Prosodic Morphology

Jochen Trommer
jtrommer@uni-leipzig.de

University of Leipzig
Department of Linguistics

Concatenative Approaches to
Nonconcatenative Morphology
EGG 2008

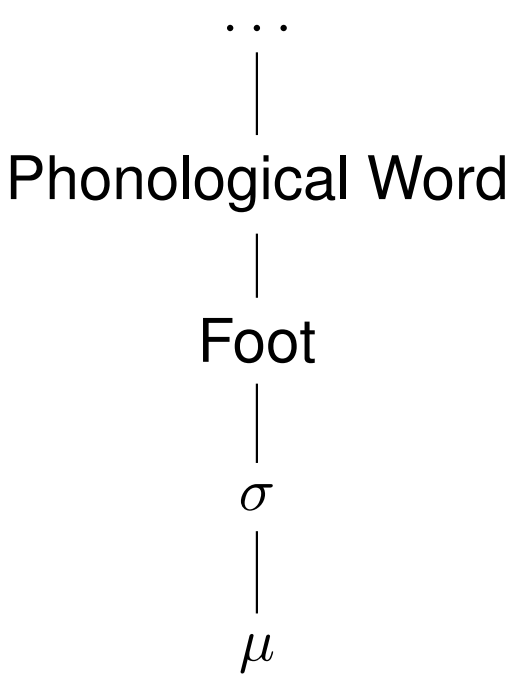
Central Claim of Marantz (1982)

Templates are arbitrary strings of skeletal positions

Central Claim of Prosodic Morphology (McCarthy & Prince, 1986)

Templates are units of the prosodic hierarchy

The Prosodic Hierarchy



Association Algorithm

Marantz (1982)

- Associate units of timing tier and melody tier
  1:1 from left to right
  until you run out of segments or timing units

McCarthy & Prince (1986)

- Associate segments with the prosodic template
  one after the other from left to right
  as long as the phonotactics of the language allow it

Marantz (1982) vs. **McCarthy & Prince (1986)**: Ilokano

RED = CCVC

basa	⇒	ag-bas-basa	‘be reading’
adal	⇒	ag-ad-adal	‘be studying’
takder	⇒	ag-tak-takder	be standing
trabaho	⇒	ag-trab-trabaho	‘be working’

RED = σ

Maximal Syllable = CCVC

Problems of the Marantz-System

- predicts non-existing templates
- must count more than 2
- leads to redundant recapitulation of language phonotactics

Existing Templates: Ilokano

RED = CCVC

basa	⇒	ag-bas-basa	‘be reading’
adal	⇒	ag-ad-adal	‘be studying’
takder	⇒	ag-tak-takder	be standing
trabaho	⇒	ag-trab-trabaho	‘be working’

RED = σ

Non-existing Templates – XXX-Reduplication

RED = XXX

badupi	⇒	bad-badupi
bladupi	⇒	bla-badupi
adupi	⇒	adu-adupi

Implicit Assumption: The CV-Theory of timing is insufficient for phonology (e.g. to account for compensatory lengthening) and must be replaced by the X-slot Theory (or mora theory)

The Number-2-Problem

Conceptual Assumption: Language never counts more than 2

- Phrases have maximally 2 constituents
- Syllables have maximally two moras
- Feet have maximally 2 syllables

The Marantz system must count beyond 2, Prosodic Morphology not

- **Ilokano Reduplication:** CCVC = 1 σ
- **Arabic Verb Template:** CVCCVC = 2 σ

Templates and Phonotactics

"It is a stable empirical finding that templates imitate - up to extrametricality - the prosodic structure of the language at hand. There is no Arabic template CVCCCVC; correlatively, the syllabification of the language disallows triconsonantal clusters. Segmental theory, however, cannot derive this result."
(McCarthy & Prince, 1986:4)

Possible Templates

- Specific syllable types
- Specific foot types
- Specific Prosodic Word Types

Possible Syllable Templates

- A syllable: σ
- A heavy syllable: $\sigma_{\mu\mu}$
- A light syllable: σ_{μ}
- A minimal syllable: CV

The Reduplicative Template in Ilokano

σ

Ilokano: Reduplicative Template = σ

basa	$\Rightarrow$	ag-bas-basa	‘be reading’
adal	$\Rightarrow$	ag-ad-adal	‘be studying’
takder	$\Rightarrow$	ag-tak-takder	be standing
trabaho	$\Rightarrow$	ag-trab-trabaho	‘be working’

