႁႩ
∅	ႁႥ	ႁႦ	ႁႧ	ႁႨ	ႁႩ	ႁႪ

Modern System

	-a	-ā	-i	-ī	-u	-ū
t	𑌕	𑌖	𑌗	𑌘	𑌙	𑌚
t'	𑌕'	𑌖'	𑌗'	𑌘'	𑌙'	𑌚'
d	𑌔	𑌕	𑌖	𑌗	𑌘	𑌙
d'	𑌔'	𑌕'	𑌖'	𑌗'	𑌘'	𑌙'

Modern System

	-e	-o	-ja	-ju	-wa	-wi
t	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ
t'	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ
d	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ
d'	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ	ṭṭ

Modern System

	-a	-ā	-i	-ī	-u	-ū
ⁿ d	𑌎	𑌎̄	𑌏	𑌏̄	𑌐	𑌐̄
s	𑌑	𑌑̄	𑌒	𑌒̄	𑌓	𑌓̄
sʳ	𑌔	𑌔̄	𑌕	𑌕̄	𑌖	𑌖̄
z	𑌗	𑌗̄	𑌘	𑌘̄	𑌙	𑌙̄

Modern System

	-e	-o	-ja	-ju	-wa	-wi
ⁿ d	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ
s	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ
sʃ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ
z	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ	ᱛᱟ

Modern System

	-a	-ā	-i	-ī	-u	-ū
zʳ	𑌛	𑌛̄	𑌛᳚	𑌛̄᳚	𑌛᳚	𑌛̄᳚
m	𑌛	𑌛̄	𑌛᳚	𑌛̄᳚	𑌛᳚	𑌛̄᳚
n	𑌛	𑌛̄	𑌛᳚	𑌛̄᳚	𑌛᳚	𑌛̄᳚
ŋ	𑌛	𑌛̄	𑌛᳚	𑌛̄᳚	𑌛᳚	𑌛̄᳚

Modern System

	-e	-o	-ja	-ju	-wa	-wi
zʳ						
m						
n						
ŋ						

Modern System

	-a	-ā	-i	-ī	-u	-ū
k	ᳵ	ᳶ	᳷	᳸	᳹	ᳺ
k'	ᳶ	᳷	᳸	᳹	ᳺ	᳻
g	᳷	᳸	᳹	ᳺ	᳻	᳼
ḡ	᳸	᳹	ᳺ	᳻	᳼	᳽

Modern System

	-e	-o	-ja	-ju	-wa	-wi
k	ကဲ	ကော	ကော	ကော	ကော	ကော
k'	ကဲ	ကော	ကော	ကော	ကော	ကော
g	ကံ	ကော	ကော	ကော	ကော	ကော
ḡ	ကဲ	ကော	ကော	ကော	ကော	ကော

Modern System

	-a	-ā	-i	-ī	-u	-ū
ṅg	ṅa	ṅā	ṅi	ṅī	ṅu	ṅū
h	ha	hā	hi	hī	hu	hū
ḥ	ḥa	ḥā	ḥi	ḥī	ḥu	ḥū
ḍ	ḍa	ḍā	ḍi	ḍī	ḍu	ḍū

Modern System

	-e	-o	-ja	-ju	-wa	-wi
ᵑg	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ
h	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ
θ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ
ð	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ	ᵑᵑ

Modern System

	-a	-ā	-i	-ī	-u	-ū
ṛ	ṛ	ṝ	ṝḥ	ṝḅ	ṝ	ṝḥ
ṝ	ṝ	ṝ̄	ṝ̄ḥ	ṝ̄ḅ	ṝ̄	ṝ̄ḥ

Modern System

	-e	-o	-ja	-ju	-wa	-wi
၂	၂ေ	၂ေ	၂ေ	၂ေ	၂ေ	၂ေ
၂	၂ေ	၂ေ	၂ေ	၂ေ	၂ေ	၂ေ

New Glyphs

𑜆𑜃𑜂𑜫 /zwa/

𑜆𑜃𑜂𑜫 /zwi/

𑜆𑜃𑜂𑜫 /zwe/

𑜆𑜃𑜂𑜫 /zwo/

New Glyphs

ꨲꩃ /zja/

ꨲꩃꨳ /zje/

ꨲꩃꨱ /zju/

ꨲꩃꨳꨱ /zjo/

Spelling

ᑭᑦᑲᑦᑲᑦ

<e-ti-lī-nu>

[ˈe.dʒi.li.no]

“gear”

Spelling

ᑭᑦᑲᑦᑲᑦᑲᑦ

<e-ti-lī-nu>

['e.dʒi.li.no]

“gear”

ᑲᑦᑲᑦᑲᑦᑲᑦ

<di-mi-di-ru>

['dʒe.mi.dʒi.ro]

“anyway”

Spelling

နိာရဿိာ

<nyu-vu-lā>

[ˈɲu.hu.la]

“complains”

နိာရဗျ

<nyu-vwa>

[ˈɲu.va]

“complained”

Spelling

𑀓𑀲𑀭𑀸𑀓

<fā-hi-ⁿdū>

['fjen.du]

“to own”

𑀓𑀲𑀸𑀓

<fje-ⁿdū>

['fjen.du]

“to own”

Spelling

တေတေ

<ta-to>

['ta.to]

“dad”

ဟိုပိဆေ

<ho-p'i-sje>

['ho.pi.sje]

“beautiful”

Spelling

ဝေဏ်းသီ

လိမ္မော်သီး

<SUN-ⁿdi-du>

<DANGER-zju-lu>

['ve.ron.dʒi.ðo]

['stʃi.re.ʒu.lo]

“sunrise”

“danger”

Mistakes

ᑲᑲᑲᑲᑲ

<hu-kju-lū>

['wo.kju.lu]

“to sleep”

Mistakes

മിസ്റ്റേക്കുകൾ

Mistakes

𑄎𑄢𑄢𑄎

<ⁿda-hi-ka-ⁿdi>

['dai.gan.dʒe]

“hot”

Mistakes

Handwritten text in a stylized, cursive script, possibly representing a name or a specific phrase. The characters are dark brown and feature thick, rounded strokes with some loops and flourishes.

