Morpho-Semantics of Verbal Reduplication: the Case of Mauritian

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1 Verbal Reduplication in Mauritian

Mauritian exhibits different types of verbal reduplication:

- Syntactic level: iteration, contrastive or prototypical redup. and predicate doubling.
- Morphological level: attenuative redup.

We here focus on morphological reduplication.

1.1 Empirical Background

1.1.1 Mauritian morphology

- Mauritian shows a verb form alternation, the long form (LF) and the short form (SF), among which 30% are syncretic.

- This morphological alternation seems to be the remnants of French inflectional morphology. However, unlike French, Mauritian shows no inflection w.r.t. tense, mode and aspect or to number and person.

(1) a. Mo/to/li/nou/zot manz kari.  
   1SG/2SG/3SG/1PL/2/3PL eat.SF curry  
   ‘I/you/he/she/they eat(s) curry.’

b. Mari/Zan manz kari.  
   Mary eat.SF curry  
   ‘Mary eats curry.’

c. Mo ti manz kari.  
   1SG PST eat.SF curry  
   ‘I ate curry.’

d. Mo pou manz kari.  
   1SG IRR eat.SF curry  
   ‘I will eat curry.’
The alternation is not phonologically predictable: neither form is predictable form the other (Henri, 2010; Bonami & Henri, 2010).

\[
\begin{array}{c|c|c|c|c|c|c|c|c|c}
\text{LF} & \text{brije} & \text{fini} & \text{vini} & \text{kōsiste} & \text{egziste} & \text{amōde} & \text{demōde} \\
\downarrow & & & & & & & \\
\text{SF} & \text{brije} & \text{brij} & \text{fini} & \text{vin} & \text{kōsiste} & \text{egzis} & \text{amōd} & \text{deman}
\end{array}
\]

\[
\begin{array}{c|c|c|c|c|c|c|c|c|c}
\text{LF} & \text{paste} & \text{pas} & \text{bāde} & \text{ban} & \text{fuiz} & \text{fuiz} & \text{feve} & \text{fēa} \\
\uparrow & & & & & & & & & \\
\text{SF} & \text{pas} & \text{ban} & \text{bāde} & \text{ban} & \text{fuiz} & \text{fuiz} & \text{feve} & \text{fēa}
\end{array}
\]

- **Deriving the SF form the LF:**
  
  * Verbs with a LF in -e tend to drop the final vowel when it is preceded by a single consonant.
  * -e never drops after a branching onset.
  * Both situations are found when the verb penultimate syllable has a nonempty coda (kōsiste vs. egziste) or when the single consonant is a glide (brije ‘mix’ vs. brije ‘glow’).
  * Almost all verbs with a LF in -i are syncrétic, but there are two exceptions (soēti and vini), which are not phonologically distinguishable from syncrétic verbs (resp. paēti and fini).
  * Only verbs with a final consonant in the LF are uniformly syncrétic.

- **Deriving the LF form the SF:**
  
  * verbs with a vowel-final SF are always syncrétic.
  * verbs with a consonant-final SF may have a syncrétic LF, a LF in -e or a LF in -i: brize vs friz, arete vs aparet, mine vs vini, poēte vs soēti

The more predictive cell is the LF since the relation from the LF to the SF is simpler. We thus consider the LF to be the base form (Bonami & Henri, 2010).

### 1.1.2 Distribution

The two forms appear in contexts that do not form a natural class (Henri & Abeillé, 2008; Henri, 2010).

**Syntax**

- The SF is triggered by nonclausal complements (2).

(2) a. Mo ti manz/*manze kari.
    1SG PST eat.SF/LF curry
    ‘I ate curry.’
b. Sa stati la dat/*date depi lepok lager.
DEM statue date.SF/LF from period war
‘This statue dates back from the war period.’

- It also appears with predicative APs (3-a) and locative goals (3-b).

- Verbs with a clausal complement take a SF only if another nonclausal complement precedes it (3-c).

(3)  
   a. Nou res/*reste malad.
        1PL stay.SF/LF sick
       ‘We are still sick.’
   b. Li pe mars lor disab.
        3SG.M PROG walk.SF on sand
       ‘He is walking towards the sand.’
   c. Mari inn demann/*demande [ ar tou dimounn] [ kiler la ].
      Mary PERF ask.SF/LF with all people what_time DEF
     ‘Mari asked everyone what time it was.’

