One is ok but two is too much: Avoidance of multiple reduplication

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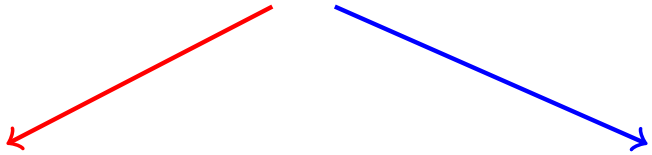
sil’	‘calico’
sisil’	‘a small piece of calico’
silsil’	‘patches of calico’
?	‘small patches of calico’



silsil

Avoidance of multiple reduplication

silsisil

Multiple reduplication

➙ Phonological markedness?

Too much material?, Too much identical material? …

➙ Morphological markedness?

Too much marked exponence type? …

Main Claim

- the avoidance of multiple reduplication is the avoidance of too many **unfaithful** phonological repair operations
- possible in a purely phonological acocunt to reduplication based on the **affixation of empty prosodic nodes**
- argument against employing a concept of 'marked exponence' type or alternatives based on phonological markedness that have problems predicting the 'typology' of multiple reduplication
  - surfacing of multiple reduplicants
  - avoidance of multiple reduplicants
  - the superset effect of the surviving reduplicant
  - (partial) blocking of reduplication for pseudoreduplicated stems

A typology of multiple reduplication

Multiple reduplication

- the presence of two different reduplicative morphemes in one word
- not the repetition of one reduplicative morpheme as, for example, reinforcement of continuity in (1)

(1) *Pingelapese continuity (Rehg, 1981, 11)*

pei	'float'
pei∼pei	'floating'
pei∼pei∼pei	'still floating'
pa	'weave'
pah∼pa	'weaving'
pah∼pah∼pa	'still weaving'
meir	'sleep'
mei∼meir	'sleeping'
mei∼mei∼meir	'still sleeping'

Multiple reduplication

(2) *Multiple reduplication in Thompson (Shaw, 2005, 162)*

a. sí∼sil’
DIM-calico
‘a little piece of calico’

b. sil∼síl
DISTR-calico
‘patches of calico’

c. sil∼sí∼sil’
DIM-DISTR-calico
‘small patches of calico’

Multiple reduplication

- Lillooet employs full reduplication (3-a) (+predictable vowel reduction in non-stressed position) and infixing C-reduplication (3-b); both can cooccur (3-c)

(3) *Multiple reduplication in Lillooet (van Eijk, 1997, 56+57)*

a.	a.	s-ɣap 'tree'	s-ɣəp∼ɣáp 'trees'
	b.	pálaʔ 'person'	pá∼p∼laʔ 'one person'
	c.	ciq^{w} 'red'	cək^{w}∼cə́∼c∼k^{w} 'little red ones'

Multiple reduplication

- monosyllabic prefixing reduplication /Ca:-/ (except base starts with /e/, then /Ce:-/) and bisyllabic prefixing reduplication can cooccur (5)

(4) *Reduplication in Fox (Dahlstrom, 1997, 206)*

		Continuative	Iterative
wi:tamaw-e:wa	'he tells him'	wa:∼wi:tamaw-e:wa	wi:ta∼wi:tamaw-e:wa
nowi:-wa	'he goes out'	na:∼nowi:-wa	nowi∼nowi:-wa
wa:pam-e:wa	'he looks at him'	wa:∼wa:pam-e:wa	wa:pa∼wa:pam-e:wa
nepe:-wa	'he sleeps'	ne:∼nepe:-wa	nepe∼nepe:-wa

(5) *Multiple Reduplication (Dahlstrom, 1997, 207+218)*

wa:wi∼wa:∼wi:tamaw-e:wa	'he keeps telling him over and over'
nenje∼nje∼nje:maso-wa	'he keeps standing'

Multiple reduplication: Examples

Fox	Algic	Algonquian	(Dahlstrom, 1997)
Sikaiana	Austronesian	Malayo-Polynesian	(Donner, 2012)
Tagalog	Austronesian	Malayo-Polynesian	(Blake, 1917)
Papapana	Austronesian	Malayo-Polynesian	(Smith, 2016)
Klamath	Klamath-Modoc		(Barker, 1964; Zoll, 2002)
Colville	Salishan	Interior Salish	(Andersen, 1996)
Lillooet	Salishan	Interior Salish	(van Eijk, 1997)
Shuswap	Salishan	Interior Salish	(Kuipers, 1974)
Spokane	Salishan	Interior Salish	(Bates and Carlson, 1998)
Thompson	Salishan	Interior Salish	(Thompson and Thompson, 1992)
Lushootseed	Salishan	Central Salish	(Urbanczyk, 2001)
Sliammon	Salishan	Central Salish	(Watanabe, 1994)
Kyuoquot*	Wakashan	S. Wakashan	(Rose, 1981)
Makah*	Wakashan	S. Wakashan	(Davidson, 2002)
Ditidaht*	Wakashan	S. Wakashan	(Stonham, 1994)
Tsishaath*	Wakashan	S. Wakashan	(Stonham, 2004)

(*Both avoidance and surfacing of multiple reduplicants: inflection vs. derivation)

The avoidance of multiple reduplicants

- the focus are patterns of multiple reduplication where more than one reduplicative morpheme is present **but only one reduplicant surfaces**:

1. Avoidance of multiple reduplicants

2. The shape of the one surviving reduplicant

3. The effect of pseudoreduplicated stems

Ahousaht (Southern Wakashan) (Kim, 2003*a*,*b*, 2008)

- some meanings are expressed by reduplication alone (6-a), e.g. PL
- many suffixes trigger prefixing reduplication (=underlined) (6-b)

(6) a.

maɬtiː	‘house’	
ma∼maɬtiː	‘houses’	(PL-maɬtiː)
naʔa	‘to hear’	
na∼naʔa	‘to understand’	(DER-naʔa)

b. mi∼miɬkʼukʔicuːʃ
mi-ɬ-kʼuk-ʔitʃuːʃ
same-to.resemble-2PL.IND
‘both of you look alike’

(Kim, 2003*b*, 136+138)

Ahousaht (Southern Nuuchahnulth, Wakashan) (Kim, 2003*a*,*b*, 2008)

- two reduplicative morphemes in a word = **a single reduplicant**

(7) a. na∼naʔak'ukʔiʃ (*na∼na∼naʔak'ukʔiʃ)
DER-naʔa-k'uk-ʔiʃ
DER-to.hear-to.resemble-3SG.IND
's/he seems to be knowledgeable'

b. t'u∼t'uc'iːħ (*t'u∼t'u∼t'uc'iːħ)
PL-t'uc'(up)-ʔiːħ
PL-sea.urchin-to.gather/fish
'gathering more than one sea urchin'

(Kim, 2003*b*, 138)

Kyuquot/Tsishaath (Southern Wakashan) (Rose, 1981; Stonham, 2004)

- two reduplicative morphemes in a word = **a single reduplicant** (8-b)