Spelling

၅၂၈

<a-pi>

['a.be]

“if”

၅၂၉

<ā-θu>

['a.ðo]

“eleven”

Spelling

ḡ = <a>

ḡ̄ = <ā>

$$\wedge \cap = p \cap$$

$$\wedge \cup = p \bar{\wedge}$$

1 7 = 8

1 7 = 8

Mistakes

But I mixed up the glyphs in
the font editor.

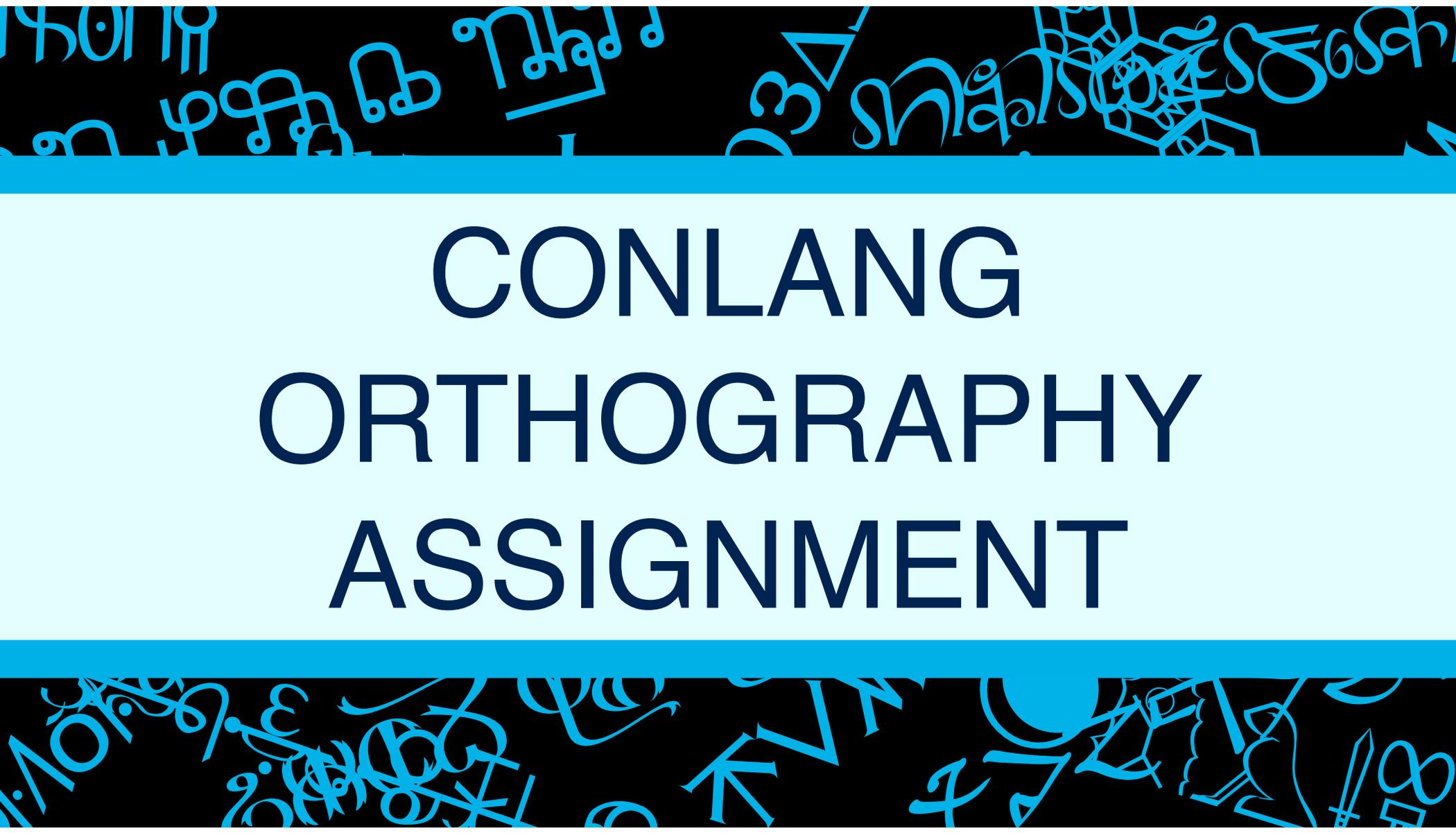
Mistakes

By the time I realized my mistake it was too late: It was on signage that had been filmed. :(

Questions?