- Finally note that the postverbal argument of unaccusative verbs counts as a complement (4)

(4)  
     Inn ariv/*arive enn aksidan.
     PRF arrive.SF/LF INDF accident
    ‘There has been an accident.’

- Conversely, the LF appears when the verb has no complement, (5-a), the complement is extracted (5-b), or it is clausal (5-c).

(5)  
   a. Mo ti manze/*manz.
        1SG PST eat.LF/SF
      ‘I ate.’
   b. Tibaba ki mo mama ti veye/*vey toule zour.
      little_baby COMP POSS mother PST look_after.LF/SF every day
     ‘It’s little babies that my mother looked after every day.’
   c. Mari inn demande/*demande [ kiler la ] [ ar tou dimounn] .
      Mary PERF ask.SF/LF with all people what_time DEF
     ‘Mari asked everyone what time it was.’

- Adjuncts also trigger the LF.

(6)  
     Li pe marse lor disab.
     3SG PROG walk.LF on sand
     ‘He is walking on the sand.’

- The alternation is not phonologically conditioned: a complement that is not adjacent to the verb still triggers the SF.
(7) Nou res/*reste toultan malad.
1PL stay.SF/LF always sick
‘Lit. We remain always sick.’

Discourse

- Interestingly, the LF may appear with a nonclausal complement under certain discursive conditions, precisely in counter-oriented moves (deferments, counter-implicative and counter-propositional moves).

☞ In such contexts, the LF is analyzed as an exponent of Verum Focus (Henri et al., 2008; Henri, 2010).

(8) Mo ti krwar Mari pa MANZE/*MANZ kari poul!
1SG PST think Mary NEG eat.LF/SF curry chicken
‘I thought Mary DIDN’T eat chicken curry!’

Morphology

☞ Both forms are used in lexeme formation processes, in particular, in “attenuative reduplication” (Baker, 2003).

1.2 Types of reduplication

1.2.1 Syntactic level

- Predicate doubling (9) and iteration (10). We examine iteration because of its direct relevance to the matter at hand. Iteration may give rise to a durative (10-b), a cumulative (10-c) or a pluractional (10-a) reading.

(9) Ala galoupe (ki) Mari galoupe la.
PART run.LF that Mary run.LF DEF
What a runner Mary is!

(10) a. Zan nek sant sega, sant sega enn lazourne.
John like.SF sing.SF sega sing.SF sega
John merely sings the sega, sings the sega all day.

b. Mo’nn get sa po fler la tonbe, tonbe, tonbe depi lao.
1SG’PERF watch.SF DEM pot flower DEF fall.LF, fall.LF, fall.LF from up
I have watched this flower pot fall, fall, fall from upstairs.

c. Mari anvi dormi, dormi, dormi.
Mary want.SF sleep.LF, sleep.LF, sleep.LF
Mary wants to sleep, sleep, sleep.

- Prototypical or contrastive reduplication (Ghomeshi et al., 2004): restricted to a prototypical or an intensive reading.
<table>
<thead>
<tr>
<th></th>
<th>conj.</th>
<th>N of copies</th>
<th>base form</th>
<th>reduplicant</th>
<th>aspectual type</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Iteration</strong></td>
<td>ek 'and'</td>
<td>n</td>
<td>SF/LF</td>
<td>SF/LF</td>
<td>activities /accomplishment</td>
</tr>
<tr>
<td><strong>Contrastive Red.</strong></td>
<td>me 'but'</td>
<td>1</td>
<td>LF</td>
<td>LF</td>
<td>any (?)</td>
</tr>
</tbody>
</table>

(11) Zan kontan sante sante.
John like.SF sing.LF sing.LF
John likes to really sing

These types are probably available crosslinguistically (at least for iteration and prototypical reduplication).

- Both prototypical reduplication and iteration show properties that distinguishes them from “attenuative” reduplication.
  - They can both be coordinated- additive in one case (12) and adversative in the other (13).

(12) Li sante (ek) sante (ek) sante.
3SG (and) sing.SF (and) sante.SF sante.SF
He keeps singing (and) singing (and) singing.

(13) Sa boug la sante me sante!
DEM man DEF sing.LF but sing.LF
This man sings but sings! (=He sings so well)

- The verb is always LF with prototypical reduplication while with iteration, verb form is correlated to syntactic constraints established above.
- Iteration allows more than two copies while contrastive reduplication is restricted to only two copies.

1.2.2 Morphological level

- We compare the above-mentioned types with “attenuative” reduplication, a very productive lexeme formation process.
  - Not syntactic: has properties of a simple verb.
  - Not iconic: has different interpretations associated with a weakening effect.

