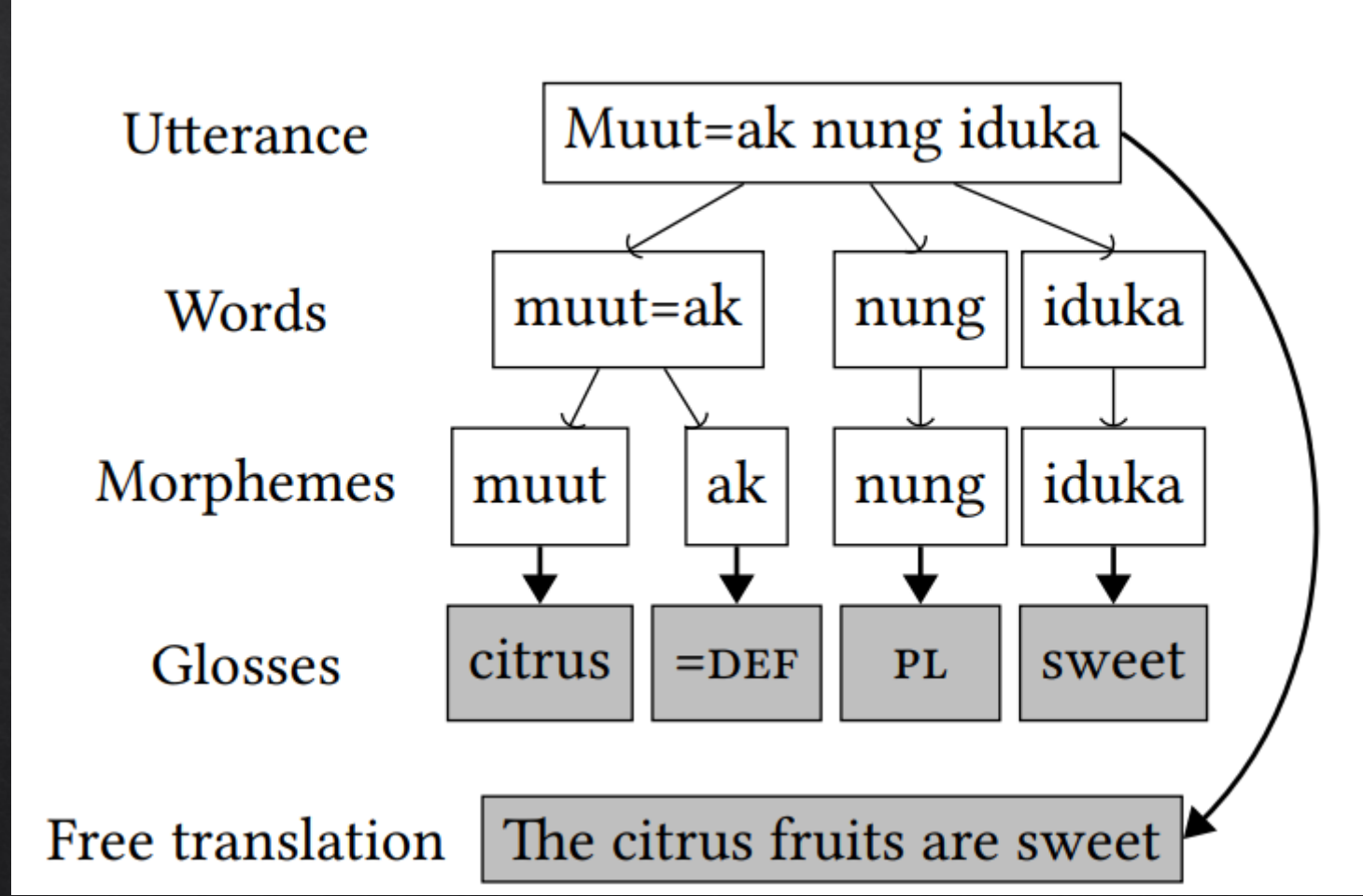# Typology

601.764

3/3/2023

Definition

Classify languages based upon their structural features

(2) Ég   hjálpa-ð-i   þeim.
1SG.NOM help-PAST-1SG 3PL.DAT
'I helped them.' [isl]

