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	D		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

   $$\ldots\text{-A-}\ldots\text{-B-}\ldots \qquad \ldots\text{-A-}\ldots\text{-X-}\ldots$$
   $$\ldots\text{-B-}\ldots\text{-A-}\ldots \qquad \ldots\text{-X-}\ldots\text{-B-}\ldots$$
   $$\ldots\text{-B-}\ldots\text{-A-}\ldots$$

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-ʃu-ni	3	'I came'
b.	bai-ʃu-ni	3	'I went'
c.	dos-ʃu-me	3	'you(sg) ran.'
d.	meʔ-ʃu-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-ʃu-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-ʃu-ni-tuʃi	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-tuʃi-leʔ	5	'are they suddenly speaking?'

Gee position class: Version 1

	ROOT	TNS	PNUM	FIRST	SUDD	ONLY	NEG	QUE
k.	meʔ	te	mi	risa			do	leʔ
i.	dos	te	mi	risa				leʔ
l.	biʔ	te	me			duʔa	do	
m.	meʔ	paʔ	mi		tuʃi			leʔ
e.	bai	te	mi					leʔ
f.	biʔ	paʔ	ni				do	
g.	dos	ʃu	ni	risa				
h.	bai	paʔ	me			duʔa		
j.	bai	ʃu	ni		tuʃi			
a.	biʔ	ʃu	ni					
b.	bai	ʃu	ni					
c.	dos	ʃu	me					
d.	meʔ	ʃu	mi					

Lister/Grimes Chart

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

	te	paʔ	ʃu	mi	ni	me	risa	duʔa	tuʃi	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	
tuʃi	■	■	■	■	■	■	■	■	■		m
do	■	■	■	■	■	■	■	■	■	■	k
leʔ	■	■	■	■	■	■	■	■	■	■	■

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

	te	paʔ	ʃu	mi	ni	me	risa	duʔa	tuʃi	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	
tuʃi	▦	▦	▦	▦	▦	▦	▦	▦	▦		m
do	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	k
leʔ	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦

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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	
tuʃi	▦	▦	▦	▦	▦	▦	▦	▦	▦		m
do	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	k
leʔ	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦

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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	
tuʃi	▦	▦	▦	▦	▦	▦	■	■	■		m
do	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	k
leʔ	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦	▦

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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	
tuʃi	■	■	■	■	■	■	■	■	■		m
do	■	■	■	■	■	■	■	■	■	■	k
leʔ	■	■	■	■	■	■	■	■	■	■	■

Positional analysis: Grimes

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.