Vokal(-harmoni)e

Jochen Trommer Gerald Heusing
{heusing,jtrommer}@uni-leipzig.de

Universität Leipzig

Die Phonologie der atlantischen Sprachen – SS 2006

Wolof Vowel Inventory

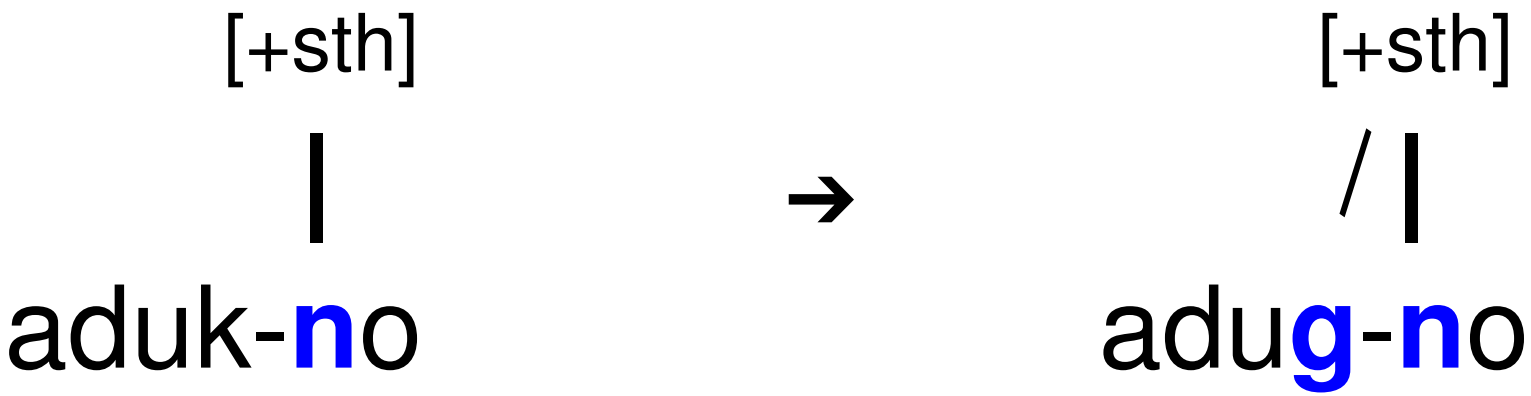
		front		back
high	advanced	i		u
	retracted			
mid	advanced	e		o
	retracted	ɛ		ɔ
low	advanced		ə	
	retracted		a	

Wolof: Harmony of non-high Vowels

	+ATR		–ATR
gən-**e**	‘be better in’	x**a**m-**ɛ**	‘know in’
r**e:**r-**e**	‘be lost in’	d**ɛ**m-**ɛ**	‘go with’
d**o:**r-**e**	‘hit with ’	x**ɔ**l-**ɛ**	‘look with’

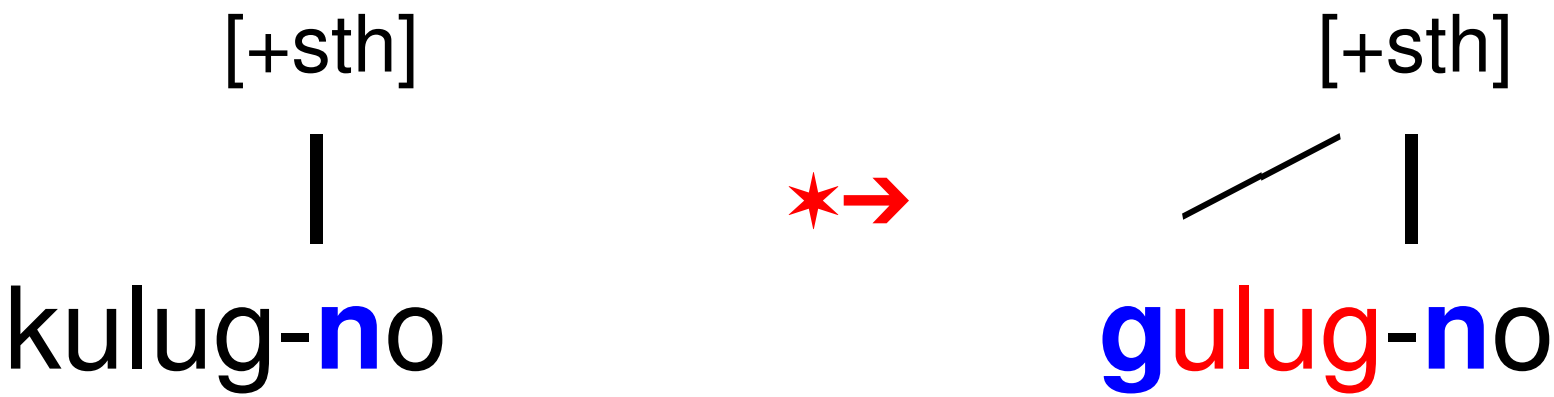
Phonology is Local: Assimilation

“die/das N”	[tuga**d**-i]	[buga**t**-i]	[kulu**g**-i]	[adu**k**-i]
“mein(e) N”	[tuga**d**-no]	[buga**d**-no]	[kulu**g**-no]	[adu**g**-no]
	“Beere”	“Fenster”	“Harfe”	“Last”