(8)

a.	tɬuk-ʾas	tɬuː∼tɬukʾʷas	‘He has wide wrists’	R312
	mitxʷ-ʃi(tɬ)-apa	miː∼miːtxʃitɬap	‘He turned too much’	R325
	ʔu-ħwʾaɬ-apa	ʔuː∼ʔuːħwʾaɬap	‘He used it too much’	R340
b.	mʾaɬ-ʾas-apa	mʾaː∼mʾaːɬʔasap	‘He has really cold wrists’	R341
	tɬʾuk-aːnʾuɬ-apa	tɬʾuː∼tɬʾuːkʷanʾɬap	‘His legs are really big’	R341
	pumaɬ-suɬ-apa	puːc-puːmaɬ-suɬ-ap	‘He has really itchy eyes’	R341
	mitxʷ-ʾas-stʾaɬ	miː∼mitwʾisstʾaɬ	‘They were twisting each others wrists’	R342

(Rose, 1981)

Southern Wakashan: The superset effect for the survivor

- different shapes for the reduplicants:
  - V of reduplicant is long (RL)
  - V of stem is long (R+L)
  - fixed segment in the reduplicant (RC)
  - maximal initial syllable copied (Max)
  - …

(9) *Kyuoqot reduplication*

satʃk-ʾimɬ	**R**	sa∼satʃkʾimɬ	‘His ears are pointed’	329
tɬuk-ʾas	**RL**	tɬuː∼tɬukʾʷas	‘He has wide wrists’	312
mitxʷ-ʃi(tɬ)-apa	**RL+L**	miː∼miːtxʃitɬap	‘He turned too much’	325

(Rose, 1981)

(10) *Tsishaath reduplication*

PL-mʾinuːqʷ-ʾaqtɬ	**Rt**	mʾit∼mʾinuʕaqtɬ	‘the disease-throwers’	125
jʾimħ-ʃ	**Max**	jʾimħ∼jʾimħʃ	‘he became embarrassed every now and then’	132

(Stonham, 2004)

Southern Wakashan: The superset effect for the survivor

‘the effects on the final form are those that are required by *all* the triggers, with the proviso that only a single copy occurs’ (Stonham, 2004, 137)

- multiple reduplicant avoidance = surfacing reduplicant **has the maximal shape that combines the shape requirements of both reduplicative morphemes**

(11)

a.	tɬ’uk-aːn’uɬ-apa	**R+L & RL+L**	tɬ’uː-tɬ’uːkʷan’ɬap	**RL+L**
b.	m’aɬ-’as-apa	**RL & RL+L**	m’aː-m’aːɬʔasap	**RL+L**
c.	pumaɬ-suɬ-apa	**Rc+L & RL+L**	puːc-puːmaɬ-suɬ-ap	**RLc+L**
d.	hin-’as-tʃ’ap-ajuk	**RL & R**	hiː∼hinʔastʃpajk	**RL**

(Stonham, 2004, 137)

(Caveat: apparent counterexamples in Kyuquot; all involve the same RcL suffix.)

Ahousaht (Southern Nuuchahnulth, Wakashan) (Kim, 2003*a*,*b*, 2008)

- **pseudoreduplication** (=apparent reduplication but 'base' never surfaces on its own; found in many loans) blocks reduplication (12-b-d)

(12) a. *Pseudoreduplicated stems*

kakaw'in	'killer whale'
piːʃpiʃ	'cat'
muːsmuːs	'cow'
maːmaːti	'bird'

(Kim, 2003*b*, 137)

b. *Added suffixes: /k'uk-ʔiʃ/ 'to.resemble-*3SG.IND*'*

kakaw'ink'ukʔiʃ	'It looks like a killer whale'	*ka∼kakaw'ink'ukʔiʃ
piːʃpiʃk'ukʔiʃ	'It looks like a cat'	*pi∼piːʃpiʃk'ukʔiʃ
maːmaːtik'ukʔiʃ	'It looks like a bird'	*ma∼maːmaati

(Kim, 2003*b*, 138)

Ditidaht (Southern Nuuchahnulth, Wakashan) (Stonham, 1994, 2003)

- asymmetry for pseudoreduplicated stems: some do **not block reduplication** (13-a), others do (13-b)

(13) *Pseudoreduplicated stems*

a.	mu:smus	mu:smus	'cow'
	mu:smus-ataχ	mu:∼mu:smusataχ	'hunting cows'
b.	kakaw'ad	kakaw'ad	'killer whale'
	kakaw'ad-ataχ	kakaw'adataχ	'hunting killer whale'
		*ka∼kakaw'adataχ	'hunting killer whale'

(Stonham, 2003, 248+247)

Manam (Malayo-Polynesian) (Buckley, 1997; Lichtenberk, 1983)

- if the base already ends in two identical syllables (=pseudoreduplication), the usually φ-sized reduplicant is only one syllable (15) (similar pattern in Samoan (de Lacy, 1999; Nevins, 2012))

(14) a. *φ-reduplication*

laba	'be big'	laba∼laba	'older person'
salaga	'be long'	salaga∼laga	'long' SG
sapara	'branch'	sapara∼para	'having branches'
ʔulan	'desire' (V)	ʔulan∼laŋ	'desirable'

(Lichtenberk, 1983, 599-602)

b. *σ-reduplication if stem ends in identical syllables*

ragogo	'be warm'	ragogo∼go	'warm'	*ragogo∼gogo
ʔoʔo	'be plentiful'	ʔoʔo∼ʔo	'many, much'	*ʔoʔo∼ʔoʔo
rere	'like'	rere∼re	'like'	*rere∼rere
lele	'look for'	lele∼le	'look for'	*lele∼lele

(Lichtenberk, 1983, 599-602)

Multiple reduplication patterns: Summary of empirical facts

(15)

	Multiple reduplicants	Pseudoreduplication
Thompson	Y	–
Ahousaht	N	blocks red.
Kyuquot*	N	–
Ditidaht*	N	blocks red. sometimes
Manam	–	triggers different red.-size

- S. Wakashan multiple reduplicant avoidance: A **superset effect** for the one surfacing reduplicant

(*Not in all contexts: Multiple reduplication surfaces if derivational/inflectional reduplicative morphemes are combined (Stonham, 1994, 2004, 2007))

A PA account of multiple reduplication

Background: Prosodic Affixation

Reduplication and prosodic affixation (=PA)

(Marantz, 1982; Saba Kirchner, 2010, 2013*a*,*b*; Pulleyblank, 2009; McCarthy et al., 2010; Bye and Svenonius, 2012; Bermúdez-Otero, 2012)

reduplicative morpheme = a **segmentally empty prosodic affix** that is filled with 'copied' elements of the base it is added to

- not substantially different from segmental affixes: they simply lack segmental content
- a **purely phonological account** since no reduplication-specific mechanism or entities like RED or Faith_{BR} (McCarthy and Prince, 1995, and subsequent work)
- strong argument for such an approach: **phonologically predictable allomorphy** between reduplication and other non-concatenative strategies like vowel lengthening

Reduplication and prosodic affixation

- copying is a general phonological repair, modeled as segmental **fission** violating (16-a) (Spaelti, 1997; Struijke, 2000; Gafos, 2003; Nelson, 2003)
- that the otherwise prosodic node is filled with segmental material is ensured by constraints ensuring proper prosodic parsing (16-b)
- alternative strategies to realize the prosodic affix: for example epenthesis, penalized by Dep-S (16-c)