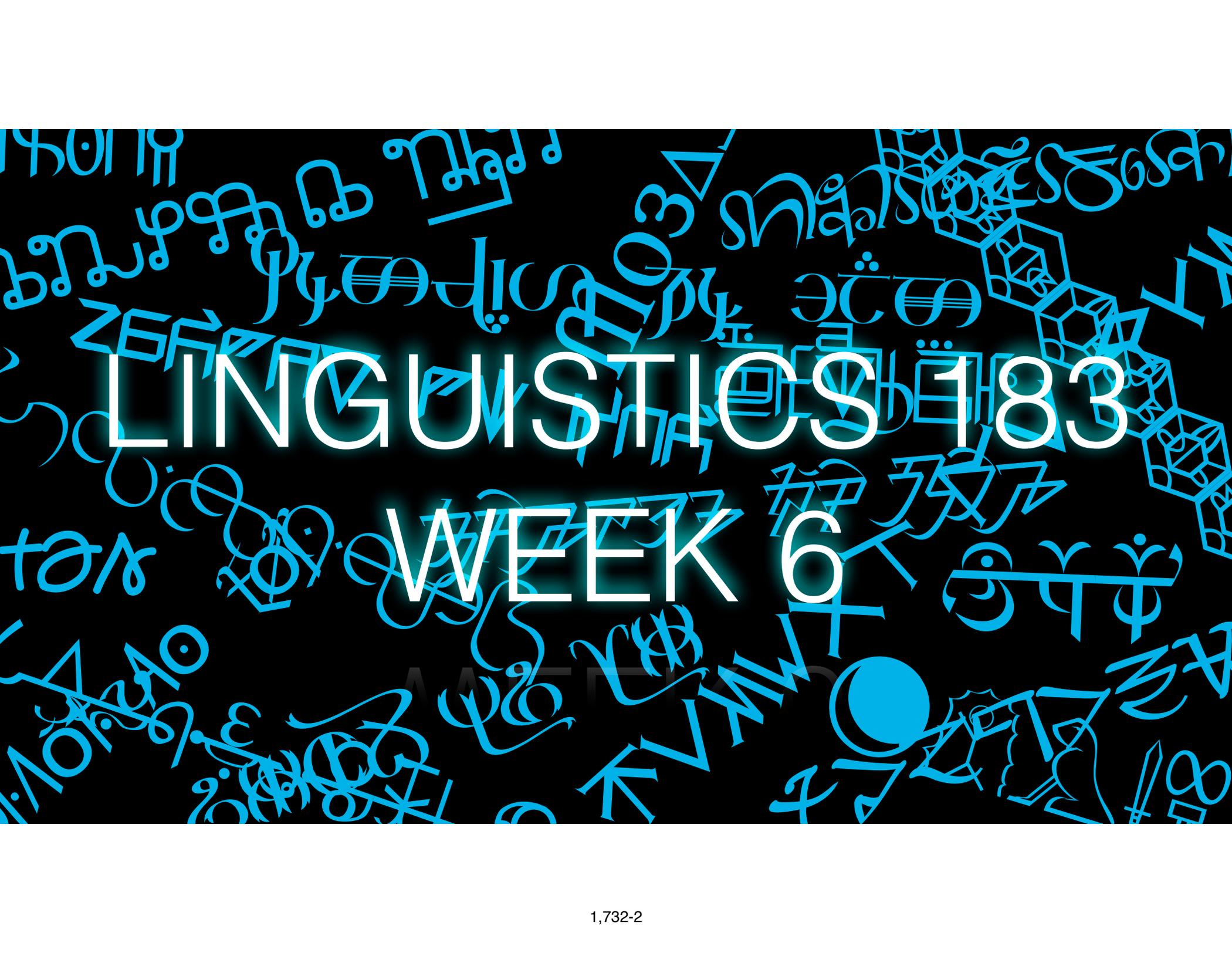
Tonight

- (1) PA23 = Share a word in your orthography from your language!
- (2) MA10: Your orthography!



