Class 4
Stress & Reduplicant Shape

2/15/18

1 Reduplicant shape as prosodic TETU

- **Summary of last time:**
  - Unmarked features can emerge in reduplication via TETU.
  - If we adhere to the a-templatic approach, partial reduplication is minimal (*size restrictor* $\gg$ MAX-BR), subject to extension by high ranked constraints.
  - (From last week) Truncation often results in unmarked *prosodic* shapes.

⇒ **My claim (not completely new):** Reduplicant shape effects previously attributed to prosodic templates (either as URs or as constraints) can be better modeled as prosodic TETU.
  - Specifically, in a given language, the shape of the reduplicant often follows from directly from the prosodic constraints which are otherwise active in the language (see Zukoff 2016).

2 Stress determines reduplicant shape in Diyari

- Australian languages commonly display quantity insensitive left-to-right alternating stress (QI L→R) without stressed final syllables (left-to-right binary syllabic trochees, in foot-based terms).
- Many also display "cyclic stress" (Poser 1989, Crowhurst 1994, Berry 1998, Kenstowicz 1998, Alderete 2009, Stanton 2014), i.e. stress in morphologically complex words is sensitive to the stress pattern of their morphological base(s).
- When these languages display prefixal partial reduplication, **it is always disyllabic** (Zukoff 2016).

⇒ **My claim:** This fact about reduplicant **follows directly from the stress system**.
  - It doesn't need to refer to templates. In fact, the possibility of using templates makes the wrong typological prediction for these languages.

- I'll illustrate this with data from Diyari (Austin 1981).

2.1 Diyari Stress

- In monomorphemic forms, Diyari displays the basic QI L→R pattern, as illustrated by the data in (1):

(1) Diyari simplex stress (Austin 1981:38–40)

a. 2 syllables: ***σ́σ*** — *wílha* 'woman', *kánku* 'boy', *yátha* 'to talk'
b. 3 syllables: ***σ́σσ*** — *pínarru* 'old man', *tyílparku* (bird type), *kánhini* 'mother's mother'
c. 4 syllables: ***σ́σσ̀σ*** — *ngándrawàlka* 'to close', *wílhapìna* 'old woman'

- In a foot-free stress framework, the stress behavior of Diyari (and other QI L→R stress languages) can be modeled with the constraints in (2):

(2) Foot-free stress constraints for QI L→R stress systems (based in part on Gordon 2002)

a. **StressLeft:** Assign one * if the initial syllable is not stressed. (= *#σ̆)
b. **NonFinality:** Assign one * if the word-final syllable is stressed. (= *σ́#)
c. ***Clash:** Assign one * for each sequence of two adjacent stressed syllables. (= *σ́σ́)
d. ***Lapse:** Assign one * for each sequence of two adjacent unstressed syllables. (= *σ̆σ̆)

- The ranking of these constraints shown in (3), where *Lapse is the only dominated constraint, generates the basic stress pattern of Diyari and other similar languages, as demonstrated in tableau (4).

(3) Simplex stress ranking in Diyari

StressLeft *Clash NonFinality

*Lapse

(4) Stress in 3 syllable simplex words: Diyari /pinaru/ → [pínʌru] 'old man' (Austin 1981:39)

/pinaru/	StressLeft	*Clash	NonFinality	*Lapse
a. ☞ pínʌru [100]				*
b. pínʌrù [102]			*!	
c. pínʌ̀ru [120]		*!		
d. pinʌ́ru [010]	*!			

- In three syllable words, (at least) one of the four constraints **must** be violated. Diyari chooses to violate *Lapse, as in optimal candidate (4a).
  - Candidate (4b): avoids lapse by stressing the final syllable; violates NonFinality.
  - Candidate (4c): avoids lapse by stressing second syllable; violates *Clash.
  - Candidate (4d): avoids lapse by stressing medial syllable not initial; violates StressLeft.
  - (A pathological candidate **pinʌ́rù* would violate all three of the top-ranked constraints simultaneously.)

- Data in (5) demonstrates that Diyari stress is "cyclic": the stress pattern of a morphological base must be adhered to in its morphological derivatives, even if this leads to new violations of markedness constraints.