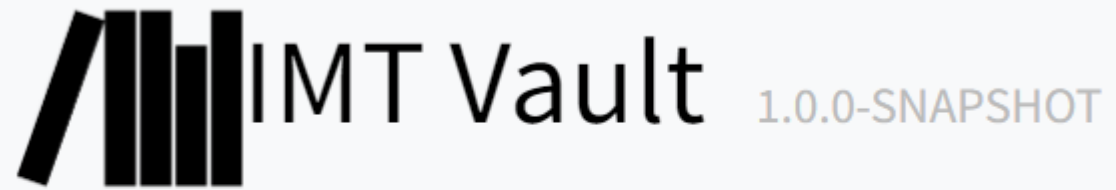Goodman et al., 2014 "Xigt: extensible interlinear glossed text for natural language processing"

Klamer et al 2017

(1) Rhoddodd yr athro   lyfr i'r   bachgen ddoe
    gave-3sg   the teacher book to-the boy   yesterday
    "The teacher gave a book to the boy yesterday" (Bailyn, 2001) [cym]

Xia et al., 2014 "Enriching ODIN"

◈ Most of these examples are from IMT Vault

◈ https://imtvault.org/

¿Voy a la biblioteca?

go.PRS.1SG to the library

Shall I come to the library [location of addressee; speaker elsewhere]? ()

Sak ri-núhwe'-s.

Sak 1SG.SUBJ/MASC.SG.OBJ-like-HAB

I like Sak. ()

Wafula a-a-yet-ang-a baa-tambi.

1.Wafula 1-PRS-help-HAB-FV 2.2-poor

Wafula usually helps the poor. ()

Pwy brynodd   t delyn?

who buy.PST.3S _ harp

Who bought a harp? ()

Prynodd   y   ddynes delyn.

buy.PST.3S the woman harp

The woman bought a harp. ()

Gwnaeth y ddynes [werthu telyn].

do.PST.3S the woman sell.INF harp

The woman sold a harp. ()

Nid	oes	neb		yn	yr	ystafell
NEG	is	no.one		in	the	room

There is no one in the room. ()

Wíyã   že   [wicá še   wayága] hĩkná [céya].

woman DET [man the see   CONJ [cry

The woman saw the man and cried. ()

Škóšobena wãží hokšína že yúda.

banana   a   boy   DET ate

The boy ate a banana (not the apple).' (preferred translation) or ()

Shi wóndoⁿ ithádi shti hóⁿdi ugíkitha ihóⁿ akʰá shti.

and both his.father too last.night 3A.was.talking.to.3P his.mother the too

And last night he was talking to both his father and his mother. ()

Watʰé zhíde, hiⁿbé ská, watháde pézhitu shénoⁿ abthiⁿ.

dress red   shoe white hat   green   that.extent 1SGA.have

I have a red dress, white shoes, and a green hat. ()

Níor cheannaigh mé teach ariamh, ach dhíol.

NEG-PAST buy I house ever but sold

I never bought this house, but sold it. ()

an ghirseach [a   ghoid na síogaí]
the girl   _ RCI stole the fairies _
the girl that the fairies stole away ()

Shíl mé goN mbeadh sé ann.

thought I PRT would.be he there

I thought that he would be there. ()

Deir sé go dtógfaidh sé an peann.

say.PRES he that take.FUT he the pen

He says that he will take the pen. ()

Martina arrabia spesso Piero.

Martina angers often   Piero

intended: 'Martina often angers Piero. ()

Hanno   invitato Marina.

have.3PL invited Marina

They invited Marina. ()

Charlotte a-a-wandiika a-ma-baluwa o-ku-singa   Rita

Charlotte nc1-pst-write aug-nc6-letter aug-nc15-exceed Rita

Charlotte wrote more letters than Rita. ()

Nazina   (luli).