(14)    a. Zan kontan sant-sante.
      John like.SF sing-sing.LF
      John likes to hum.

    b. Zan kontan sant-sant sega.
      John like.SF sing-sing.SF sega
      John likes to hum the sega.

    c. Mo’nn dormi-dormi.
      1SG’PERF sleep-sleep.LF
      I have slept sporadically
2 Morphology of AR

2.1 Why is it morphology?

Interestingly, reduplicated verbs show a morphotactic import: The SF is the concatenation of two copies of the base’s SF, whereas its LF is the concatenation of the base’s SF with the base’s LF. It can be argued that the reduplicant is SF because it analyzes the base as a complement. But the phenomenon is not syntactic.

If this was the case then we would have problems determining what kind of verbal complement a verb like *manze* would take since it is not a raising or a control verb. The base does not have properties of a phrasal complement since it does not allow any marking (possible with modals).

(15) a. Zan ti paret pe sante.
John PST seem PROG sing.LF
John seemed to be singing.
b. Zan ti paret touzour pe sante.
John PST seem always PROG sing.LF
John always seemed to be singing.

John sing.SF always sing.LF
b. *Zan sant souvan sante.
John sing.SF often sing.LF
c. *Pol ti manz pe manz poul.
Paul PST eat.SF PROG eat.SF chicken

• They can be iterated like simple verbs.

(17) a. Mari pas so letan manz-manze, manz-manze mem.
Mary pass.SF 3SG.POSS time eat-eat.LF eat-eat.LF still
Lit. Mary spends her time only nibbling, nibbling.
b. Zan sant-sante (ek) sant-sante (ek) sant-sante.
John sing-sing.LF and sing-sing.LF and sing-sing.LF
= John is always humming.

• The base and its reduplicant cannot be coordinated.

(18) *Mari manz ek manze.
Mary eat.SF and eat.LF

• With iteration or contrastive reduplication, all occurrences of the verb bears final-syllable high tone while with attenuative reduplication only the last syllable of the base bears the high tone.

(19) a. Li nek sant-santé.
b. Li santé, santé, santé

c. *Li nek santé-santé

- **It is not phonology**: the reduplicant is not phonologically predictable but corresponds to the SF.

- There is moreover, no restrictions with respect to syllable structure.

<table>
<thead>
<tr>
<th>regular verb</th>
<th>reduplicated verb</th>
<th>syllable structure</th>
</tr>
</thead>
<tbody>
<tr>
<td>reste</td>
<td>res-reste</td>
<td>CVC-CVCCV</td>
</tr>
<tr>
<td>manze</td>
<td>manz-manze</td>
<td>CVC-CVCV</td>
</tr>
<tr>
<td>balie</td>
<td>balie-balie</td>
<td>CVCV-CVCV</td>
</tr>
<tr>
<td>amene</td>
<td>amenn-amene</td>
<td>VCVC-VCVCV</td>
</tr>
<tr>
<td>pak</td>
<td>pak-pak</td>
<td>CVC-CVC</td>
</tr>
<tr>
<td>zwe</td>
<td>zwe-zwe</td>
<td>CCV-CCV</td>
</tr>
</tbody>
</table>

**Table 1: Syllable structure of reduplicated verbs**

### 2.2 Distinctive properties

- They obey same syntactic constraints as regular verbs. They are SF when the verb is followed by a (non-clausal) complement (20-b) and are LF with no complements (20-a), an extracted (21-a) or clausal one (21-b) or when followed an adjunct (22-b).

(20) a. Zan kontan sant-sant sega.
John like.SF sing-sing.SF sega
John likes to hum the sega.

b. Zan kontan sant-sante.
John like.SF sing-sing.LF
John likes to hum.

(21) a. Ki sa bann madam la inn koup-koupe?
what DEM PL woman DEF PERF cut-cut.SF
What have these women chopped?

b. Mo’nn atann-atann ki li vini pou mo ale.
3SG.NOM’PERF wait-wait.LF that 3SG come.LF for 1SG.NOM go.LF
I have waited a bit that he comes for me to go.

(22) a. Li pe mars-marse lor laplaz.
3SG PROG walk-walk.LF on beach
He is walking on the beach.

b. Li pe mars-mars lor laplaz.
3SG PROG walk-walk.SF on beach
He is walking onto the beach.

- As with regular verbs, reduplicated verbs are still SF even when they are non-adjacent to their complement (23).
They allow any type of subject: pronominal or non-pronominal, singular or plural and they can be marked by TAM markers.