(5) Diyari cyclic stress (a,b from Austin 1981:40, c,d from Berry 1998:39)

a. i. 'man' *kárna*
ii. 'man-loc' *kárna-nhi*
iii. 'man-loc-ident' *kárna-nhi-màtha* (not **kárna-nhì-matha*)

b. i. 'man' *kárna*
ii. 'man-pl' *kárna-wàr̲a*
iii. 'man-pl-loc' *kárna-wàr̲a-ngu*
iv. 'man-pl-loc' *kárna-wàr̲a-ngu-màtha* (not **kárna-wàr̲a-ngù-matha*)

c. 'hill-charac-prop' *máda-la-nthu* (not **máda-là-nthu*) [presumed bases: *máda*, *máda-la*]
d. 'mud-loc' *púlyudu-nhi* (not **púlyudù-nhi*) [presumed base: *púlyudu*]
(cf. simplex (1c): *ngándrawàlka*, not **ngándrawalka*)

- This behavior can be explained by the Base-Derivative faithfulness constraint (following Benua 1997; see also Stanton 2014) defined in (6):

(6) **BD-IDENT(stress):** Assign one * for each syllable in the derivative in which the presence or absence of stress differs from the corresponding syllable of the base.

- When this constraint is ranked above *LAPSE (just as the other constraints needed to be to explain the simplex pattern), it derives the cyclic behavior, especially in concert with NONFINALITY:

(7) Cyclic stress: Diyari /mada-la-n̪t̪u/ → [mʌ́.dʌ-lʌ-n̪.t̪u] 'hill-CHARAC-PROP' (Berry 1998:39)

INPUT: /mada-la-n̪t̪u/ BASE: [mʌ́.dʌ-lʌ]	NONFINALITY	BD-IDENT[stress]	*LAPSE
a. ☞ mʌ́.dʌ-lʌ-n̪.t̪u [10-0-0]			**
b. mʌ́.dʌ-lʌ̀-n̪.t̪u [10-2-0]		*!	
c. mʌ́.dʌ-lʌ-n̪.t̪ù [10-0-2]	*!		*

- ○ The double lapse in optimal candidate (7a) is forced by the requirement to retain the same stress values as the base ([mʌ́.dʌ-lʌ]), namely that the first suffix [-lʌ] was *unstressed* (due to NONFINALITY).

⋆ The combination of BD-IDENT(stress) and NONFINALITY make it such that
 (i) no root-final syllables ever bear stress, because they are word-final in simplex forms,
 (ii) no 1σ suffixes ever bear stress, because they are word-final when they are the rightmost suffix.

- This yields the total stress ranking in (8):

(8) STRESSLEFT *CLASH NONFINALITY BD-IDENT[stress]
*LAPSE

⇒ The undominated stress constraints will, on their own, be sufficient to generate the disyllabic reduplication pattern.

2.2 How stress determines Diyari reduplication

- Diyari, like many other Australian languages, has a consistent prefixal disyllabic reduplication pattern (Austin 1981; for analyses see McCarthy & Prince 1986, 1994a,b, *et seq.*).
- The pattern is illustrated in (9):

(9) Diyari Reduplication (Austin 1981:38–40)

Non-reduplicated stem			Reduplicated stem	
Two syllable bases				
a.	‘woman’	*wilha*	*wilha-wilha*	[wíd̪l̪ʌ-wíd̪l̪ʌ]
b.	‘to talk’	*yatha*	*yatha-yatha*	[jɛ́t̪ʌ-jɛ́t̪ʌ]
c.	‘boy’	*kanku*	*kanku-kanku*	[kʌ́nku-kʌ́nku]
Three syllable bases				
d.	bird type	*tyilparku*	*tyilpa-tyilparku*	[tʲílpʌ-tʲílpʌrku]
e.	‘mother’s mother’	*kanhini*	*kanhi-kanhini*	[kʌ́d̪n̪i-kʌ́d̪n̪ini]
f.	‘father’	*ngapiri*	*ngapi-ngapiri*	[ŋʌ́pi-ŋʌ́piri]
g.	‘cat fish’	*ngankanthi*	*nganka-ngankanthi*	[ŋʌ́nkʌ-ŋʌ́nkʌn̪t̪i]

- Without using any constraints that mention reduplicant size/shape, the ranking from (8) derives a disyllabic reduplicant:

(10) Schematic Diyari reduplication: $2\sigma \succ 1\sigma$

INPUT: /RED, $\sigma\sigma\sigma\sigma$/ BASE: [$\acute{\sigma}\sigma\grave{\sigma}\sigma$] (1020)		*CLASH	STRESSL	BD-IDENT[stress]	*LAPSE
a. ☞ $\acute{\sigma}\sigma$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[10-1020]				
b. $\acute{\sigma}$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[1-1020]	*!			
c. σ-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[0-1020]		*!		
d. $\acute{\sigma}$-$\sigma\grave{\sigma}\sigma\sigma$	[1-0200]			*!**	*

- Any candidate w/ a monosyllabic reduplicant incurs a fatal violation of one of the STRESSREQ constraints.
  - Candidate (10b): faithful to base stress, stresses leftmost syllable; but **creates a clash**.
  - Candidate (10c): faithful to base stress, no clash; but **doesn’t stress leftmost syllable**.
  - Candidate (10d): stresses leftmost syllable, no clash; **but re-stresses base**.
- Adding an extra “buffer” syllable to the reduplicant escapes all of these problems.
  - Candidate (10a) can stress the initial syllable without causing a clash or re-stressing the base.

- But adding any additional syllables does not improve on the stress constraints (they’re already perfectly satisfied).
  - The size restrictor constraint now gets to assert itself, selecting the minimal reduplicant among remaining candidates (i.e. those $> 1\sigma$).
  - Therefore, a 2σ reduplicant (11b) is still preferable to a 3σ reduplicant (11c) or 4σ (11d) reduplicant.

(11) Schematic Diyari reduplication: $2\sigma \succ 4\sigma$

INPUT: /RED, $\sigma\sigma\sigma\sigma$/ BASE: [$\acute{\sigma}\sigma\grave{\sigma}\sigma$] (1020)		*CLASH, etc.	ALIGN-ROOT-L	MAX-BR
a. $\acute{\sigma}$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[1-1020]	*!	σ	$\sigma\sigma\sigma$
b. ☞ $\acute{\sigma}\sigma$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[10-1020]		$\sigma\sigma$	$\sigma\sigma$
c. $\acute{\sigma}\sigma\sigma$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[100-1020]		$\sigma\sigma\sigma$!	σ
d. $\acute{\sigma}\sigma\grave{\sigma}\sigma$-$\acute{\sigma}\sigma\grave{\sigma}\sigma$	[1020-1020]		$\sigma\sigma\sigma!\sigma$	

2.3 Typology and the relative ranking of the size restrictor (or templatic constraint)

- To explain the Diyari facts in this way, the size restrictor has to be ranked below the undominated stress constraints, or else it would select a 1σ reduplicant.

- **Typological claim:** Among all Australian languages with the Diyari stress system that also have prefixal partial reduplication, every single one (n=12) has a fixed disyllabic reduplicant (Zukoff 2016).
  - Crucially, none have a fixed monosyllabic reduplicant.
- This means that, in all of these cases, the size restrictor ranks below the undominated stress constraints.

⇒ **My conclusion:** Size restrictors **must** rank below stress constraints (maybe any constraints) which are unviolated in the language outside of reduplication.
  - Maybe some meta-ranking inherent to the grammar? Maybe something to do with acquisition order or learning bias? (See Zukoff 2016, 2017 for speculations.)
- The same point would hold if we allowed templatic constraints/URs.
  - If you had free choice of templatic constraint, it would need to be restricted to ranking below unviolated constraints.
  - If you had free choice of templatic UR, whatever constraints govern the faithful realization of that UR would need to be restricted to ranking below unviolated constraints.

- More generally, what this points to is that the grammar is inclined to use reduplicant shapes that optimize the prosodic constraints of the language.
- Suggests that stipulated templatic constraints/URs specific to reduplication is not the right analytical route.

3 Stress determines reduplicant shape in Ponapean

- In Ponapean (Austronesian; Rehg & Sohl 1981, Rehg 1993), reduplicant size is *prosodically variable*, but *predictable*.
  - It has partial reduplication at the left edge, which varies between 1μ and 2μ.
  - *Central prosodic fact*: Ponapean has *strictly alternating* stress by mora from right to left.