CONLANG ORTHOGRAPHY ASSIGNMENT





LINGUISTICS 183

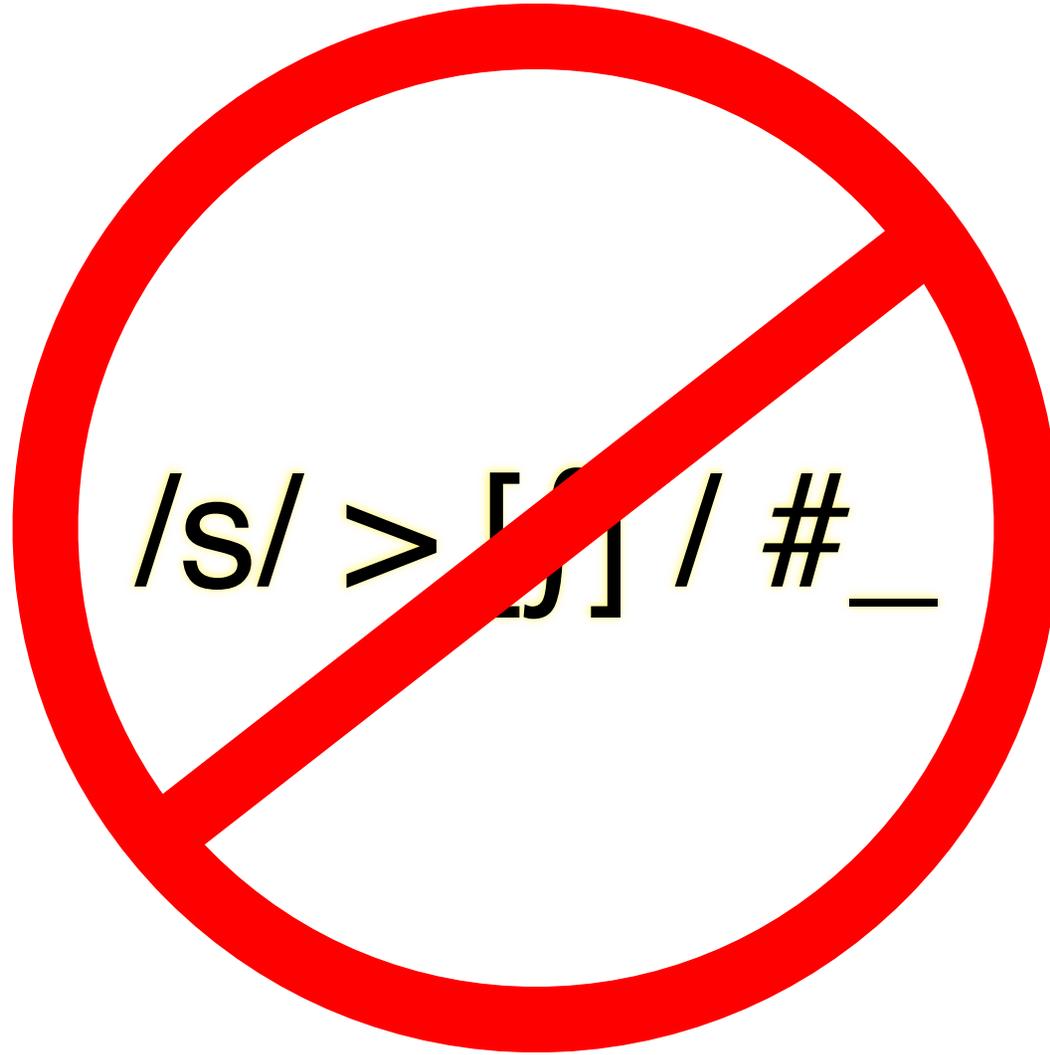
WEEK 6

Valdyan/Ilaini by Irina Rempt

Hanleni halsen varyenan laynat
Daysinen verein idanla le listat
Havien hinla laziena forat
Culea rachleni arlea a chalat?

“The song of the starlings speaks of heroic deeds
In the morning rain the heron does its laundry
In the night the lark worships the stars
Who sees the true nature of birds?”