Phonology is Local: Assimilation

“die/das N”	[tuga**d**-i]	[buga**t**-i]	[kulu**g**-i]	[adu**k**-i]
“mein(e) N”	[tuga**d**-no]	[buga**d**-no]	[kulu**g**-no]	[adu**g**-no]
	“Beere”	“Fenster”	“Harfe”	“Last”



Vowel Harmony is Non-Local

+ATR		–ATR	
gən-**e**	‘be better in’	x**a**m-**ɛ**	‘know in’
r**e:**r-**e**	‘be lost in’	d**ɛ**m-**ɛ**	‘go with’
d**o:**r-**e**	‘hit with ’	x**ɔ**l-**ɛ**	‘look with’

[+ATR]

|

d**o:**r-ɛ

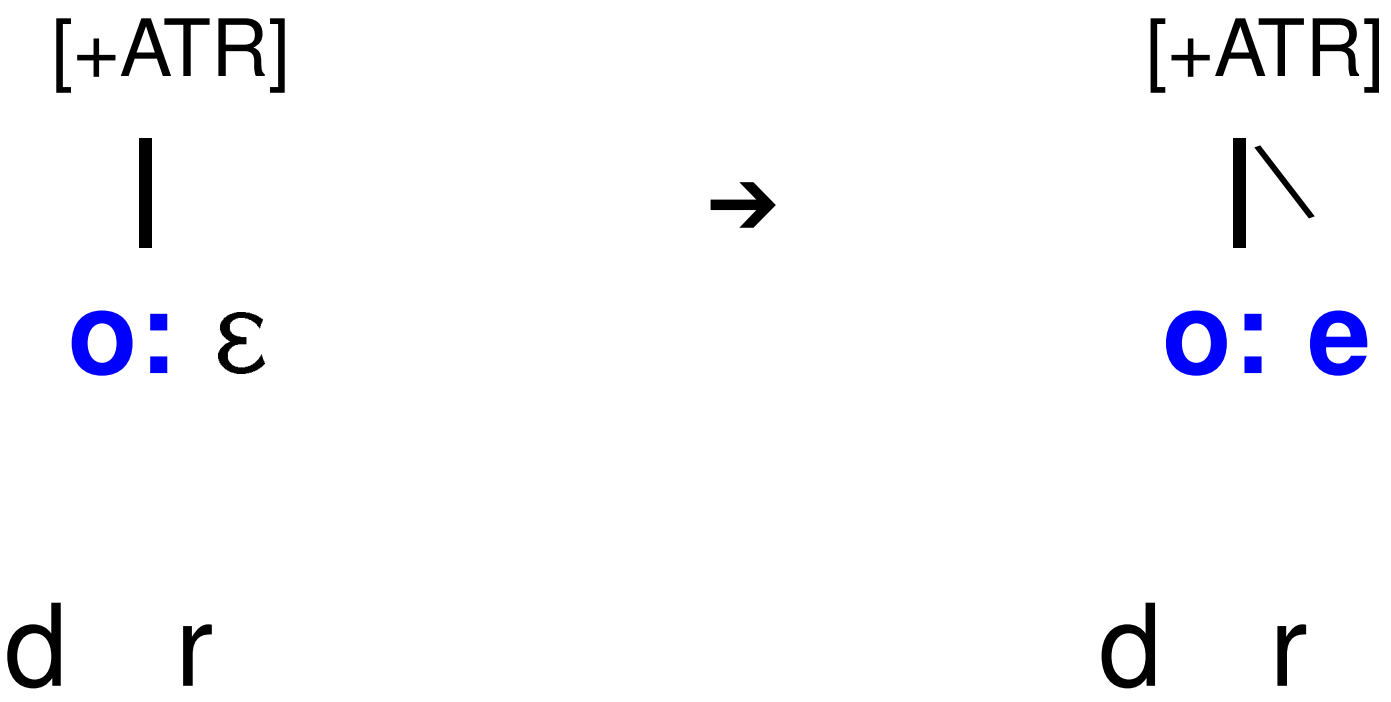
→

[+ATR]