- This variation will be describable in essentially the same way as the fixed reduplicant size in Australian:
  1. Stress constraints which are unviolated elsewhere in the language must be satisfied in reduplication.
  2. Subject to these constraints, reduplication is minimal.
- An apparent disruption to this generalization results from there being a high ranked phonotactic constraint which can also force extension.

→ These are all the hallmarks of an a-templatic approach, even though the variation is between different prosodic shapes which we often observe as invariant "templates" in other languages.

3.1 Ponapean Stress

- In Ponapean, the rightmost mora always bears primary stress (Rehg 1993; Kennedy 2002:223), assuming final consonants are non-moraic. (Medial codas are moraic.)

(12) **StressR**$_\mu$: Assign one * if the final mora is unstressed. (= $*\breve{\mu}\#$)

- Counting leftward from this main stress, there is strictly alternating stress by mora:

(13) a. ***CLASH**$_\mu$: Assign one * for each sequence of two adjacent stressed moras. (= *$\acute{\mu}\acute{\mu}$)
b. ***LAPSE**$_\mu$: Assign one * for each sequence of two adjacent unstressed moras. (= *$\breve{\mu}\breve{\mu}$)

- Predictable difference in the stress of the initial mora of a word depending on its moraic length (parity):

(14) i. **Odd moraic parity words will have stress on the initial mora:**
1μ: *pá*; 3μ: *lì.aán*, *dùupék*
ii. **Even moraic parity words will *not* have stress on the initial mora:**
2μ: *duné*, *dilíp*; 4μ: *ri.àalá*, *toòroór*, *soùpisék*; 6μ: *waàntùuké*

- This difference will be crucial in explaining the distribution of reduplicant shapes.

3.2 Ponapean Reduplication

- Kennedy (2002) (building on McCarthy & Prince 1986) shows that the data can be grouped based on mora count of the stem and mora count of the reduplicative prefix.
  - We won't be concerned with the different segmental shapes that the bimoraic reduplicants can take. They are determined by segmental phonotactics. See Kennedy (2002) for some discussion.

(15) Ponapean reduplication (Kennedy 2002:225)

	1-mora stem	2-mora stem	3-mora stem	4-mora stem
2-mora reduplicant	**pàa**.pá **tè.pi**.tép **dòn**$_\mu$.dód	**duǹ**$_\mu$.du.né **si.pì**.si.péd **diǹ**$_\mu$.di.líp	**dùu**.dùu.pék **mèe**.mèe.lél **lìi**.lì.aán	**riì**.ri.àa.lá
1-mora reduplicant		**dù**.duúp		**tò**.toò.roór **sò**.soù.pi.sék

  - Also one example of a 6μ stem: *waàn.tùu.ké* → ***wà****.waàn.tùu.ké* (Kennedy 2002:224)

- The key to explaining the pattern: **the reduplicant must always bear a stress** (Kennedy 2002:225–226)

(16) **STRESS-TO-RED**: All reduplicants must have at least one stressed mora.

3.2.1 Odd parity stems

- This potentially conflicts with undominated *CLASH$_\mu$ for **odd parity** stems.
  - Odd parity stems have initial stress due to the alternating rhythm (14.i).
  - If the reduplicant were monomoraic, and bore its required stress, then there would be a **clash**.
  - To avoid this, odd parity stems always have **bimoraic reduplicants**:

(17) Odd parity stems have bimoraic reduplicants
a. pá$_\mu$ → pà$_\mu$a$_\mu$-pá$_\mu$ (not *pà$_\mu$-pá$_\mu$)
b. té$_\mu$p → tè$_\mu$.pi$_\mu$-té$_\mu$p (not *tè$_\mu$-té$_\mu$p)
c. dó$_\mu$d → dò$_\mu$n$_\mu$-dó$_\mu$d (not *dò$_\mu$-dó$_\mu$d)
d. lì$_\mu$.a$_\mu$á$_\mu$n → lì$_\mu$i$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n (not *lì$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n)
e. dù$_\mu$u$_\mu$.pé$_\mu$k → dù$_\mu$u$_\mu$-dù$_\mu$u$_\mu$.pé$_\mu$k (not *dù$_\mu$-dù$_\mu$u$_\mu$.pé$_\mu$k)

- The non-minimal copying (i.e. $2\mu \succ 1\mu$) follows if the high ranked stress constraints STRESS-TO-RED and *CLASH$_\mu$ outrank the relevant size restrictor.
  - I'll use ALIGN-ROOT-L, but defined over moras. (There are other, perhaps better, ways to do this.)
- ALIGN-ROOT-L(μ) will again ensure that the extension is minimal, even when copying extra doesn't introduce any stress problems (i.e. $2\mu \succ 3\mu$).