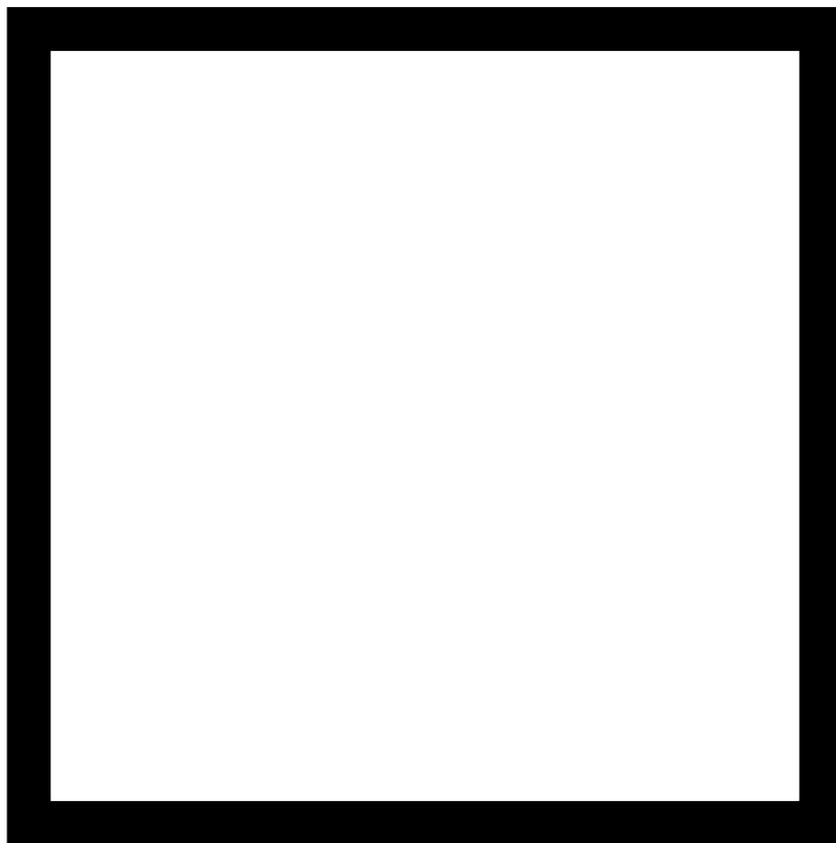
/s/ > [ʃ] / # _



TRANSLATION

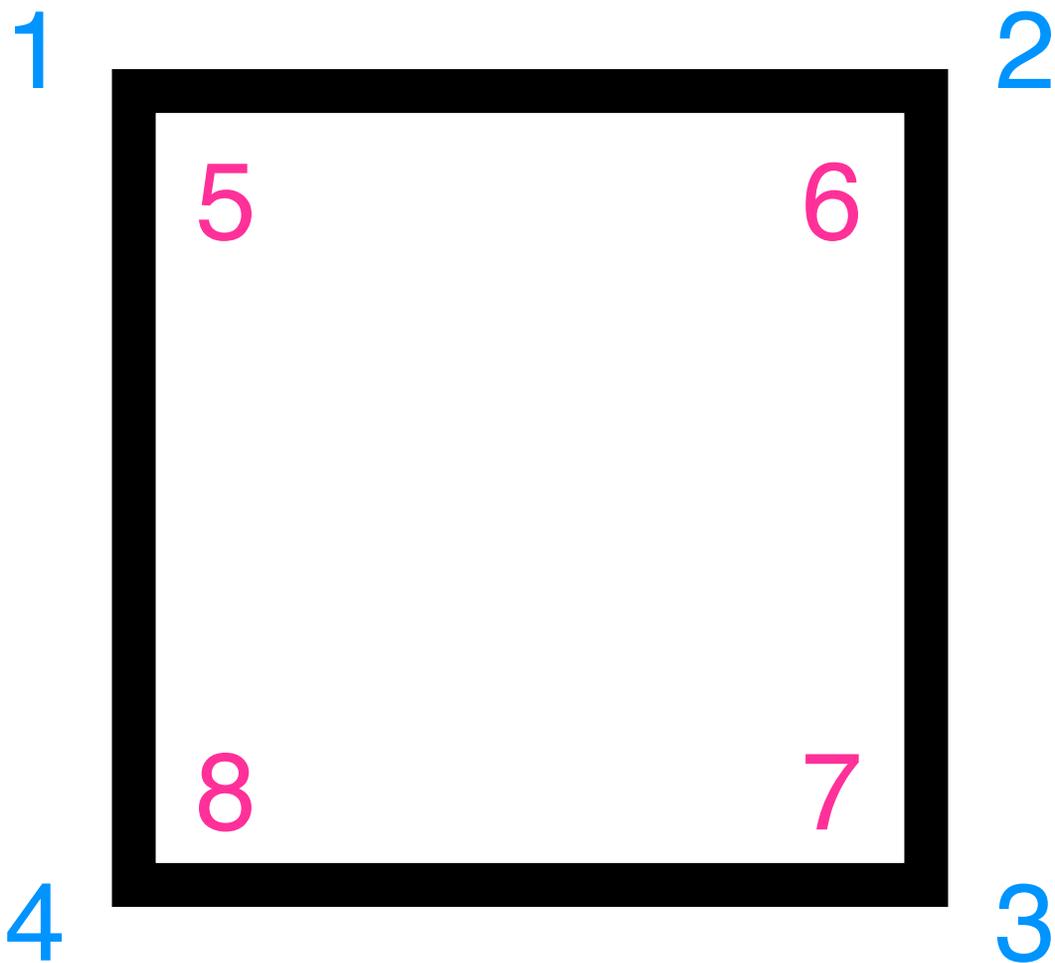
Translation \neq Writing

Generally, one can translate from one language to another, even if one has to use more words or non-standard words.



Este cuarto tiene cuatro rincones y cuatro esquinas.

**This room has four corners
and four corners.**



**This room has four inside
corners and four outside
corners.**

Frequency

rincón	4/1,000
esquina	4/1,000
inside corner	0.0004/1,000
outside corner	0.0004/1,000

He banged his hip on the
corner of the desk.

wonderful
marvelous
awesome
incredible
fantastic
terrific

That's a wonderful book.
That's a marvelous book.
That's an awesome book.
That's an incredible book.
That's a fantastic book.
That's a terrific book.

That's a wonderful book.

That's a marvelous book.

That's an awesome book.

That's an incredible book.

That's a fantastic book.

That's a terrific book.

**Dude, that's a marvelous
laptop!**

Dude, that's a sick laptop!

**Dude, that's an awesome
laptop!**

maravilloso
increíble
fantástico

marvelous ≠ maravilloso

The Problem

If you write in English and go to translate the English, you're going to be translating *English* sentences/word choices.

The Problem

Dude, that's an awesome
laptop!

The Problem

Dude, that's an **awesome**
laptop!

The Problem

awesome (adj.) delvek,
asaneak, misek

The Problem

marvelous (adj.) asanek,
delvek, kilek

The Problem

Delvek (#1 definition of “awesome”) used in mainly religious contexts; not as common.

The Problem

Asanek (#1 definition of “marvelous”) used more commonly amongst all people.

The Problem

Kilek (#3 definition of “marvelous”) used more often by young people; uncommon elsewhere.

The Problem

By choosing “delvek”, the translator has mapped English frequency onto the new language.

Consequence 1

Dothraki

athirarido (n.) dream

thirat atthiraride (v.) to dream

Consequence 1

Dothraki

Atthirarido m'anhoon she
jalan.

/dream with-me in night/

“I had a dream last night.”

Consequence 1

Dothraki

Thir atthiraride she jalan.

/lived dream at night/

“I dreamt last night.”

Consequence 1

English

I had a dream last night. 

I dreamt last night.

Consequence 1

Dothraki

I had a dream last night.

I dreamt last night. 

Consequence 1

Both Dothraki strategies are perfectly grammatical.

Consequence 1

The English translation biases the translator, with the result being that the Dothraki is more anglophone.

Consequence 2

Dothraki

nhazhof (n.) a situation/
problem that's more trouble
than it's worth

Consequence 2

Dothraki

lanlekhi (n.) when you eat
one of something, and then
you immediately want to eat
more for a while

Consequence 2

Dothraki

azhkemokan (n.) gift given
specifically to a bride on her
wedding day

Consequence 2

Out of sight, out of mind.

Consequence 2

Translating from English,
you end up using the
conlang vocab most readily
and easily translated to
English.

Consequence 2

Composing in English you
get the same problem.

Consequence 2

A native speaker has the words in mind and can use them at will. A non-native speaker doesn't.

Common Conlang Problem

Conlangers often forget the cool words they create that don't easily translate to English.

Solution

Better tagging!

Solution

prūmia (n.) heart

Solution

prūmia ['pruː.mia] (n.) heart

Solution

prūmia ['pruː.mia] (n.f) heart

Solution

prūm·ia, -ī, -ȳn, -iar
['pruː.mia] (n.l) heart

Solution

prūm·ia, -ī, -ȳn, -iar (prumia,
prūmia) ['pruː.mia] (n.l) heart

Solution

prūm·ia, -ī, -ȳn, -iar (prumia,
prūmia) ['pruːmia] (n.l) {00}
heart

Solution

$\{00\}$ = basic

$\{10\}$ = technical/artsy

$\{01\}$ = potentially insulting

$\{11\}$ = uncommon insult

Solution

{00} = hero

{10} = nonpareil

{01} = jerk

{11} = Philistine

Solution

More complexity possible:
You just have to remember
your system.