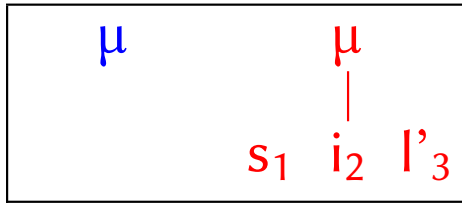
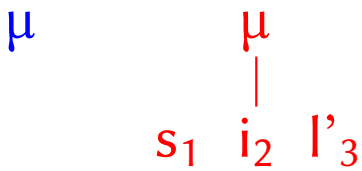
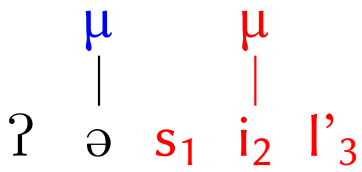
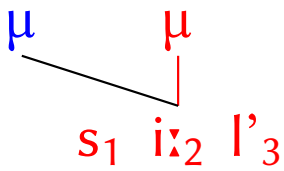
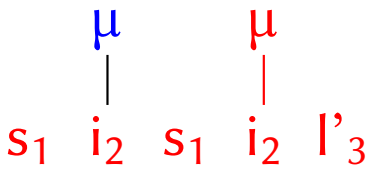
(16)
a. Int-S: Assign * to every pair of output segments that correspond to the same input segment.

b. μ>S: Assign * to every μ not dominating a segment.

c. Dep-S: Assign * to every output-segment without an input correspondent.

Copying as fission: The basic mechanism

(17)

	μ>S	Dep-S	*Vː	Int-S
				
a. 	*!			
b. 		*!*		
c. 			*!	
☞ d. 				**

Background assumptions

- **morphological colours** (=morphological affiliation) allows the phonology to identify whether material is epenthetic (=colourless) and whether two elements belong to the same or different morphemes
  (van Oostendorp, 2003, 2008, 2007; Revithiadou, 2007; Trommer, 2011; Trommer and Zimmermann, 2014; Zimmermann, 2017)

- the phonology is able to differentiate **stem- and affix**-material – this does not imply reference to specific morpho-syntactic features; only a difference in 'morpheme status'
  (Urbanczyk, 2011; Trommer, 2010)

- the stem is **fully prosodified** at the point where affixes are added: a stratal model (Kiparsky, 2011; Bermúdez-Otero, in preparation) with an evaluation prior to concatenation (Trommer, 2011)
  (but this primarily faciliates the presentation: can be reimplemented without strata)

Avoidance of multiple reduplicants: PA account

PA account for the avoidance of multiple reduplication

- multiple reduplication is avoided to minimize violations of Int-S
  (in spirit similar to an account based on unified indexation (Buckley, 1997; Rose, 1997))
- two possible repairs:

1. **coalescence of prosodic nodes on the same tier**, under violation of Uniformity (Saba Kirchner, 2010, 65)

   (18) Unf-μ: Assign * for every output-μ corresponding to more than one input-μ.

2. **prosodic affixes on different tiers dominate each other**, under violation of $\text{DepAL(X-Y)}_{\text{A}}$, e.g. (19)

   (19) $\text{Dep}(\sigma\text{-}\mu)_{\text{A}}$: Assign * for every colourless association line between a σ and a μ if one is affix-material.

Ahousaht: Multiple reduplication avoidance and coalescence

(20)

	μ_1 μ_2 μ_3 μ_4 | | n_1 a_2 $?_3$ a_4	$\mu > S$	Dep-S	Unf-μS	Int-S	Unf-μ
a.	μ_1 μ_2 μ_3 μ_4 | | | | n_1 a_2 $?_3$ a_4 n_1 a_2 $?_3$ a_4				***!*	
☞ b.	$\mu_{1,2}$ μ_3 μ_4 | | | n_1 a_2 n_1 a_2 $?_3$ a_4				**	*
c.	$\mu_{1,2,3}$ μ_4 | | n_1 a_2 $?_3$ a_4			*!		

- overapplication of coalescence (21-c) excluded by Unf-μS penalizing fusion of stem-μ's

Thompson: No coalescence and multiple reduplicants

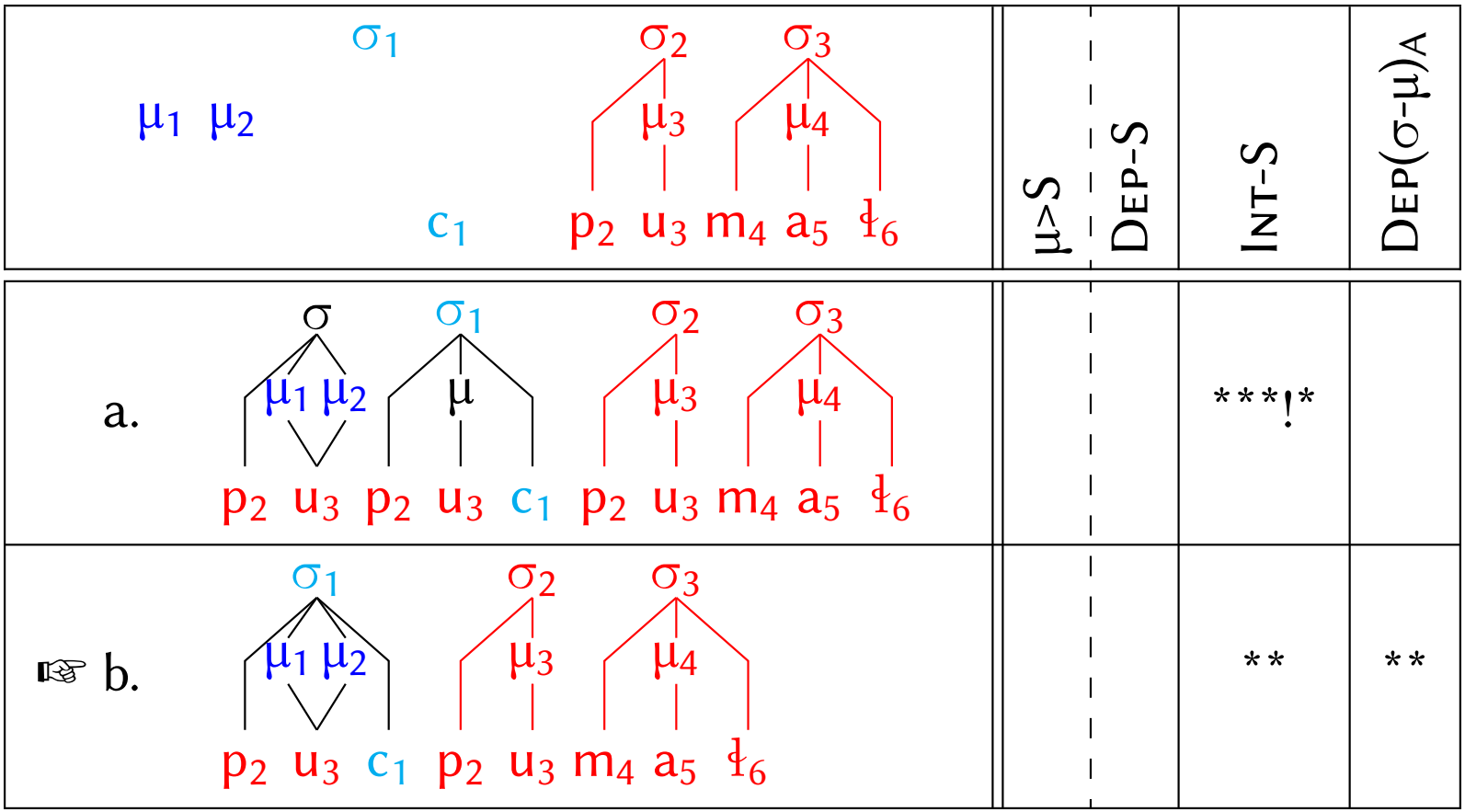
- reranking of Unf-μ: Multiple reduplication surfaces

