24.961   Stress-4   Peak Prominence systems

[1]. In various languages the inherent weight of a syllable contributes to its prominence. Often there is more than a binary (heavy vs. light) distinction. In case of culminativity, there can be complex interactions with edgemost: ties resolved by edge orientation. Will it be consistent through all levels of weight? Nonfinality may also play a role as well as certain window restrictions.

[2]. Kelkhar's Hindi (Prince & Smolensky 1993): stress rightmost heaviest syllable; in case of tie, stress rightmost nonfinal heaviest:

- weight hierarchy: CVVC (S) > CVV, CVC (H) > CV (L)

ka:rí:gari:	'craftsmanship'	H > L
só:xjaba:ni:	'talkative'	S > H,L
ré:zga:ri:	'small change'	S > H

- ties: samíti   'committee'
  qísmat   'fortune'
  ro:zá:na: 'daily'
  ró:zga:r   'employment'
  a:smá:nja:h   'highly placed'

- nonfinality blocked

  kidhár   'which way'
  rupiá: 'rupee'
  janá:b   'sir'
  asbá:b   'goods'
  musalmá:n   'Muslim'
  inqilá:b   'revolution'

- analysis

  Peak-Prominence >> Nonfinality >> Rightmost
  Peak Prominence: *'L >> *'H >> *'S

- exemplification

  Ties: Rightmost >> Leftmost: samíti

/LLL/	*'L	Non-Fin	Rightmost	Leftmost
'LLL	*		**!	
->L'LL	*		*	*
L'LL	*	*!		**

  Peak-Prom overrides Non-Finality: musalmáan

/LHS/	*'L	*'H	*'S	Non-Fin
'LHS	*!			
L'HS		*!		
LH'S			*	*

1

[3]. **Kashmiri** (PPG, 618)

- Weight hierarchy: CV: (H) > CVC (C) > CV (L)

masrá:wun	H > C
zitó:vuh	H > L
yunivársiti	C > L

- ties: mahá:ra:zi   Non-Fin: nóyid
        bagándarladin   sála:m
                                           bákhcanha:r

        ardonó:ri:sor
        sírinagar

- analysis: Nonfinality >> Peak Prom >> Leftmost

[4]. **Pulaar** (Niang 1993)

- syllable types: CVVC > CVV > CVC > CV

CVV > CV		CVC > CV	
jiyáaDo	slave	dadórde	waist
fodóore	God's wish	fijírde	unglossed
píilago	unglossed	tálkuru	unglossed

CVC > CVC		CVVC > CVV	
halkáade	to die	báaldiiDo	person with whom one spends
gaynáako	herdsman		the night
		naanáalde	salted area

NonFin > PP			
súudu	house	nóogaas	twenty
púlaar	Pulaar	débbuus	stick
dáwaar	duty		

ties			
ábabo	type of grass	tállorde	place for rolling
wúdure	sarong	tákkjodi	unglossed
yáakaare	hope		
táaniiko	his/her grandparent	báawaado	defeated person

- ranking:

Non-Finality » Peak Prominence (*'CV » *'CVC » *'CVV » *'CVVC) » Leftmost » Rightmost

/dawaar	NonFin	PP
> 'dawaar		*
da'waar	*!	

/naanaalde/	*'CVV	*'CVVC	Leftmost
> naa'naalde		*	*
'naanaalde	*!		

/baawaado/	*'CVV	Leftmost
> 'baawaado	*	
baa'waado	*	*!

[5]. **Pular Secondary stress**

Niang (1993) notes a number of generalizations governing the distribution of secondary stress.
* secondary stress never appears on a light syllable.
* it never appears in words of three syllables or less.
* in four-syllable words, it never occurs on the second syllable
* Tell how these generalizations emerge from your analysis, revising it if necessary. Prince's (1990) Weight-to-Stress constraint ("if heavy then stressed") may be useful.

basotóoDo	'boastful person' [170]
òltinóowo	'person who takes/puts out' [151]
jaatáarnaajo	'person from Jaataaa' [146]
njaayéemnaajo	'person from Njaayeem' [146]
gáastotòoDo	'person who digs up' [149]
báaligelam	[172]
póoftorgelam	[173]
háalpulàar?en	'speakers of Pulaar' [147]
táanirààDo	'grandparent' [170]
jáafotòodo	'person who forgives' [170]
báabalnàajo	'person from Baabal' [151]
ártiròyde	'to go and bring back' [190]
duwananóoDo	'person who was blessed' [175]
lèsDikináade	'to be humble' [192]
suweeráatnaajo	unglossed [178]
nuwaasóornaajo	unglossed [178]
kàasamáasnaajo	'person from the Casamance region' [151]
gáastotonòoDo	'person who used to dig up' [151]
DáanotonòoDo	'person who used to sleep' [151]
báabirààgelam	'my little father' [151]

[6] conflicting directionality: ties resolved differently as a function of weight
* in rule based-system called "default to opposite side"

- Selkup: stress rightmost heavy (CVV) otherwise initial

punakisə́:   qólcimpatɨ

u:cɨkkó:qi   kárman

u:có:mɨt   úŋŋɨntɨ

ú:cɨqo   sə́rɨ

- Zoll (1997): positional licensing of ˈL only in initial syllable

/HLHL/	*ˈL	*ˈH	Rightmost
ˈHLHL		*	***!
HˈLHL	*!		**
> HLˈHL		*	*
HLHˈL	*!		

License-ˈL >> Rightmost

/LLL/	*ˈL	*ˈH	License-ˈL	Rightmost
> ˈLLL	*			**
LˈLL	*		*!	*
LLˈL	*		*!	