Solution

daoriot jem·agon (vp.) {00}*
to not matter (to s/o, use the
[com.]

Your Translation

Let us discuss!

Your Translation

Create/write some
connected narrative.

Your Translation

- Creation myth.
- Origin of writing.
- Origin of plant/animal/
place.

Your Translation

- Battle with other nation.
- Great deed by great leader.
- Founding of the nation.
- Hero story.

Your Translation

- Ghost/taboo story.
- Marriage/birth/death rite.
- Disaster tale.

Tonight!

1.PA 24: Post what kind of story you're doing in the #asoi af channel.

ámmann íar by David Bell

	PREFIX	EXAMPLE
DESCRIPTIVE	v(e)-	riel vemarlis “beautiful woman”
PURPOSIVE	p(a)-	tornil pamurmlir “sleeping bag”
MATERIAL	g(a)-	teleg galdar “wooden leg”
SIZE	m(a)-	caras mabeleg “large house”
COLOR	d(e)-	curunar demith “gray wizard”
SHAPE	t(a)-	palag tacom “round table”
COUNT	b(e)-	lhibai becaer “ten fingers”
AGE	l(a)-	cair lorseinnon “ancient ship”
ORIGIN	h(a)-	sinair harhun “eastern manners”

DERIVATION

Taking a word with X
meaning and doing
something with it to get X'
meaning.

$X \rightarrow X'$

$X \rightarrow Y_x$

gato ~ gatito ~ gaticito

N ~ N ~ N

value
revalue
devalue
misvalue

V

Zero Derivation: Taking a word and using it in some other lexical class without changing it at all.

subject (v.) ~ subject (n.)

~~subject (v.) subject (n.)~~

store (v.) → store (n.)

run (v.) → run (n.)

Google (n.) → google (v.)

Xerox (n.) → xerox (v.)

Warrior (n.) → Warrior (adj.)

**The Warrior players are
taking the court.**

bake (v.) → bakery (n.)

teach (v.) → teacher (n.)

brother (n.) → brotherly (adj.)

black (adj.) → blacken (v.)

red (adj.) → reddish (n.)

teach (v.) → teaching (adj.)

incredible ~ incredibility
incredible ~ incredibleness
red ~ *redidity
red ~ redness

park → parkovati

start → startovati

tanzen → tantsjevat

organize → organizovati

Common Derivations

Use of Noun as Verb

Quality of Adjective

Verbal Noun

Common Derivations

Noun-Like Becoming an Adjective Participles

Common Derivations

$V \rightarrow N$

Agent/Experiencer

Place Where V Happens

Usual Object

Instrument

Nonstandard Derivations

écrire “to write”
écrivain “writing”

Nonstandard Derivations

défendre “to defend”
défendant “defending”

Nonstandard Derivations

salir “to leave”

salida “left”

Nonstandard Derivations

Present Participle = agent

Passive Participle = patient

Nonstandard Derivations

new ~ news

Nonstandard Derivations

*These news travel fast.

Nonstandard Derivations

Down in the dumps.

Got the munchies.

Case of the Mondays.

Nonstandard Derivations

No such thing as an affix
that “means” something.
Everything can be reused.

COLOR

COLOR

Basic Color Term: A color term that you can't say is some other type of color.

Red cannot be described as
dark pink.

Blue cannot be described as
deep green.

Green isn't halfway between
blue and yellow.

Lime is light green.

Mauve is a kind of purple.

Ocher is a dark yellow.

Aquamarine is halfway
between blue and green.

11 Basic Color Terms

Black, White, Red, Green,
Yellow, Blue, Brown,
Orange, Purple, Gray, Pink

**Berlin and Kay (1969):
Languages develop color
terms in a fixed order.**

Stage I: Black vs. White

Stage II: + Red

Stage III: + Green *or* Yellow

Stage IV: Both Green *and* Yellow

Stage V: + Blue

Stage VI: + Brown

Stage VII: The Rest

Stage I: Black vs. White

Stage II: + Red

Stage III: + Green *or* Yellow

Stage IV: Both Green *and* Yellow

Stage V: + Blue

Stage VI: + Brown

Stage VII: The Rest

Stage I: Black vs. White

Stage II: + Red

Stage III: + Green *or* Yellow

Stage IV: Both Green *and* Yellow

Stage V: + Blue

Stage VI: + Brown

Stage VII: The Rest

Stage IV

Black + White = Basic

Red = Maybe Basic

Green + Yellow = Derived

Stage IV

Blue = Green if lighter; black if darker.

Purple + Gray = Black, most likely.

Pink = White or red.

Orange = Yellow or red.



Green



Yellow



Green



Yellow

Голубой
goluboi



Blue

Синий
sini

Pink



Red

Red

Sources

Black, White and Red may
be basic; maybe Green or
Yellow.

Sources

Others: Names based on things that are that color—or plants that get you that color dye or ink.

Sources

Most common way to get color terms: Borrowing.

Tonight

Work on your final!

Kash by Roger Mills

sisa "to love" ~ sisa-matisa "to love one another"

leka "to argue" ~ leka-mandeka "to argue back and forth"

handa "to load" ~ handa-makanda "to load and unload cargo"

cati "to face" ~ cati-manjati "to confront"

procañ "to bargain" ~ proca-mambrocañ "to negotiate"

Twinkle, twinkle, little star,
How I wonder what you are!