1sg.dance.dist.pst (another.time)

I danced (the other day).' DISTANT PAST ()

Babilie abadde lubuto.

B.   3sg.be.REC.PST NC11.pregnant.woman

Babilie was just pregnant. ()

Maama a-wa-dde taata ssente.

1.mother 1SM-give-PFV 1.father 10.money

Mother has given father money. ()

Kato addusse   mairo biri.

K.   3sg.run.REC.PST mile   three

Kato just ran three miles. ()

Kato yadduka   mairo biri.

K.   3sg.run.DIS.PST mile   three
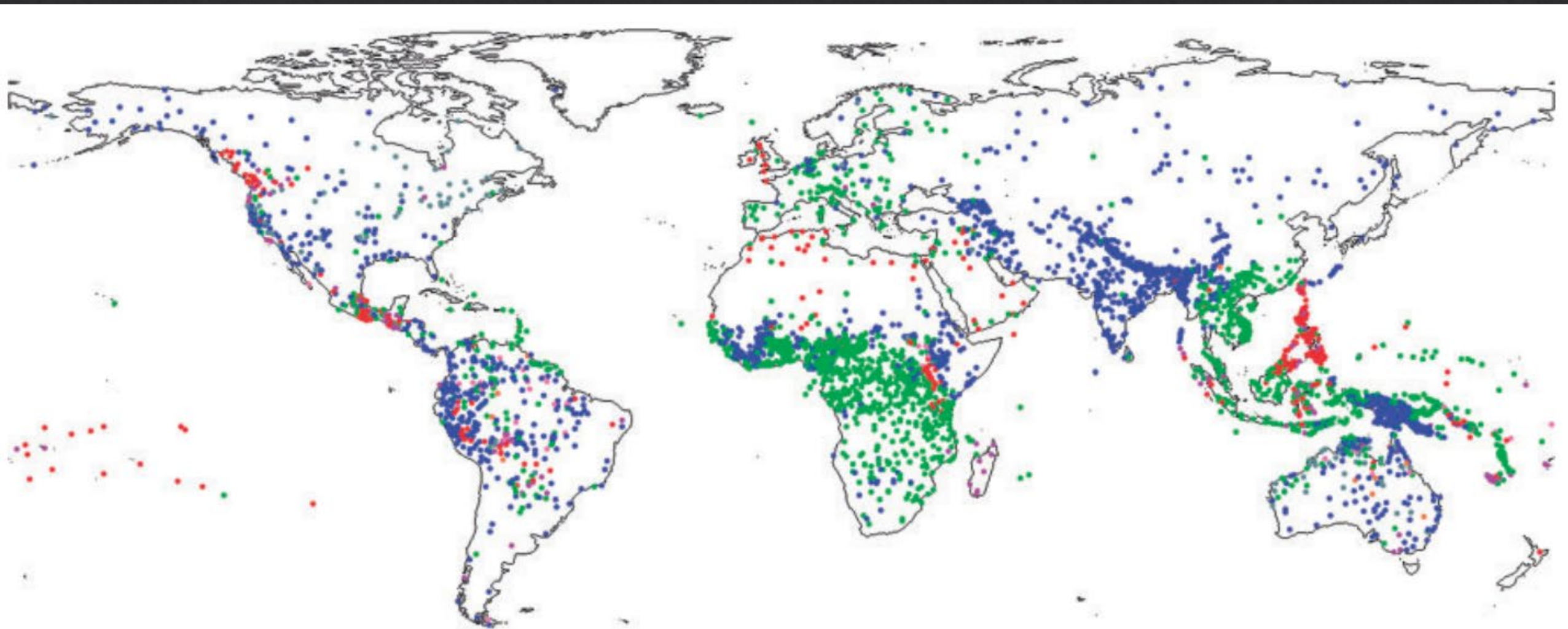
Kato ran three miles (a long time ago). ()

Word Order

- SVO
- SOV
- VSO
- VOS
- OVS
- OSV

Table 7. Raw counts of basic constituent orders in languages and families (majority value per family) across the world, adapted from Hammarström (2013)

