

Lister Grimes positional analysis

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Frank Lister's algorithm

List *right part* (rp) of each morpheme; find null right parts.

Raw data	⇒	morph	rp	⇒	morph	rp	p	m
A B C D		A	B C D		A	B C D	0	E
D E		B	C D X		B	C D X		
C E		C	D E		C	D		
X D		D	E		D			
B X		E			X	D		
		X	D					

morph	rp	p	m	⇒	morph	rp	p	m	⇒	p	m
A	B C	0	E		A	B	0	E		0	E
B	C X	-1	D		B		-1	D		-1	D
C							-2	C X		-2	C X
X										-3	B
										-4	A

Wrinkles

1 Inconsistent data

...-A- ...-B--A- ...-X- ...
...-B- ...-A--X- ...-B- ...
	...-B- ...-A- ...

2 Algorithm blocks in a state in which no morpheme has a null rp.

Homophony

Flexibility in morpheme order

3 A morpheme actually spans two position class positions: Look at both lp and rp.

Example: Gee Togo

	Example	Size	Gloss
a.	biʔ-fu-ni	3	'I came'
b.	bai-fu-ni	3	'I went'
c.	dos-fu-me	3	'you(sg) ran.'
d.	meʔ-fu-mi	3	'they spoke'
e.	bai-te-mi-leʔ	4	'will they go?'
f.	biʔ-paʔ-ni-do	4	'I am not coming'
g.	dos-fu-ni-risa	4	'I ran first'
h.	bai-paʔ-me-duʔa	4	'you(sg) only are going'
i.	dos-te-mi-risa-leʔ	5	'will they run first?'
j.	bai-fu-ni-tufi	4	'I went suddenly'
k.	meʔ-te-mi-risa-do-leʔ	6	'will they not speak first?'
l.	biʔ-te-me-duʔa-do	5	'you(sg) only will not come'
m.	meʔ-paʔ-mi-tufi-leʔ	5	'are they suddenly speaking?'

Gee position class: Version 1

	ROOT	TNS	PNUM	FIRST	SUDD	ONLY	NEG	QUE
k.	me?	te	mi	risa			do	le?
i.	dos	te	mi	risa				le?
l.	bi?	te	me			du?a	do	
m.	me?	pa?	mi		tufi			le?
e.	bai	te	mi					le?
f.	bi?	pa?	ni				do	
g.	dos	fu	ni	risa				
h.	bai	pa?	me			du?a		
j.	bai	fu	ni		tufi			
a.	bi?	fu	ni					
b.	bai	fu	ni					
c.	dos	fu	me					
d.	me?	fu	mi					

Lister/Grimes Chart

X row: Morphemes occurring to X's right (Nida 1949, Grimes 1967)

	te	paʔ	ʃu	mi	ni	me	risa	duʔa	tufi	do	leʔ
te				k	l	k	l		k	k	
paʔ				m	f	h		h	m	f	
ʃu				d	j	c	g		j		
mi							i		m	k	k
ni							g		j	f	
me								h		l	
risa										k	i
duʔa										l	
tufi											m
do											k
leʔ											

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	te	paʔ	ʃu	mi	ni	me	risa	duʔa	tufi	do	leʔ
te				k	l	k	l		k	k	
paʔ				m	f	h		h	m	f	
ʃu				d	j	c	g		j		
mi							i		m	k	k
ni							g		j	f	
me								h		l	
risa										k	i
duʔa										l	
tufi											m
do											k
leʔ											

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te				k	l	k	l		k	k	
paʔ				m	f	h		h	m	f	
fu				d	j	c	g		j		
mi							i		m	k	k
ni							g		j	f	
me								h		l	
risa										k	i
duʔa										l	
tufi											m
do											k
leʔ											

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te				k	l	k	l		k	k	
paʔ				m	f	h		h	m	f	
fu				d	j	c	g		j		
mi							i		m	k	k
ni							g		j	f	
me								h		l	
risa										k	i
duʔa										l	
tufi											m
do											k
leʔ											

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	te	paʔ	fu	mi	ni	me	risa	duʔa	tufi	do	leʔ
te				k	l	k	l		k	k	
paʔ				m	f	h		h	m	f	
fu				d	j	c	g		j		
mi							i		m	k	k
ni							g		j	f	
me								h		l	
risa										k	i
duʔa										l	
tufi											m
do											k
leʔ											

Positional analysis: Grimes

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TABLE 3. HUICHOLO VERB PREFIX CONNECTIVITY MATRIX, PARTITIONED TO FACILITATE REFERENCE

	?	?				s				z
	a	e	kkk	nnn	tttt	tt	ww	zz	z	z
	?c	?c	aaakkmm	neennnn	pp	aaaa	tii	?aa	wyyyeek	zz
	aa	eeeii	123eu	aa123i	ua	e	arm123	e12uu12	ea	eu12a
a	0	1	0	0	0	0	0	0	0	0
?a	0	0	0	0	0	0	0	0	0	0
?aci	1	0	0	1	1	1	1	1	1	1
e	0	1	0	0	0	0	0	0	0	0
?e	1	0	0	0	0	0	0	0	0	0
?eci	1	0	0	1	1	1	1	1	1	1
i	0	0	0	0	0	0	0	0	0	0
ka ₁	0	0	0	0	0	0	0	0	0	0
ka ₂	1	1	0	1	0	0	1	1	1	0
ka ₃	0	0	0	0	0	0	0	0	0	0
ke	1	1	0	1	0	0	1	1	0	1
ku	0	0	0	0	0	0	0	0	0	0
ma	1	0	0	1	0	0	1	1	0	0
ma	1	1	0	1	0	0	1	1	1	0
na	0	1	0	0	0	0	0	0	0	0
ne ₁	1	0	0	1	0	0	1	1	1	0
ne ₂	1	0	0	1	0	0	0	1	0	0
ne ₃	0	0	0	0	0	0	0	0	0	0
ni	1	1	0	1	0	0	0	1	1	0
nu	0	1	0	0	0	0	0	0	0	0
na	0	0	0	0	0	0	0	0	0	0
pe	1	1	0	1	0	0	1	1	1	0
pa	1	1	0	1	0	0	1	1	1	0
r	1	0	0	0	0	0	0	0	0	0
stem	0	0	0	0	0	0	0	0	0	0
ta ₁	1	0	0	1	0	0	0	1	1	0

Grimes, Joseph E. 1967.

Positional analysis.

Language 43(2):437–444.

Nida, Eugene A. 1949.

Morphology: the descriptive analysis of words.

Ann Arbor: University of Michigan.