(21)

	μ≥S	Dep-S	Unf-μ	Int-S
$\mu_1\ \mu_2\ \mu_3\ \mu_4\ \mu_5$ / $s_1\ i_2\ l'_3$				
a. $\mu_1\ \mu_2\ \mu_3\ \mu_4\ \mu_5$ / $s_1\ i_2\ l'_3$	*!**			
☞ b. $\mu_1\ \mu_2\ \mu_3\ \mu_4\ \mu_5$ / $s_1\ i_2\ l_3\ s_1\ i_2\ s_1\ i_2\ l'_3$				*****
c. $\mu_1\ \mu_{2,3}\ \mu_4\ \mu_5$ / $s_1\ i_2\ l_3\ s_1\ i_2\ l'_3$			*!	***

Kyuquot: Multiple reduplication avoidance and prosodic integration

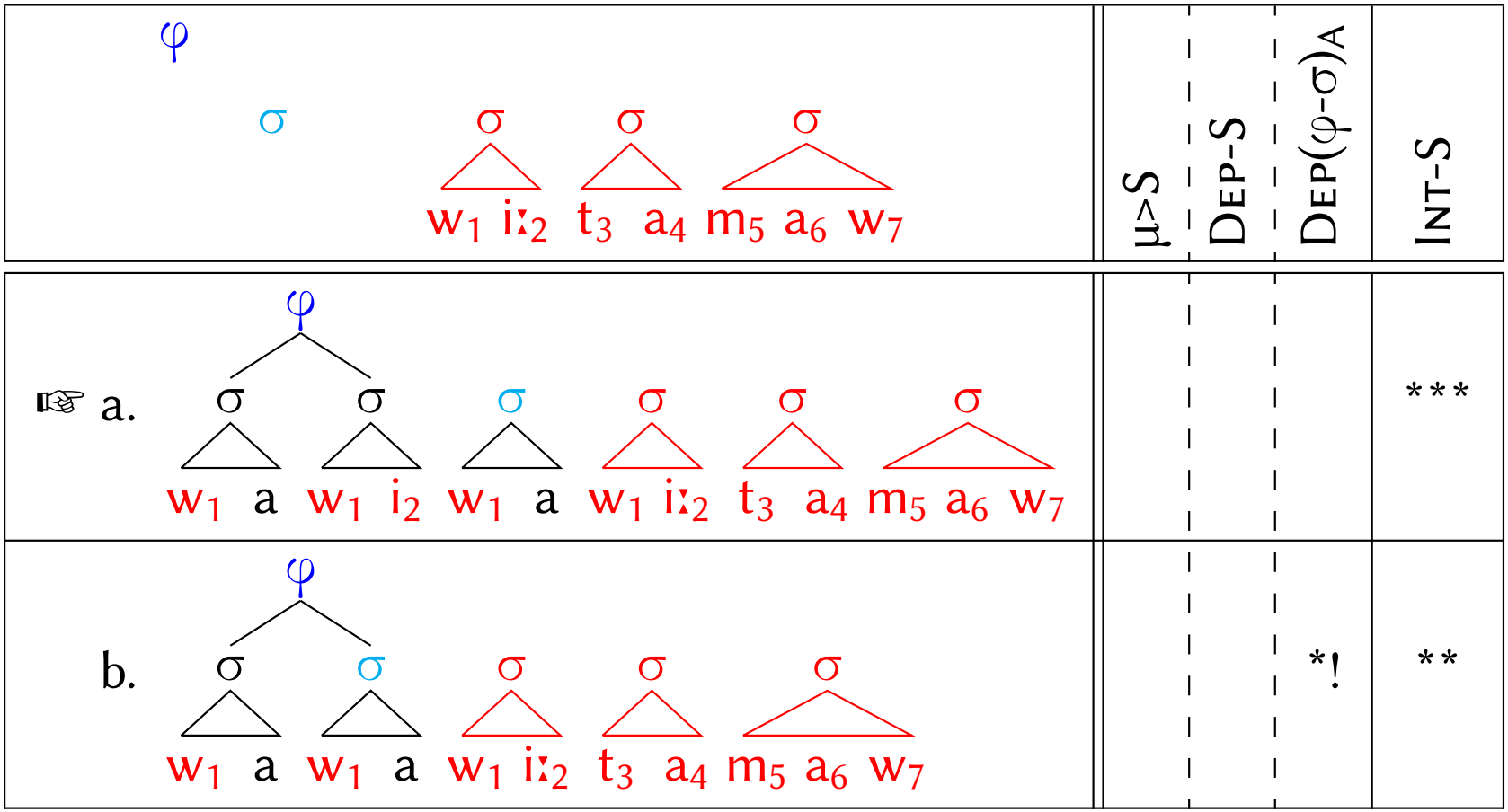
(22)



(simplified structure only showing the stem and the PA triggering reduplication)

Fox: No prosodic integration and multiple reduplicants

(23)



(Simplification: fixed segment not accounted for)

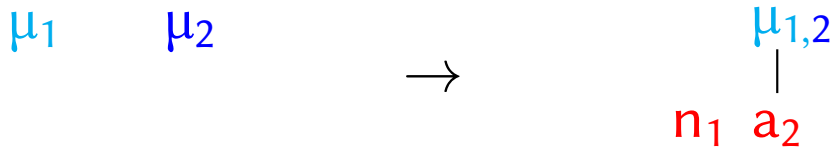
The superset effect: PA account

The superset effect for the surviving reduplicant

- follows since **no strategy to avoid multiple reduplicants involves deletion of a prosodic affix**
  (else: a ranking paradox for single reduplication contexts)

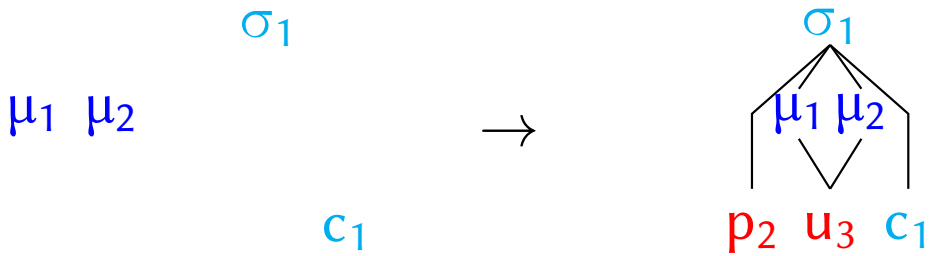
= coalescence only for prosodic nodes on the same tier: identical 'reduplication-requirements' are summarized but none gets lost (24-a)

(24) *Coalescence in Ahousaht*



= prosodic integration doesn't alter the number of prosodic affixes (25-b)