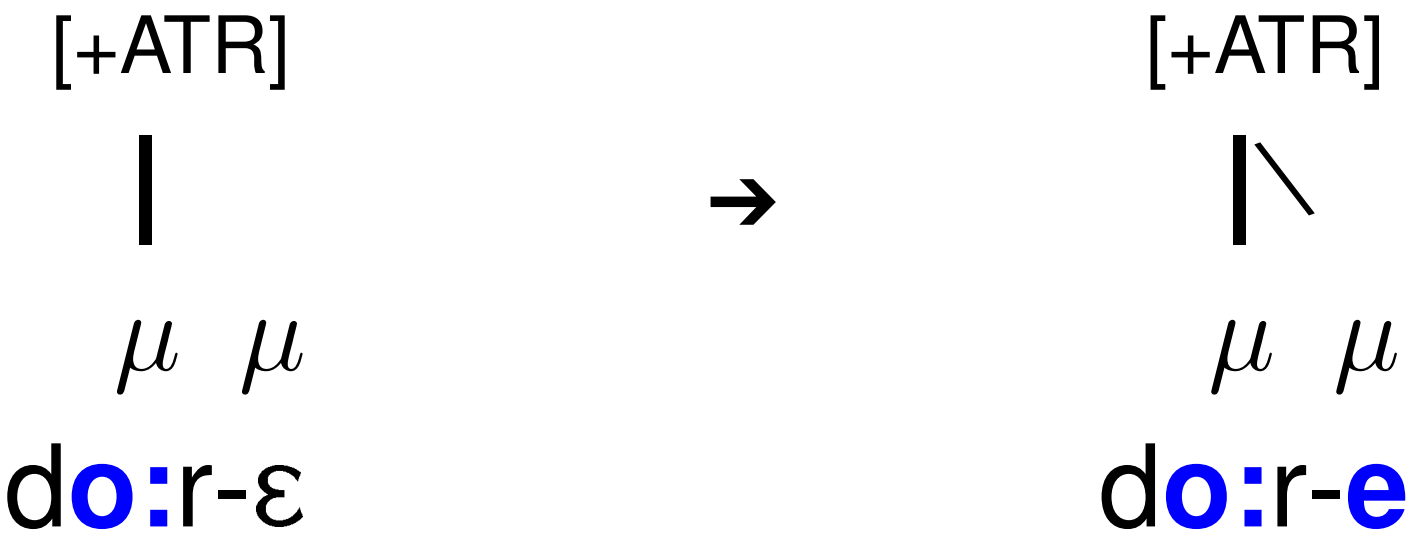
|\

d**o:**r-**e**

Autosegmentale Phonologie: Tier-Lokalität



Autosegmentale Phonologie: Prosodische Lokalität



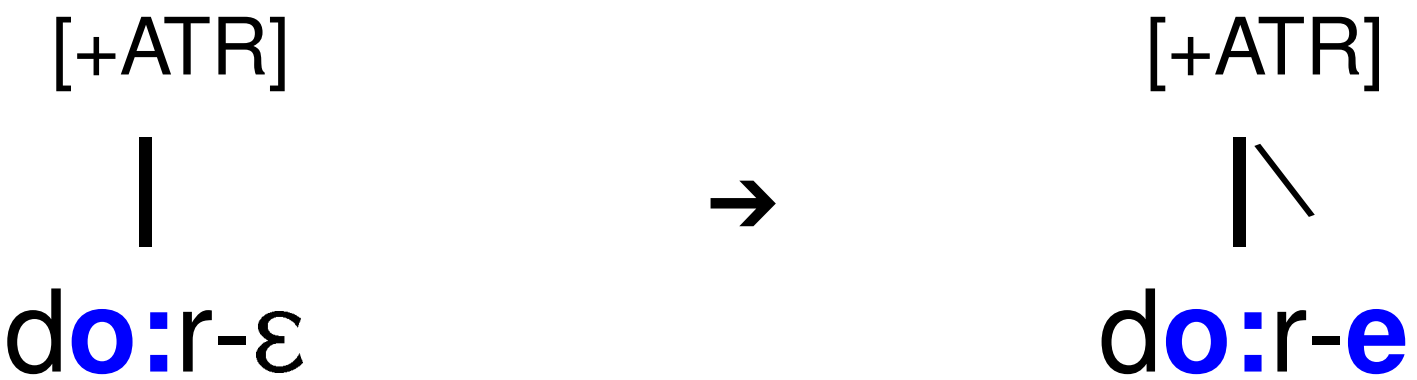
Vowel-Harmony as Spreading

Spreading is either

- Left-to Right
- Iterative or Noniterative

Wolof: Left-to-Right Spreading

+ATR		–ATR	
gən-**e**	‘be better in’	x**a**m-**ɛ**	‘know in’
r**e:**r-**e**	‘be lost in’	d**ɛ**m-**ɛ**	‘go with’
d**o:**r-**e**	‘hit with ’	x**ɔ**l-**ɛ**	‘look with’