[7] "Quality"-sensitive stress (Kenstowicz 1994, 1997)

We have seen that stress is sensitive to the weight of syllables, distinguishing two, three, and sometimes even more (Piraha) degrees of stressability. Here we look at various cases where stressability depends on the vowel phonemes comprising the syllable.

[8]. some minor precedents
- avoid stressing schwa: recall the Rhythm Rule and Sabine Iatridou [02#100] vs. Christine Graham [23#1]
- in Polish main stress is penultimate; there are some 14 lexical items with antepenultimate stress: uniwérsytet, repúblik, repúblik-a; most have penult [i]
- [Vst] penults in English (Davis 1992); an Island of Reliability (Albright 2002)

antepenultimate stress	penultimate stress
armistice	apostate
banister	asbestos
canister	canasta
hemistich	clandestine
minister	disaster
orchestra	fiasco
Philistine	**hibiscus**
Protestant	imposter
register	intestine

talisman	Nebraska
Palestine	piaster
pedestal	semester

[9] Two languages of New Guinea

a. Kobon (Davies 1980)

-
i	ɨ	u
e	ə	o
	a	

- stress in disyllabic window at right edge; seeks out stronger vowel on the following prominence scale:

  a,e,o,i,u > ə, ɨ   (peripheral vs. central)

  a > e,o > i,u > ə> ɨ (height, sonority)

a > e	hagápe	blood		o > u	mó.u	thus
a > o	alágo	snake		o > i	si.óg	bird sp.
a > i	ki.á	tree		i > ə	galínəN	bird sp.
				u > ɨ	mú.ɨs	fungus
				ə > ɨ	gɨsə́#gɨsə́	to tap

- analysis

  Align-PW-R Align-PW-L

  Trochaic » Iambic (for ties)

  Peak Prom: *P/central » *P/peripheral, *P/high » *P/mid » *P/low

/galinəN/	Align-R	*P/central	*P/high
('ss)s	*!		
> s('ss)			*
s(s's)		*!	

/kɨgɨgɨl/	Align-R	*P/central	Trochaic
('ss)s	*!		
> s('ss)		*	
s(s's)		*	*!

/siog/	*P/high	*P/mid	*P/low
('ss)	*!		
> (s's)		*	

/hagape/	Align-Rt	*P/high	*P/mid	*P/low
('ss)s	*!			
> s('ss)				*
s(s's)			*!	

b. **Takia** (de Lacy 2007, Ross 2002, 2003)

- North New Guinea: a,e,o,u,i
- stress lower vowel
- apparently no window restriction

a > e   ŋisáŋes   e > i   ŋiémi

a > o   ŋá-sol   o > i   ilódi

a > i   ábi   e > u   bémfufu

a > u   bugugáru

a > o,i kanáorig

- ties: tamán, aratám, ifiní, tubún
- ranking: *P/i,u » *P/e,o » *P/a, Align-Ft-Rt

        Iambic » Trochaic

[10]. **Chukchi**

- stress in disyllabic window at right edge of base
- Iambic » Trochaic
- Nonfinality » Iambic

    sg.   pl

    qorá-ŋə   qóra-t   reindeer

    rícit   ricít-ti   belt

    melotá-lgən   milúte-t   rabbit

    /ricit-ti /   <u>Iambic</u>   <u>Trochaic</u>

    (śs)s   *!

    > (sś)s   *

    /ricit/   <u>Nonfin</u>   <u>Iambic</u>

    > (śs)   *

    (sś)   *!

6

- stress will avoid a high vowel in favor of nonhigh; since vowel harmony prevents [a,o] combining with [e,i,u] we cannot test all combinations (cf. jatjól-te showing no a > o)

wéni-wen	bell
kéli-kel	paper
nuté-nut	land
piŋé-piŋ	snowfall

  *P/i,u » Align-PW-R

/weni-wen/	*P/i,u	Iambic
> (śs) = s		*
(sś)	*!	

/nute-nut/	*P/i,u	Iambic
(śs)	*!	*
> (sś)		

- schwa: retract stress from final schwa unless penult is schwa, in which case do not retract

pátgərg-ən	hole	məcə́kw-ən	shirt
tátləŋ-ək	to answer	rəkgə́t-ək	to get stuck
pipíqəlg-ən	mouse	rəmə́t-ək	to wash up

  *P/ə » *P/i,u

/ pipíqəlg-ən/	*P/ə	*P/i,u	Iambic
> s(śs)-s		*	**
s(sś)-s	*!		*

- Nonfinality: no retraction of final stress to a schwa

ətlá	mother	ə́tləq	tundra
ləlé-t	eyes	ə́ttəm	bone
pənún	middle	kə́tpət	sable
		núte-t	land

analysis : *P/ə » Nonfin » *P/i,u

- a familiar metrical contraint (NF) embedded within the peak prominence constraint that tracks alignment with phonetic scale of inherent duration
- argues for grammaticalization of the calculation of stress

/ətla /	*P/ə	Nonfin
(śs)		*!
> (sś)	*	

/ ətləq/	*P/ə	Nonfin
> (śs)		*
(sś)	*	*!

/nute-t/	*P/ə	Nonfin
> (śs)		
(sś)		*!

Final remarks:

a. duration is inversely correlated with vowel height in many languages (Lehiste 1970); sonority may be tracking this difference

Brazilian Portuguese (Escudero et al. 2009)

Females (ms)

[i]	99	[u]	100
[e]	122	[o]	123
[ɛ]	141	[ɔ]	139

[a] 144

b. a general concern: whether the category of "stress" or "prominence" in these languages plays any role in the grammar analogous to stress in languages like English: defining locus of pitch accents, segmental phonotactics or alternations. It might just represent a response by the native speaker or the analyst to the question "What syllable is strongest in this word?"

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Fall 2014

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