(25) *Prosodic integration in Kyuquot*



Pseudoreduplicated stems: PA account

Pseudoreduplicated stems and reduplication

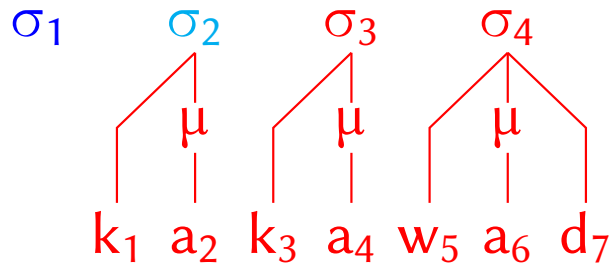
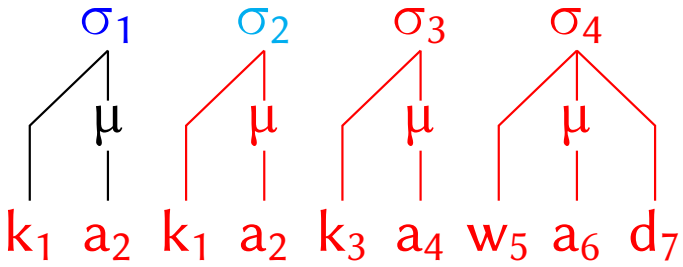
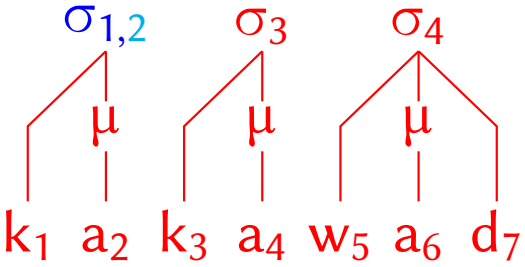
- pseudoreduplicated stems have a special underlying representation: **they contain affix prosody**
- in reduplication contexts, this affix syllable is hence treated the same way as prosodic affix nodes:

1. It can undergo coalescence with a prosodic affix on the same tier (=reduplication avoidance in Ditidaht)
2. It can be integrated under affix prosody (=smaller reduplicant in Manam)

→ that pseudoreduplicated portions have identical material may have a historical motivation (=former reduplicative affix) but is not part of the explanation

Pseudoreduplicated stems I: Coalescence in Ditidaht

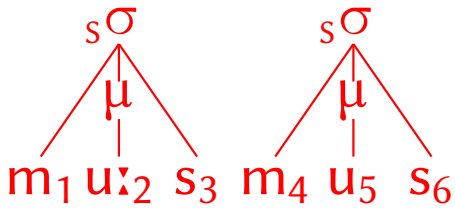
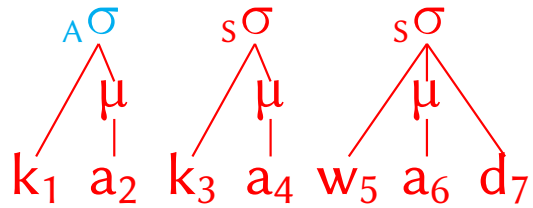
(26) *Affix prosody inside the stem: Reduplication avoidance*

	σ>S	Dep-S	Unf-σS	Int-S	Unf-σ
					
a. 				*!*	
☞ b. 					*

Pseudoreduplicated stems I: Coalescence in Ditidaht

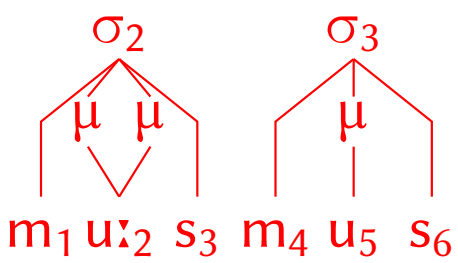
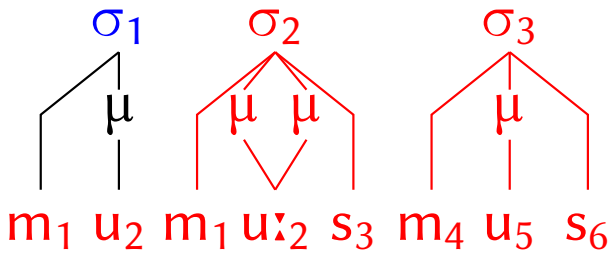
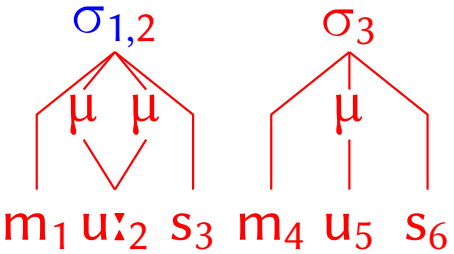
- asymmetry for pseudoreduplicated stems: they contain an affix syllable (27-b) or not (27-a) and hence block reduplication or not

(27)

	a. 'cow'	b. 'killer whale'
isolation	muːsmus	kakawad
+Lx.Sfx	*muːsmus-ataχ mu-muːsmus-ataχ	kakawad-ataχ *ka-kakawad-ataχ
Representations		

Pseudoreduplicated stems I: Coalescence in Ditidaht

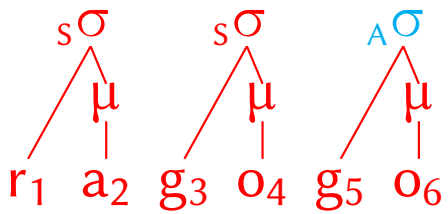
(28) *Only stem prosody: Reduplication surfaces*

		σ>S	Dep-S	Unf-σS	Int-S	Unf-σ
						
☞ a.					**	
b.				*!		*

Pseudoreduplicated stems II: Prosodic integration in Manam

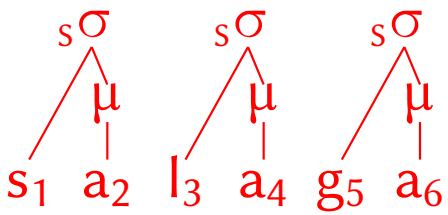
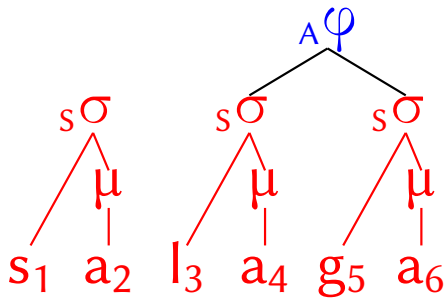
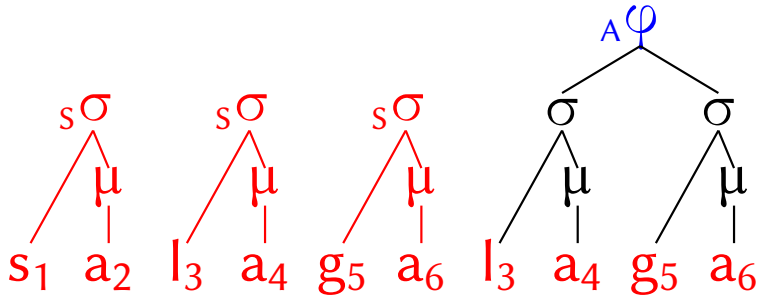
- an affixed empty foot triggers copying of a bimoraic portion since DEP(φ-σ)$_{A\text{-}S}$ penalizes integration of stem syllables into an affix-φ
- pseudoreduplicated stems **contain an affix-syllable** in their representation: this affix-σ can be dominated by the affix-φ without violating DEP(φ-σ)$_{A\text{-}S}$ and fewer copying is necessary
- similar in logic to the account of Manam in Fitzpatrick and Nevins (2004): the pseudoreduplicated stem already contains a 'trigger' for reduplication