They can be coordinated with factorization of the subject or TMA markers if any (24)

• They can also be negated, whether in coordinated structures or not with the negator scoping over both conjuncts (25-b), or in non-coordinated structures (25-a)

• They can stand alone as answers to a question as in (26-a).

• One difference with regular verbs however, is the fact that they cannot be exponents of verum focus as illustrated in (27-b) (pragmatic incoherence)

(23) Sa lisyen la mord-mord toultan sa sofa la so lipye.
    DEM dog DEF bite-bite.SF toultan DEM sofa DEF 3SG.POSS leg
This dog always nibbles this sofa’s legs.

(24) [[Bann garson] [inn [bwar-bwar labier] ek [get-get
    PL boy PERF drink-drink.SF beer and watch-watch.SF
    televizion]]],p, ziska katrer dimatin.
    TV until four morning
The boys have sipped beer and watched television sporadically until four in the morning.

(25) a. Mo pa manz-manze tout lazorne mwa!
    1SG.NOM NEG eat-eat.LF all day 1SG.ACC
I do not nibble all day!

b. [[Bann garson] [pa’nn [[bwar-bwar labier] ek [get-get
    PL boy NEG’PERF drink-drink.SF beer and watch-watch.SF
    televizion]]],p, ziska katrer dimatin.
    TV until four morning
The boys haven’t sipped beer and watched television sporadically until four in the morning.

(26) a. **SPEAKER A:** Ki to pou fer?
    what 2SG.NOM IRR do.LF
What are you doing?

b. **SPEAKER B:** res-reste!
    stay-stay.LF
Stay for a while!

(27) a. **SPEAKER A:** Zan nek manz-manz poul. (John just nibbles chicken.)

b. **SPEAKER B:** *Be non. Zan pa MANZ-MANZE poul!
    But no. John NEG eat.SF-eat.LF chicken, 3SG fill-up.LF
    No, John doesn’t NIBBLE chicken, he fills himself up.
Note that strictly intransitive verbs, which in syntax do not show any alternation, may show a morphologically alternating SF in their reduplicated form (28-b)-(28-a).

(28)  a. Zan **ronf-ronfle** lor sez.
     John snore.SF-snore.LF on chair
     John snores sporadically on the chair.

     b. Pol pe **tranm-tranble**.
     Paul PROG shiver.SF-shiver.LF
     Paul is sporadically shivering.
To summarize:

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<td>no 1</td>
<td>SF/LF</td>
<td>SF</td>
<td>scalar predicates</td>
</tr>
</tbody>
</table>

Table 2: Sample paradigms of Reduplicated verbs
2.3 **AR: a case of compounding?**

- Following (Fabb 2001) we argue that reduplication is a compounding process, because each part of the resulting word corresponds to an independently attested word.

- Examples of the phenomenon can be found in languages which can be typologically different. For example, in Yoruba (Kabore, 1998: see below) or Italian (Masini & Thornton, 2008).

**Italian**

- Lexical process which yields action nouns (Masini & Thornton, 2008).

  ☞ The change in grammatical category is a good argument in favor of such an analysis.

  (29) fuggifuggi lit.run._away.run._away ‘rush, stampede’
  pi­giapigia lit.push.push ‘rush, stampede’
  copiacopia lit.copy.copy ‘generalized copying’

- Reduplication is however a peculiar type of compounding

  ☞ They are not recursive

  (30)  
  a. She’s a high voltage grid systems supervisor. 
  b. Un porte tue-mouche  
  c. *manz-manz-manze

  ☞ constituency is not conclusive (cf. see above)
  ☞ predicate-argument structure might be an argument, but no semantic parallel (or at least it should be understood as an iteration??)

  (31)  
  a. She is a good book-keeper = She is good at keeping books.  
  b. Li pe manz-manz so zong = ?  
      3SG PROG eat-eat.SF 3SG.POSS nail  
      She is nibbling her nails.

2.3.1 **Cross-linguistics comparison**

**Mandarin Chinese**

- marks plurality (collectivity or distributivity) in the nominal domain.

  (32) ren²ren² (de⁰) xin¹li³ chong¹man³-le⁰ xi³yue⁴ 
  man-man of heart fill.SUFF joy 
  Everyone’s heart was filled with joy.