	No. of languages		No. of families	
SOV	2,275	43.3%	239	56.6%
SVO	2,117	40.3%	55	13.0%
VSO	503	9.5%	27	6.3%
VOS	174	3.3%	15	3.5%
NODOM	124	2.3%	26	6.1%
OVS	40	0.7%	3	0.7%
OSV	19	0.3%	1	0.2%
Total datapoints	5,252		366	
No data	2,284		58	
Total	7,536		424	

Figure 2. Geographical distribution of basic constituent orders in languages across the world, adapted from Hammarström (2013). Legend: SOV blue, SVO green, VSO red, VOS purple, NODOM gray, OVS yellow, OSV orange. (Colour online)

Table 2. Numbers of languages and families (including isolates) across macro-areas

	No. of languages		No. of families	
Greater New Guinea Area	1797	28.0%	127	29.9%
South America	490	7.6%	109	25.7%
North America	558	8.7%	71	16.7%
Africa	1845	28.8%	50	11.7%
Eurasia	1423	22.2%	35	8.2%
Australia	292	4.5%	32	7.5%
	6409	100%	424	100%

Table 3. Present status of grammatical description of the world's languages. Figures computed from the bibliography of Hammarström et al. (2015)

Most extensive description		No. of lgs	
Long grammar	~300 pages and beyond	1,134	17.7%
Grammar	~150 pages	891	13.9%
Grammar sketch	~50 pages	1,602	25.0%
Phonology	A phonological description or similar	711	11.1%
Wordlist or less	A short wordlist of less	2,071	32.3%
		6,409	100%

OXFORD

Linguistic diversity and language evolution

Harald Hammarström*

Department of Language and Cognition, Max Planck Institute for Psycholinguistics, Wundtlann 1, 6500 AH Nijmegen, The Netherlands
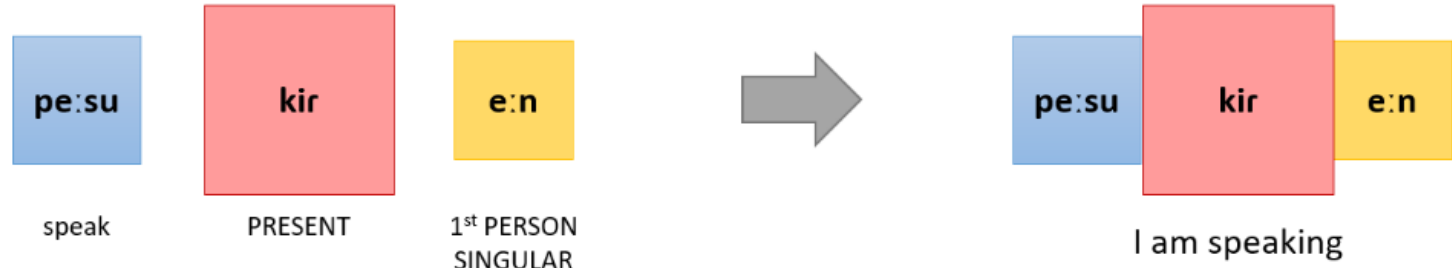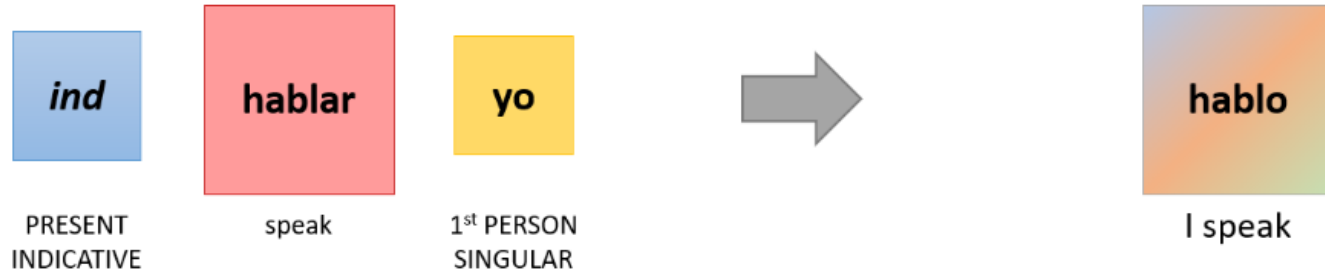
Isolating
Mandarin