(29)



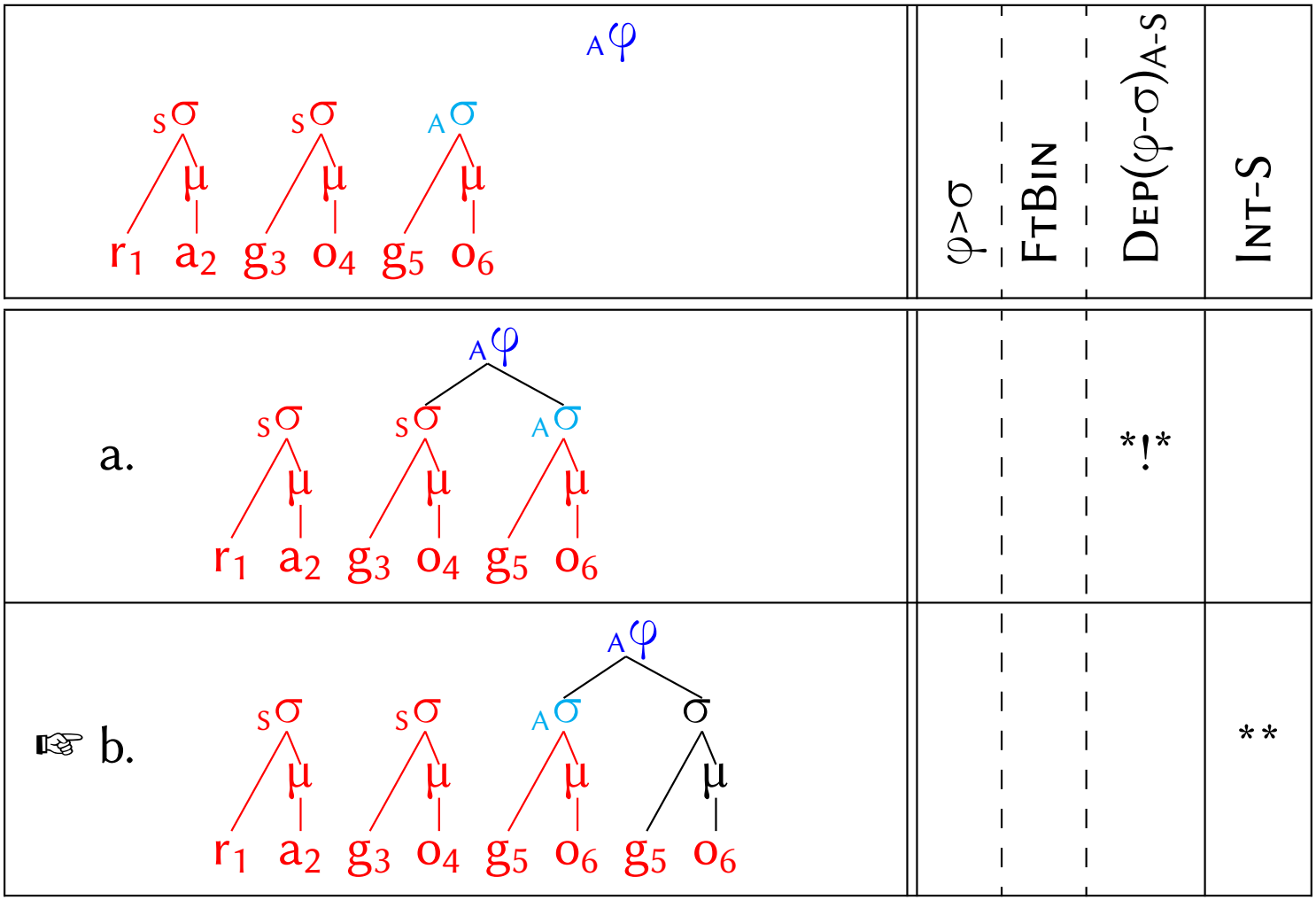
Pseudoreduplicated stems II: Prosodic integration in Manam

(30) *Only stem prosody: φ-coyping*

	φ>σ	FtBin	Dep(φ-σ)$_{A\text{-}S}$	Int-S
				
a. 			*!*	
☞ b. 				**

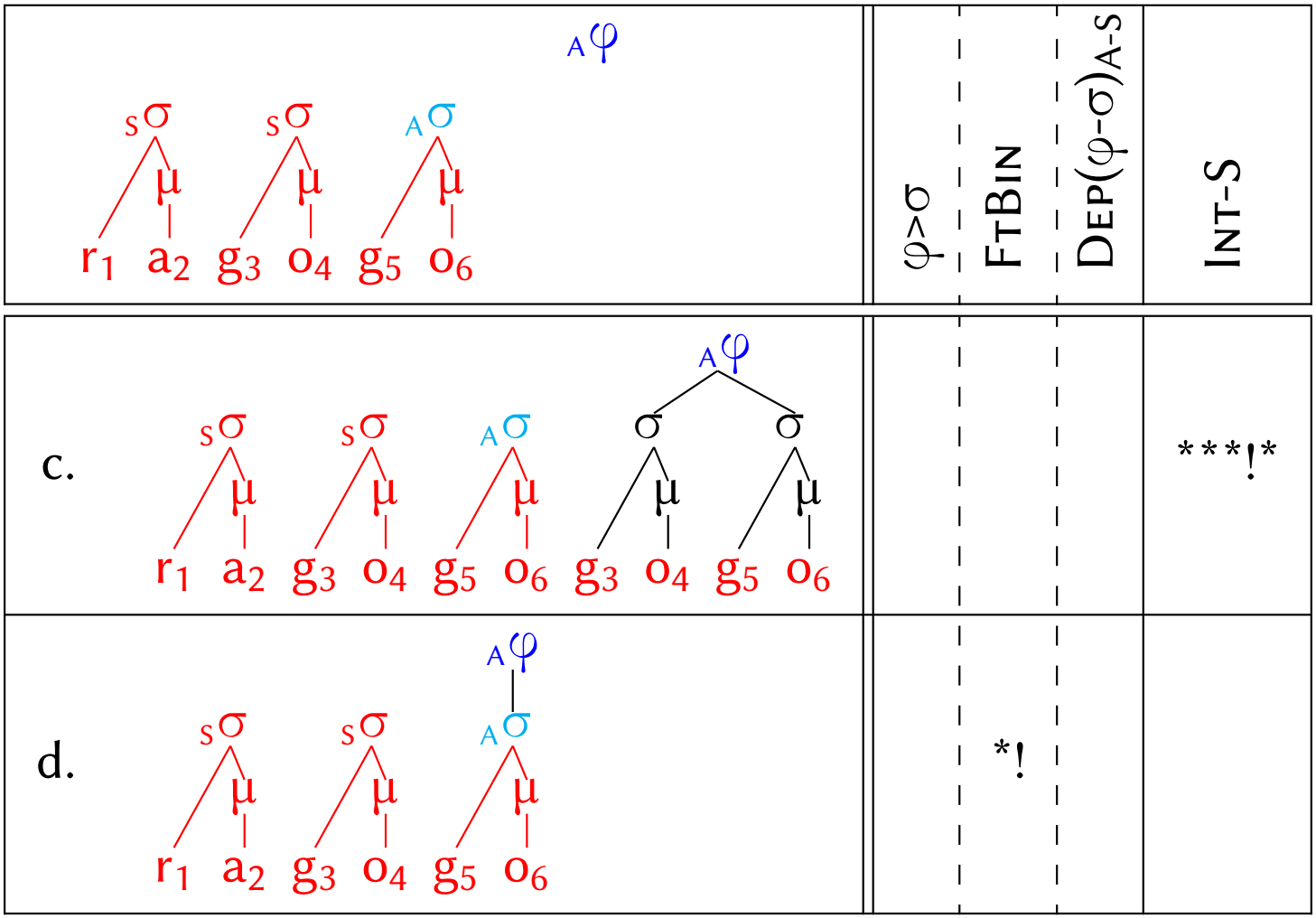
Pseudoreduplicated stems II: Prosodic integration in Manam