(18) Odd parity stems → bimoraic reduplicants: (17d) lì$_\mu$.a$_\mu$á$_\mu$n → lì$_\mu$i$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n

/RED, li$_\mu$a$_\mu$a$_\mu$n /			STRESS-TO-RED	*CLASH$_\mu$	ALIGN-ROOT-L(μ)
a.	li$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n	[0-201]	*!		μ
b.	lì$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n	[2-201]		*!	μ
c. ☞	lì$_\mu$i$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n	[20-201]			$\mu\mu$
d.	li$_\mu$.à$_\mu$a$_\mu$-lì$_\mu$.a$_\mu$á$_\mu$n	[020-201]			$\mu\mu\mu$!

3.2.2 Even parity stems

- Even parity stems are unencumbered by the clash problem.
  - The alternating rhythm places stress on the peninitial mora, rather than the initial one (14.ii).
  - This means that a monomoraic reduplicant can be stressed without ever causing a clash.
- This is indeed the case: even parity stems *with a (super)heavy initial syllable* have a **monomoraic reduplicant** — the minimal reduplicant shape.

(19) Heavy-syllable–initial even parity stems have monomoraic reduplicants

a. du$_\mu$ú$_\mu$p → dù$_\mu$-du$_\mu$ú$_\mu$p (not *dù$_\mu$u$_\mu$-du$_\mu$ú$_\mu$p, *du$_\mu$ù$_\mu$-du$_\mu$ú$_\mu$p)
b. to$_\mu$ò$_\mu$.ro$_\mu$ó$_\mu$r → tò$_\mu$-to$_\mu$ò$_\mu$.ro$_\mu$ó$_\mu$r (not *tò$_\mu$o$_\mu$-to$_\mu$ò$_\mu$.ro$_\mu$ó$_\mu$r, *to$_\mu$ò$_\mu$-to$_\mu$ò$_\mu$.ro$_\mu$ó$_\mu$r)
c. so$_\mu$ù$_\mu$.pi$_\mu$.sé$_\mu$k → sò$_\mu$-so$_\mu$ù$_\mu$.pi$_\mu$.sé$_\mu$k (not *sò$_\mu$u$_\mu$-so$_\mu$ù$_\mu$.pi$_\mu$.sé$_\mu$k, *so$_\mu$ù$_\mu$-so$_\mu$ù$_\mu$.pi$_\mu$.sé$_\mu$k)
d. wa$_\mu$à$_\mu$n$_\mu$.tù$_\mu$u$_\mu$.ké$_\mu$ → wà$_\mu$-wa$_\mu$à$_\mu$n$_\mu$.tù$_\mu$u$_\mu$.ké$_\mu$
(not *wà$_\mu$a$_\mu$-wa$_\mu$à$_\mu$n$_\mu$.tù$_\mu$u$_\mu$.ké$_\mu$, *wa$_\mu$à$_\mu$-wa$_\mu$à$_\mu$n$_\mu$.tù$_\mu$u$_\mu$.ké$_\mu$)

- When an even parity stem begins with a *light* initial syllable, it displays a bimoraic reduplicant, contrary to the preferred minimal monomoraic shape, despite not needing it for clash purposes.