The hell is “twinkle”?

What's the verb form?

What case is “little star”?

What's your version of the
(very British) expression
“How x!”

How I enjoy motoring!
How I adore toffees!
How I miss Buckfastleigh!
How I wish to be a seeeee!

Figure out what the
equivalent of that is first
before even getting to the
real content.

**What you are = That which
you are.**

What are you doing if you
have a null copula?

What do you do about “that
which”?

Is this even the best
translation for your
language?

Maybe it should be “How I
ponder your nature”?

What's “nature”?

Good luck with “wonder”!

If the whole thing is a
command, how are
commands formed in your
language?

Emerald City (2017)

Mimic me, you crude and
jarring skeletons / And
dance together, stir my dark
portent.

Emerald City (2017)

Flesh and blood cast out
their rigor mortis / Of all you
dead cold sister come
embrace / And bid farewell a
kiss the last between.

Emerald City (2017)

The lock, the key – a girl, now what's
within... / His mind undone, she'll creep
inside to look / And steal what secrets
dark and precious keep. But caution be if
bonds break weak and lie / Together they
will fall beneath the black / And madness
take their feeble hearts' desire.

“Keep Ya Head Up” 2Pac (1993)

And, uh, I know they like to beat you down a lot
When you come around the block, brothers clown a lot
But please don't cry, dry your eyes, never let up
Forgive but don't forget, girl, keep your head up

And when he tells you you ain't nothin', don't believe him
And if he can't learn to love you, you should leave him
Cause sister you don't need him

“Keep Ya Head Up” 2Pac (1993)

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And when he tells you you ain't nothin', don't believe him
And if he can't learn to love you, you should leave him
Cause sister you don't need him

Tonight!

1.PA 25: Post a picture from
or related to class on
#general or #memes!

Phonology

a p b \widehat{ps} \widehat{bz} m $\widehat{pʃ}$ $\widehat{bʒ}$ w o f v ɱ
u θ ð æ t d \widehat{ts} $\widehat{dʒ}$ s z ʃ ʒ n $\widehat{tʃ}$ $\widehat{dʒ}$
r r[ɹ] l ε ç ɲ j e k g \widehat{ks} $\widehat{gʒ}$ x y ɳ
 $\widehat{kʃ}$ $\widehat{gʒ}$ i q ħ h ?

Megdevi by David Peterson

a p b \widehat{ps} \widehat{bz} m $\widehat{pʃ}$ $\widehat{bʒ}$ w o f v ɱ
u θ ð æ t d \widehat{ts} $\widehat{dʒ}$ s z ʃ ʒ n $\widehat{tʃ}$ $\widehat{dʒ}$
r r[ɹ] l ε ç ɲ j e k g \widehat{ks} $\widehat{gʒ}$ x y ɳ
 $\widehat{kʃ}$ $\widehat{gʒ}$ i q ħ h ?

l-z-n

lezin

“ostrich”

lizejnət

“the act of being an
ostrich”

læzin

“ostrich tool/
implement which
ostriches”

lizen

“ostrich habitat”

lazon

“something that got
bit by an ostrich”

?ilzənæ

“the study of
ostriches”

læzin

“imbued of the true
essence of an
ostrich”

lōzōn

“ostrich-like”

læzɪnəd

“ostriching”

luzæn

“ostriched”

læzen

“like an ostrich
habitat”

liznə

“ostrich-colored”

ləzənə!

“Be an ostrich!”

læzʊllənə!

“Become an ostrich!”

lezni

“ostrich juice”

lozæn

“Ostrich Second”

luzen

“Ostrich Minute”

lizniks

“Ostrich Hour”

lazgo

“Ostrich Day”

lezen

“Ostrich Month”

lezen

“Ostrich Season”

lojzōn

“Ostrich Year”

lazunow

“Ostrich Decade”

melizinin

“Ostrich Century”

laɹznεθ

“Ostrich Millennium”





2000

Linguistics 5

Conlang-L

2003 Linguistics BA

2000 Linguistics 5

Conlang-L

2005	Linguistics	MA
2003	Linguistics	BA
2000	Linguistics	5

Conlang-L

2008

Self Study

2005

Linguistics MA

2003

Linguistics BA

2000

Linguistics 5

Conlang-L

2017 Professional Work

2008 Self Study

2005 Linguistics MA

2003 Linguistics BA

2000 Linguistics 5

Conlang-L



17 years → 1 course

1 course → 6 weeks

What now?

1100

Hildegard



1974

2013

One full time conlanger.