Fula: Right-to-Left Spreading

+ATR		**–ATR**
s**o**f-r**u**	‘chick’	c**ɔ**f-**ɔ**n
s**e**r-d**u**	‘rifle butt’	c**ɛ**r-k**ɔ**n
mb**ee**l-**u**	‘shadow’	mb**ɛɛ**l-**ɔ**n
p**ee**c-**i**	‘slits’	p**ɛɛ**c-**ɔ**n
b**ee**l-**i**	‘puddles’	mb**ɛɛ**l-**ɔ**n
d**o**g-**oo**-r**uu**	‘runner’	d**ɔ**g-**ɔ**-w**ɔ**n
l**o**t-**oo**-r**uu**	‘runner’	l**ɔ**t-**ɔ**-w**ɔ**n

Non-Iterative Spreading : Veneto Italian

vedo	te vidi	‘I see/you see’
coro	te curi	‘I run/you run’
tornevo	tornivi	‘I return/return!’
benedeto	benediti	‘blessed masc. sg./pl.’
moroso	morusi	‘lover masc. sg./pl.’

Iterative Spreading : Fula

+ATR		**–ATR**
s**o**f-r**u**	‘chick’	c**ɔ**f-**ɔ**n
s**e**r-d**u**	‘rifle butt’	c**ɛ**r-k**ɔ**n
mb**ee**l-**u**	‘shadow’	mb**ɛɛ**l-**ɔ**n
p**ee**c-**i**	‘slits’	p**ɛɛ**c-**ɔ**n
b**ee**l-**i**	‘puddles’	mb**ɛɛ**l-**ɔ**n
d**o**g-**oo**-r**uu**	‘runner’	d**ɔ**g-**ɔ**-w**ɔ**n
l**o**t-**oo**-r**uu**	‘runner’	l**ɔ**t-**ɔ**-w**ɔ**n

Transparente Vokale: Hohe Vokale in Wolof

rɛɛr-ɔn	‘had dinner’
reer-on	‘was lost’
gis-e	‘to see in’
su:l-e	‘to bury with’
tɛɛr-uw-ɔn	‘welcomed’
tɛk-ki-lɛɛn	‘untie!’

Wolof Vowel Inventory

		front		back
high	advanced	i		u
	retracted			
mid	advanced	e		o
	retracted	ɛ		ɔ
low	advanced		ə	
	retracted		a	

Solution 1:

Vowel Harmony sees only vowels
which are contrastively specified for the relevant feature
(Halle, Vaux & Wolfe, 2000)

Wolof Contrastive Specification

		front		back
high		i		u
mid	advanced	e		o
	retracted	ɛ		ɔ
low	advanced		ə	
	retracted		a	

tɛɛr-uw-ɔn

Solution 2: Derivational Opacity

1. ʊ → u
2. ATR-Harmony

tɛɛr-uw-on

↓

tɛɛr-ʊw-ɔn

↓

tɛɛr-uw-ɔn

Opake Vokale: Wolof a:

xa: rɛ	‘to wait in’
ja:yl-ɛ	‘to help sell’
do: ra: t-ɛ	to hit usually
genna:: l-ɛ	to go out also

Possible Solution:

Underspecification:

rɛɛr-ɔn	‘had dinner’
reer-on	‘was lost’

Full Specification:

xa: rɛ	‘to wait in’
ja:yl-ɛ	‘to help sell’
do: ra: t-ɛ	to hit usually

A Different View: Optimality Theory

Input: rɛɛr-on

	S-Identity	IO-Identity
☞ a. rɛɛr-ɔn		*
b. rɛɛr-on	*!	

Input: rɛɛr-on

	S-Identity	IO-Identity
☞ a. rɛɛr-ɔn		*
b. rɛɛr-on	*!	
☞ c. reer-on		*

Affix vs. Root Faithfulness

Input: rɛɛr-on

	S-Identity	IO-Identity$_{\text{Root}}$	IO-Identity$_{\text{Affix}}$
☞ a. rɛɛr-ɔn			*
b. rɛɛr-on	*!		
c. reer-on		*!	

Reversed Ranking

Input: rɛɛr-on

	S-Identity	IO-Identity$_{\text{Affix}}$	IO-Identity$_{\text{Root}}$
a. rɛɛr-ɔn		*!	
b. rɛɛr-on	*!		
☞ c. reer-on			*