(31) *Affix prosody inside stem: Copying of one σ avoidable*



Pseudoreduplicated stems II: Prosodic integration in Manam

(32) *Affix prosody inside stem: Copying of one σ avoidable, contd.*



Summary of the PA account

Summary: PA account

- trigger for multiple reduplication avoidance: **faithfulness constraints** and preference to keep fission to a minimum
- faithfulness constraints distinguish **affix- and stem-material**: Prosodic inteagration and coalescence possible for affixes but not stems
- pseudoreduplicated stems are **representationally different**: straightforwardly predicts intra-language variation as in Ditidaht

(33)

1.	**Avoidance of multiple reduplicants**	
	A. Coalescence	Ahousaht (20)
	B. Prosodic integration	Kyuquot (22)
2.	**The Superset effect**	
	No deletion of prosodic affixes	(24)/(25)
3.	**Pseudoreduplicated stems**	
	A. Coalescence: No reduplication	Ditidaht (26)
	B. Prosodic integration: Smaller reduplicant	Manam (31)/(32)

Alternatives based on markedness

Background: Base-Reduplicant Correspondence Theory

(=BRCT; McCarthy and Prince, 1995, and subsequent work)

- phonologically empty **RED** is the trigger for reduplication: a BR-faithfulness relation between base and reduplicant is established
- crucial: every reduplicative morpheme establishes its own **BR-relation**

(34)

	MAX-BR$_{DIM}$	*CODA	MAX-BR$_{DIS}$
RED$_{Dis}$-sil’			
a. sil		*	**!*
☞ b. si∼sil’		*	*
c. sil∼sil’		**!	
RED$_{Dim}$-sil’			
a. sil	*!**	*	
b. si∼sil’	*!	*	
☞ c. sil∼sil’		**	

Morphological Markedness

Avoidance of marked exponence: *DupDup

- multiple reduplication avoidance follows from a constraint *DupDup (or *RedRed) that 'disallow[s] multiple copies' (Stonham, 2004, 172)
- it is violated as soon as two reduplicants are in the output: it hence refers to the **exponence type that a phonological element represents**

= a complex constraint type that sees more than phonological structure (=the presence of a RED-morpheme in the input and the fact that phonological elements in the output represent this RED

- (Note: it can not simply refer to the presence of two different BR-faithfulness relations in the output: those are established as soon as RED is present in the input – non-realization of a reduplicant does not (in most standard BRCT implementations) avoid the BR-relation)

*DupDup and the avoidance of multiple reduplication: Ahousaht

(35) *No multiple reduplicants*

RED_{Der}-RED_{resbl}-naʔa	RED_{DER}=μ	*DupDup	RED_{RESBL}=μ
a. naʔa	*!		*
☞ b. na∼naʔa			*
c. na∼na∼naʔa		*!	

➙ *DupDup predicts that **only a single reduplicant surfaces**

*DupDup and the superset effect: Kyuquot

(36) *No multiple reduplicants, option 1*

RED_{really}-RED_{eye}-puma$\dot{\text{t}}$	RED_{EYE}=μ/c/	*DupDup	RED_{REALLY}=μμ
a. puma$\dot{\text{t}}$	*!		*
b. puː∼puc∼puma$\dot{\text{t}}$		*!	
c. puː∼puma$\dot{\text{t}}$	*!		
☞ d. puc∼puma$\dot{\text{t}}$			*
☛ e. puːc∼puma$\dot{\text{t}}$	*!		*

(37) *No multiple reduplicants, option 2*

RED_{really}-RED_{eye}-puma$\dot{\text{t}}$	RED_{REALLY}=μ μ	*DupDup	RED_{EYE}=μ/c/
☞ a. puː∼puma$\dot{\text{t}}$			*
b. puc∼puma$\dot{\text{t}}$	*!		
☛ c. puːc∼puma$\dot{\text{t}}$	*!		*

*DupDup and the superset effect: Kyuquot

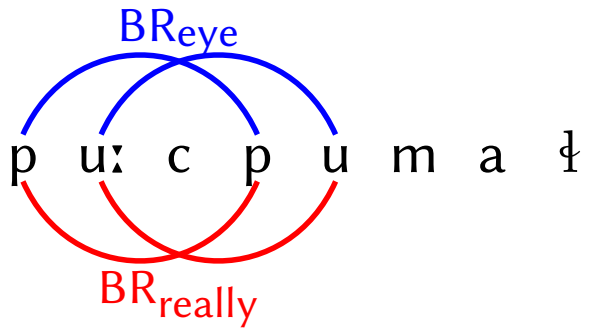
- a violation of *DupDup is avoided via **non-realization of one of the reduplicants**: Grammars can choose which one to realize but it is impossible to realize a superset of both

- (Caveat 1: for ease of exposition, the fixed segment results from the templatic constraint: not a standard assumption)
- (Caveat 2: prediction depends on how the shape of the reduplicant is determined: Generalized Template Theory (Urbanczyk, 2006; Downing, 2006) might make a different prediction?)

*DupDup and the superset effect: An alternative?

- the structure (38) where a part of the 'reduplicant' stands in two different BR-relations still does not solve the problem: the 'coalescence'-reduplicant is not coextensive with two reduplication-requirements

(38)



- a non-standard conception of RED?
- some constraint must penalize it since multiple reduplication would otherwise be generally excluded – not a trivial constraint format

(39) *BR-PARALLEL: Assign * for every pair of elements A and B that stand in a BR-correspondence relation α and a BR-correspondence relation β.