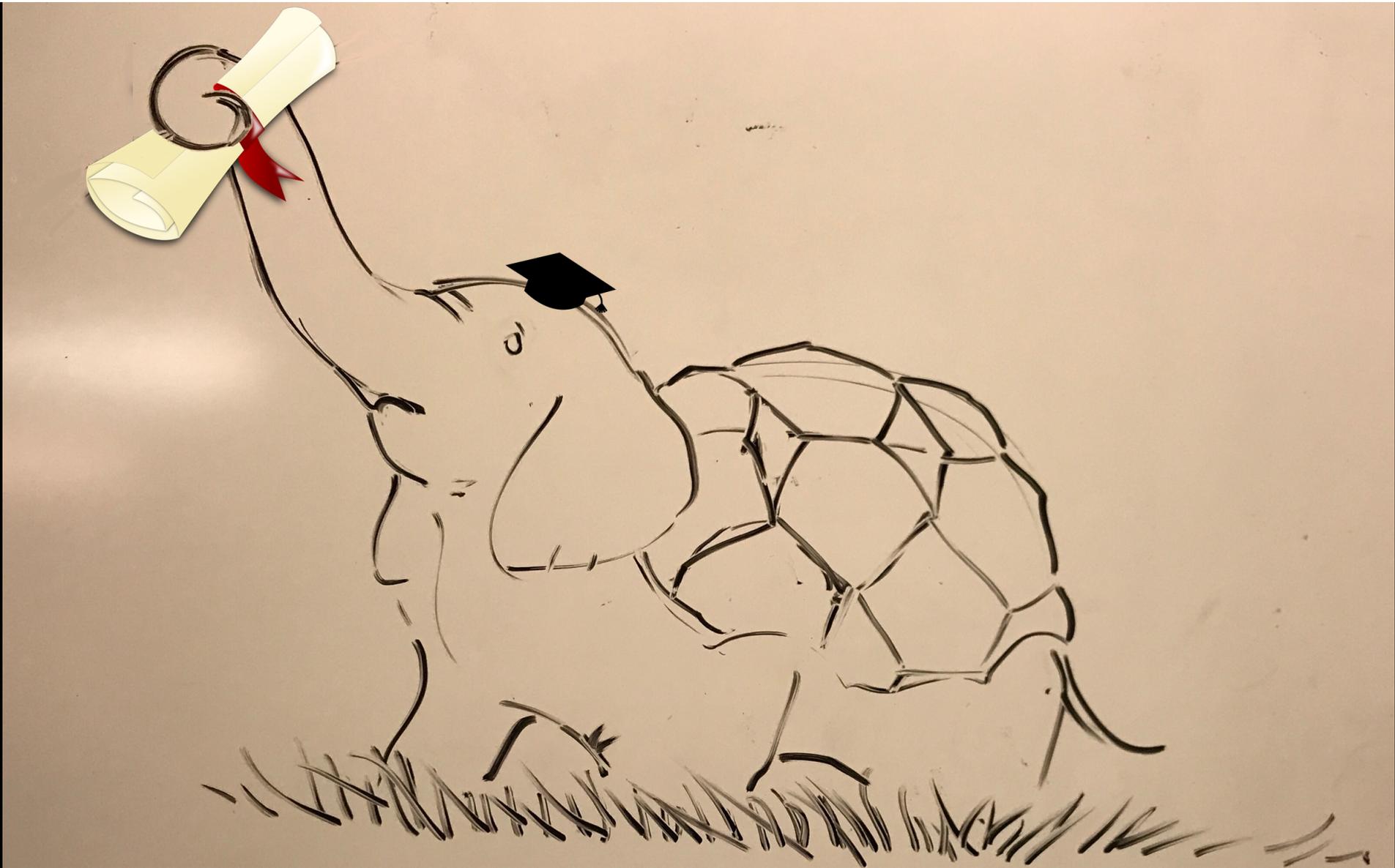
Someone gets paid.

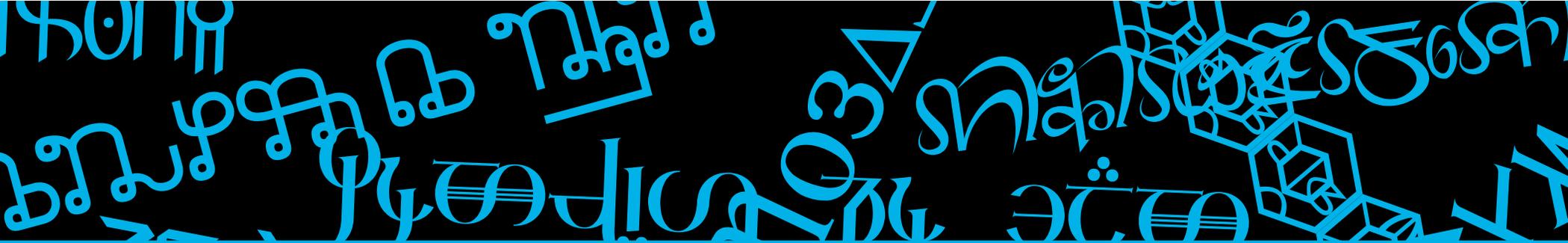
Hollywood will pay for something that has a perceived value.

In order for this to continue,
the perceived value of
conlanging must not only be
maintained, but must
increase.

More people (industry people and audience members) have to be able to discern quality conlanging from garbage.

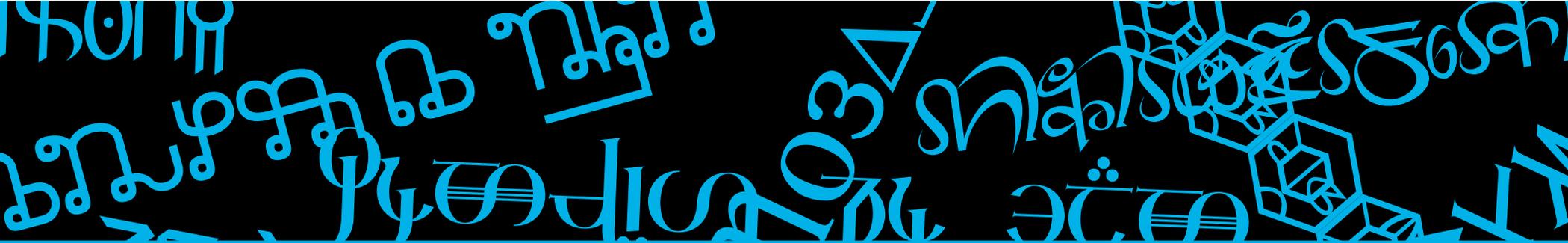
You now know!





FINAL CONLANG PROJECT





FINAL CONLANG PROJECT