měi	guó	rén	→	měi	guó	rén
America	country	person		American		

Agglutinative
Tamil

peːsu	kir	eːn	→	peːsu kir eːn
speak	PRESENT	1ST PERSON SINGULAR		I am speaking

Fusional
Spanish

ind	hablar	yo	→	hablo
PRESENT INDICATIVE	speak	1ST PERSON SINGULAR		I speak

Polysynthetic
Mohawk

s	a	hųwa	nho	tų	kw	ahs	eʔ	→	sahųwanhotųkwahseʔ
again	PAST	She/him	door	close	un	for	PERF		she opened the door for him again

Psychology of Language

Dinesh Ramoo

Figure 3.3 Example from Turkish, an Agglutinative Language [Image description]

Psychology of Language

Dinesh Ramoo

Inflectional Morphology

ὁ θεός (ho theós) "the god" (singular)

τὼ θεώ (tὼ theố) "the two gods" (dual)

οἱ θεοί (hoi theoí) "the gods" (plural)

Ancient Greek (Weir, 1920)

Inuktitut	English translations
matu	door
matu**uk**	doors (two)
matu**it**	doors (three or more)
nuvuja	cloud
nuvuja**ak**	clouds (two)
nuvuja**it**	clouds (three or more)
qarasaujaq	computer
qarasauja**ak**	computers (two)
qarasauja**it**	computers (three or more)

Singular, Dual and Plural Numbers in Inuktitut

Anderson 2018

Psychology of Language

Dinesh Ramoo

Inflectional Morphology

Inflectional Morphology

◈ Add Grammatical Information

◈ Retain Core Meaning and Grammar Category

◈ Walk → Walked … Tense

◈ Dog → Dogs … Plural

Psychology of Language

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Derivational Morphology

- ❖ Word Category often Changes
- ❖ Compute → Computer
- ❖ Write → Writer

Psychology of Language

Dinesh Ramoo

Arabic	Transliteration	Hebrew	Transliteration	Translation
كتب	**kataba**	כתב	**kata̱b**	'he wrote'
كَتَبْتُ	**katab**tu	כתבתי	**kā̱ta̱b**ti	'I wrote'
كاتب	**kā**t**ib**	כותב	**k**ote̱**b**	'writer'
أكتب	ʾa**ktab**a	הכתיב	hi**ktiḇ**	'he dictated'
مكتب	ma**ktab**	מכתב	mi**kta̱b**	'office' (Arabic), 'letter' (Hebrew)
استكتب	ista**ktab**a	התכתב	hit**katteḇ**	'he made (them) write' (Arabic), 'he corresponded' (Hebrew)

Nonconcatenative Morphology in Arabic and Hebrew

IMTVault: Extracting and Enriching Low-resource Language Interlinear Glossed Text from Grammatical Descriptions and Typological Survey Articles

Sebastian Nordhoff, Thomas Krämer

Language Science Press, gesis

	Class	criteria		example	# lgs	%
		unlabeled data	labeled data			
5	winners	good	good	Spanish	7	0.28
4	underdogs	good	insufficient	Russian	18	1.07
3	rising stars	good	none	Indonesian	28	4.42
2	hopefuls	?	smallish sets	Zulu	19	0.36
1	scraping-bys	smallish	none	Fijian	222	5.49
0	left-behinds	none	none	Warlpiri	2 191	88.38