*DupDup and pseudoreduplicated stems: Ditidaht

- mirroring the analysis from above: A RED in the stem

(40) *Internal RED*

RED_{whale}-kaw'ad	RED_{WHALE}=μ	*DupDup	RED_{HUNT}=μ
a. kaw'ad	*!		
☞ b. ka∼kaw'ad			

(41) *Internal RED blocks reduplication*

RED_{hunt}-RED_{whale}-kaw'ad	RED_{WHALE}=μ	*DupDup	RED_{HUNT}=μ
a. kaw'ad	*!		*
b. ka∼ka∼kaw'ad		*!	
☞ c. ka∼kaw'ad			*

→ *DupDup predicts that **pseudoreduplicated stems block reduplication if they contain RED**

*DupDup and pseudoreduplicated stems: Manam

(42) *Internal RED*

rago-RED$_{warm}$	RED$_{WARM}$=μ	*DupDup	RED$_{ADJ}$=φ
a. rago	*!		
☞ b. rago∼go			

(43) *Internal RED unable to trigger smaller reduplicant*

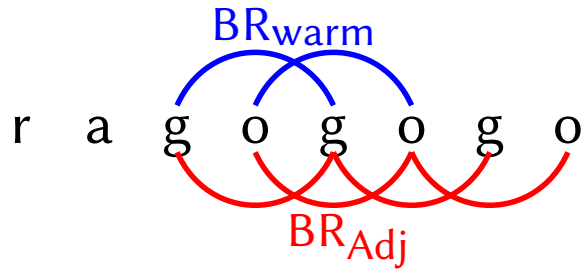
rago-RED$_{warm}$-RED$_{Adj}$	RED$_{WARM}$=μ	*DupDup	RED$_{ADJ}$=φ
a. rago	*!		*
b. rago∼go			*
☛ c. rago∼go∼go		*	*!
☞ d. rago∼go∼gogo		*	

→ a smaller reduplicant does not help avoid a violation of *DupDup

*DupDup and pseudoreduplicated stems: Footnote to Manam

- Cf. above: in the structure (45), the first reduplicated portion /go/ stands in a BR-relation with both reduplicants
- → it does not solve the problem since *DupDup **should still be violated** given that both reduplicants are still there, they only underwent coalescence

(44)



*DupDup: Summary of predictions

(45)

1.	**Avoidance of multiple reduplicants**		
	Triggered by *DupDup	Ahousaht	(35)
2.	**The Superset effect**		
	Only one reduplicant is realized	Kyuquot	(36)/(37)
3.	**Pseudoreduplicated stems**		
	A. No reduplication: RED in the stem	Ditidaht	(41)
	B. Smaller reduplicant: still violates DupDup	Manam	(43)

Phonological Markedness

Multiple reduplicants and phonological markedness

Multiple reduplication = Too much structure (de Lacy, 1999)

- avoidance of multiple full reduplicants increases violations of *Struc
- coalescence (=only possible if the material is reduplicated and hence identical) helps avoiding such violations

→ predicts that a reduplicant is smaller than expected but not easily extendable to the complete avoidance of multiple reduplication

Multiple reduplication = Too much identical structure

- a complex **identity avoidance** effect (Menn and McWhinney, 1984; Yip, 1998)
- a single repition is tolerated but not more repititions; termed 2xOCP_σ
  - conjoined OCP_σ&OCP_σ (Smolensky, 1995; Lubowicz, 2002, 2003)
  - a threshold effect in Harmonic Grammar (Legendre et al., 1990)

Identity Avoidance: Avoidance of multiple reduplication in Ahousaht

(46) *No multiple reduplicants*

RED_{Der}-RED_{resbl}-naʔa	RED_{DER}=μ	*2OCP_{σ}	RED_{RESBL}=μ
a. naʔa	*!		*
☞ b. na∼naʔa			*
c. na∼na∼naʔa		*!	

➙ *2OCP_{σ} predicts that **only a single reduplicant surfaces**

Identity Avoidance: The superset effect

- the problem discussed for *DupDup is actually identical for a solution based on *2OCP$_\sigma$: the possible repair in a BRCT account is again **non-realization of one reduplicant** – the superset effect is unexpected

Identity Avoidance: Pseudoreduplicated stems in Ditidaht

(47) *Pseudoreduplicated stem blocks reduplication*

RED_{hunt}-kakaw'ad	*2OCP$_\sigma$	RED_{HUNT}=μ
a. ka∼kakaw'ad	*!	
☞ b. kakaw'ad		*

- whether the pseudoreduplicated stem is as in (47) or a complex structure /RED_{hunt}-RED_{whale}-kaw'ad/ does not matter: *2OCP$_\sigma$ predicts that the blocking of reduplication is the **avoidance of too much identical material**

Identity Avoidance: Pseudoreduplicated stems in Ditidaht

(48) *Pseudoreduplicated stem does not block reduplication*

RED_{hunt}-mu:smus		*2OCP$_\sigma$	RED$_{HUNT}$=μ
☛ a.	mu∼mu:smus	*!	
☞ b.	mu:smus		*

➙ *2OCP$_\sigma$ **can not predict that the blocking of reduplication is a lexical property of *some* pseudoreduplicated stems**

❧ but Ditidaht showed an asymmetry: some pseudoreduplicated stems block reduplication (47), others not (48)

Identity Avoidance: Pseudoreduplicated stems in Manam

- in contrast to *DupDup, an account based on the markedness of too many identical elements can in principle predict that a smaller reduplicant surfaces to avoid too many repetitions

- but for Manam, this solution needs to be based on *3OCP$_\sigma$ 'Assign * for four identical instances of identical syllables' – a **problematic instance of counting in grammar**?

Identity Avoidance and pseudoreduplicated stems: Manam

(49) *Internal RED unable to trigger smaller reduplicant*

ragogo-RED$_{Adj}$	*3OCP$_\sigma$	RED$_{ADJ}$=φ	MAX-BR$_{ADJ}$=φ
a. ragogo		*	***!*
☞ b. ragogo∼go		*	**
c. ragogo∼gogo	*!		

*3OCP$_\sigma$: Summary of predictions

(50)

1.	**Avoidance of multiple reduplicants**	
	triggered by *2OCP$_\sigma$	Ahousaht (46)
2.	**The Superset effect**	
	Only one reduplicant is realized	(cf. *DupDup)
3.	**Pseudoreduplicated stems**	
	A. Surface ban: No lexical contrast possible	Ditidaht (47)&(48)
	B. Smaller reduplicant avoids *3OCP$_\sigma$	Manam (49)

Summary and conclusion

Summary: Predictions of the accounts

	PA	*DupDup	*2/3xOCP
Avoidance of multiple reduplicants	☺	☺	☺
Pseudored. stems block reduplication	☺	☺	☺
Some pseudored. stems block reduplication	☺	☺	☹
Pseudored. stems trigger smaller reduplicant	☺	☹	☺
The superset effect of the survivor	☺	☹	☹

Summary: Predictions of the accounts

- the challenges of **pseudoreduplicated stems**:
  - in Ditidaht, some block reduplication, others not: impossible if it is avoidance of too many identical material
  - in Manam, a smaller reduplicant helps: impossible if it is avoidance of too many marked exponence types

- the challenge of the **superset effect**: impossible in BRCT if the avoidance of multiple reduplication is the non-realization of one reduplicant

Summary: Main claim

- multiple reduplication avoidance is not the avoidance of a marked exponence type or as avoidance of a marked phonological configuration: it is the **avoidance of an unnecessary repair**
- an account that is **purely phonological** in that it does not require reduplication-specific machinery: Reduplicative morphemes simply lack segmental content
- this predicts the **'typology' of multiple reduplication** avoidance discussed that is problematic for the alternatives

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