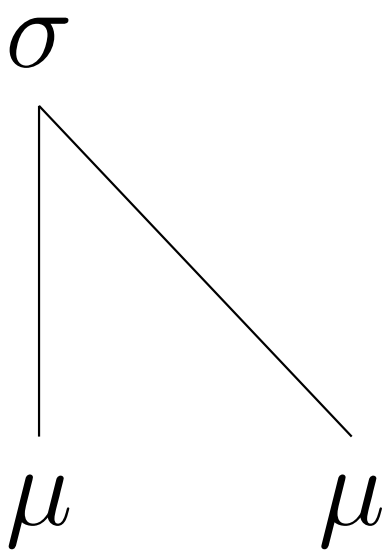
The Reduplicative Template in Gokana

Gokana: Reduplicative Template = σ_μ

Base	Reduplicated	
dɔ	**dɔ-**dɔ	‘fall’
darà	**da-**darà	‘pick up’
pi:ga	**pi-**pi:ga	‘try’

(Gerundive Formation; Hyman, 1982)

Reduplicative Template in Mokilese



Mokilese: Reduplicative Template = $\sigma_{\mu\mu}$

	redupliziert	
pɔdɔk	**pɔd-** pɔdɔk	‘plant’
mwiŋe	**mwiŋ-** mwiŋe	‘eat’
kasɔ	**kas-** kasɔ	‘throw’
poki	**pok-** poki	‘beat’

Satisfaction Condition

All elements in a template are obligatorily satisfied

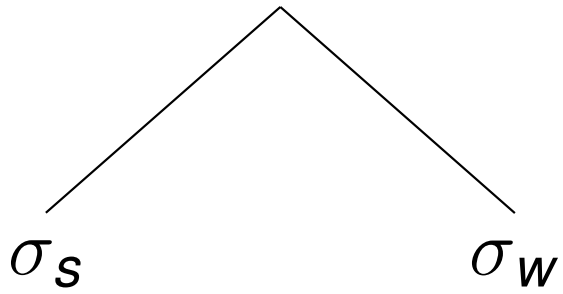
Mokilese and the Satisfaction Condition

	redupliziert	
pɔdɔk	**pɔd-** pɔdɔk	‘plant’
mwiŋe	**mwiŋ-** mwiŋe	‘eat’
kasɔ	**kas-** kasɔ	‘throw’
poki	**pok-** poki	‘beat’

sɔ:rɔk	**sɔ:-**sɔ:rɔk	‘tear’
tʃa:k	**tʃa:-** tʃa:k	‘bend’

If it is impossible to satisfy the $\sigma_{\mu\mu}$-Template by reduplication it is satisfied by lengthening

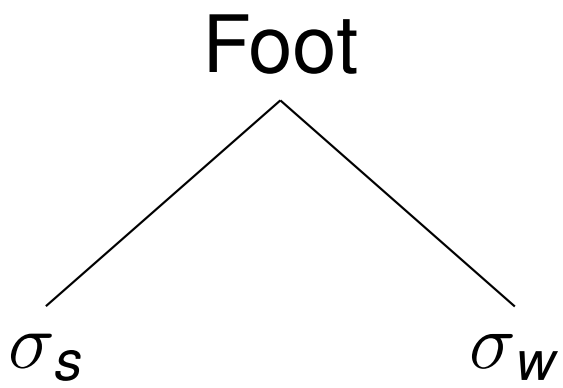
Diyari

Reduplicative Template	=	Foot
Foot	=	Foot 

Diyari: Reduplicative Template = Foot = Foot$_{\sigma\sigma}$

	redupliziert	
wila	**wila-**wila	‘woman’
kanku	**kanku-**kanku	‘boy’
kuɭkuŋa	**kuɭku-**kuɭkuŋa	‘jump’
tʲilparku	**tʲilpa-** tʲilparku	‘bird’
ŋankanti	**ŋanka-**ŋankanti	‘catfish’

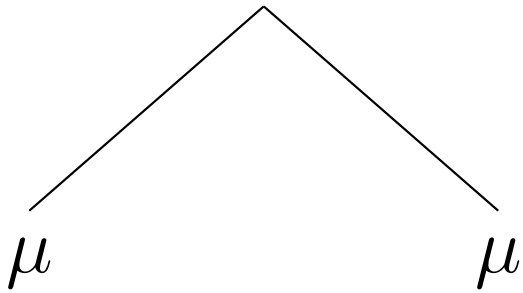
Alternative Analysis for Diyari

Reduplicative Template	=	Minimal PWord
Minimal PWord	=	1 Foot
Foot	=	

Diyari: Evidence for the PWord Analysis

- The reduplicant shows the stress pattern of an independent phonological word
- Just as in single PWords
  no final consonant is allowed in the reduplicant

Lardil

Reduplicative Template	=	Foot
Foot	=	Foot 

Lardil: Reduplicative Template = Foot$_{\mu\mu}$

Root	**Simple**	**Reduplicated**	
/keleth/	kele	**kele-**kele	‘cut’
/kelith/	keli	**keli-**keli	‘jump’
/parelith/	pareli	**parel-**pareli	‘gather’
/lath/	latha	**la:-**la	‘spear’
/neth/	netha	**ne:-**ne	‘strike’
/ŋaalith/	ŋaali	**ŋa:-**la:li	‘thirst’