(20) Light-syllable–initial even parity stems have bimoraic reduplicants

a. du$_\mu$.né$_\mu$ → du$_\mu$ǹ$_\mu$-du$_\mu$.né$_\mu$ (not *dù$_\mu$-du$_\mu$.né$_\mu$)
b. di$_\mu$.lí$_\mu$p → di$_\mu$ǹ$_\mu$-di$_\mu$.lí$_\mu$p (not *dì$_\mu$-di$_\mu$.lí$_\mu$p)
c. si$_\mu$.pé$_\mu$d → si$_\mu$.pì$_\mu$-si$_\mu$.pé$_\mu$d (not *sì$_\mu$-si$_\mu$.pé$_\mu$d)
d. ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$ → ri$_\mu$ì$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$ (not *rì$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$)

- The variation within even parity stems is not stress-related, but instead due to a phonotactic restriction:
  - A monomoraic reduplicant for light-syllable–initial stems would lead to two identical light (i.e. monomoraic) syllables next to each other.
  - Therefore, a constraint which bans adjacent identical light syllables generates the data.[1]

[1] The restriction to light syllables is crucial here, since, in trimoraic stems with an initial long vowel, the reduplicant is identical to the first syllable of the root: e.g. (17e) dù$_\mu$u$_\mu$.pé$_\mu$k → dù$_\mu$u$_\mu$-dù$_\mu$u$_\mu$.pé$_\mu$k, not *du$_\mu$ù$_\mu$pi$_\mu$-dù$_\mu$u$_\mu$.pé$_\mu$k. A general constraint against all sorts of adjacent identical syllables would rule out such forms, and thus is not the formulation we want.

- I propose to use a version of Yip's (1995) *REPEAT constraint:

(21) ***REPEAT(light)**: No identical adjacent light syllables.

  - Hicks Kennard (2004) employs this constraint (without the restriction to light syllables) in her analysis of the cognate pattern in the closely related language Tawala.
  - This serves as suggestive comparative evidence in favor of the use of such a constraint in the analysis.

- The ranking *REPEAT(light) $\gg$ ALIGN-ROOT-L(μ) causes light-syllable–initial roots to extend their reduplicants to two moras (22), but has no effect on heavy-syllable–initial roots (23).

(22) Light-syllable–initial even parity stems $\rightarrow$ *REPEAT effect: (20d) ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$ $\rightarrow$ ri$_\mu$ì$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$

/RED, ri$_\mu$a$_\mu$a$_\mu$la$_\mu$/		STRESS-TO-RED	*LAPSE$_\mu$	*REPEAT (light)	ALIGN-ROOT-L(μ)
a. ri$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$	[0-0201]	*!	*!	*	μ
b. rì$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$	[2-0201]			*!	μ
c. ☞ ri$_\mu$ì$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$	[02-0201]				$\mu\mu$
d. rì$_\mu$i$_\mu$-ri$_\mu$.à$_\mu$a$_\mu$.lá$_\mu$	[20-0201]		*!		$\mu\mu$

(23) Heavy-syllable–initial even parity stems $\rightarrow$ no *REPEAT effect: (19a) du$_\mu$ú$_\mu$p $\rightarrow$ dù$_\mu$-du$_\mu$ú$_\mu$p

/RED, du$_\mu$u$_\mu$p/		STRESS-TO-RED	*LAPSE$_\mu$	*REPEAT (light)	ALIGN-ROOT-L(μ)
a. du$_\mu$-du$_\mu$ú$_\mu$p	[0-01]	*!	*!		μ
b. ☞ dù$_\mu$-du$_\mu$ú$_\mu$p	[2-01]				μ
c. du$_\mu$ù$_\mu$-du$_\mu$ú$_\mu$p	[02-01]				$\mu\mu$!
d. dù$_\mu$u$_\mu$-du$_\mu$ú$_\mu$p	[20-01]		*!		$\mu\mu$!

- This gives us the following ranking:

(24) Ponapean stress and reduplication ranking

STRESS-TO-RED STRESSR$_\mu$ *CLASH$_\mu$ *LAPSE$_\mu$ *REPEAT(light)

|

ALIGN-ROOT-L(μ)

4 Summary

- In Ponapean, the reduplicant seeks to be minimal (1μ).
  - This is successful in even parity stems with heavy or superheavy initial syllables.
- Extension can be motivated in two ways:
  1. *CLASH$_\mu$ + STRESS-TO-RED in odd parity stems
  2. *REPEAT(light) in even parity stems with light initial syllables

- The a-templatic approach thus allows us to derive both fixed prosodic shapes (as in Australian) and variable prosodic shapes (in Ponapean) without any specification of reduplicant shape anywhere in the grammar.
  - All that cases such as these require is for the otherwise unviolated stress constraints to dominate the size restrictor.
  - The "templatic" effects then fall out simply through constraint interaction.

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