- marks “attenuation” or illocutionary force in the verbal domain. (Paris, 2007)
(33) \[ \begin{array}{c}
\text{chang}^2\text{chang}^0 \\
taste-taste \\
taste a bit.
\end{array} \]

- Reduplication of classifiers (cf. reduplication of nouns).

**African Languages** In African languages (Yoruba, Mûuré, Fulfulde, Soninke, Sân, among others) reduplication is a derivational process creating new lexemes (Kabore, 1998):

- **Yoruba**: creation of adverbs from impersonal verbs (compounding)

  (34) \[ \begin{array}{c}
yóó \ wá \ dáójú-dáójú \\
\text{FUT}^{10}\text{+3SG.MASC} \text{come surely} \\
\text{He will surely come.}
\end{array} \]

- **Mûuré**: semantic value similar to Mauritian reduplicated verbs.

  (35) \[ \begin{array}{c}
pùg-puge \\
\text{sweep-sweep} \\
\text{sweep carelessly.}
\end{array} \]

☞ At the semantic level, reduplication in those languages can express

- repetition and a continuous process

  (36) \[ \begin{array}{c}
O \ \text{warwarinii} \ \text{(Hausa)} \\
\text{he come.ac} \\
\text{He came several times.}
\end{array} \]

- Multiplicity

  (37) \[ \begin{array}{c}
\text{ferèse} \ \text{nlánlá} \ \text{(Yoruba)} \\
\text{window big-big} \\
\text{Big windows.}
\end{array} \]

- Weakening effect

  (38) \[ \begin{array}{c}
à \ sárállé \ sárállé \ yà. \ \text{(Soninke)} \\
\text{3SG shiver shiver} \ \text{FOC} \\
\text{He is shivering slightly.}
\end{array} \]

- ...

### 2.4 The rules for AR

(39) \[
\text{sign} \\
\text{expression} \quad \text{lex-sign} \\
\text{phrase} \quad \text{word} \quad \text{lexeme}
\]
(40) \[
\begin{array}{ll}
\text{sign} & \text{phonological-object} \\
\text{PHON} & \text{morphological object} \\
\text{FORM} & \text{syntactic-object} \\
\text{SYN} & \text{linguistic-meaning} \\
\text{SEM} & \text{context-object} \\
\text{CNTXT} & \\
\end{array}
\]

(41)
\[
\begin{array}{c}
\text{construct} \\
\text{lex-cxt} \\
\text{deriv-cxt} \quad \text{infl-cxt} \quad \text{pinfl-cxt} \\
\text{phr-cxt} \\
\end{array}
\]

(42)
\[
\begin{array}{c}
\text{construct} \\
\text{MTR} \quad \text{sign} \\
\text{DTRS} \quad \text{nelist}(\text{sign}) \\
\end{array}
\]

(43) \[\text{lex-cxt} \Rightarrow \text{DTRS list(lex-sign)}\]

(44)
\[
\begin{array}{c}
\text{deriv-cxt} \\
\text{redup-cxt} \\
\text{reduplicated-vb-cxt} \quad \text{reduplicated-noun-cxt} \quad \text{...}
\end{array}
\]

(45) \[\text{deriv-cxt: MTR lex-sign} \]
\[\text{DTRS nelist(lex-sign)}\]

(46)
\[
\begin{array}{c}
\text{verbal} \\
\text{[AUX]} \\
\text{complementizer} \\
\text{verb} \\
\end{array}
\]

(47) \[\text{vform} \]
\[\text{long} \quad \text{short}\]
\[
\begin{array}{|c|c|}
\hline
x & F_{\text{shorten}}(x) \\
\hline
\text{rest} & \text{res} \\
\text{demande} & \text{demann} \\
\text{briye} & \text{briye} \\
\text{sorti} & \text{sort} \\
\text{vini} & \text{vinn} \\
\text{tranble} & \text{tranm} \\
\ldots & \\
\text{otherwise} & \langle x \odot e \rangle \\
\hline
\end{array}
\]

(48) \[\text{vb-alt-cxt} \Rightarrow \text{word} \]

\[
\begin{array}{|c|}
\hline
\text{FORM} & \langle x \odot e' \rangle \\
\hline
\text{SYN} & \text{CAT} \\
\text{VFORM} & \text{short} \\
\text{LID} & + \\
\text{...} & \\
\hline
\end{array}
\]

(49) \[\text{redup-vb-cxt} \Rightarrow \text{word} \]

\[
\begin{array}{|c|}
\hline
\text{FORM} & \langle x \odot y \rangle \\
\hline
\text{SYN} & \text{CAT} \\
\text{VFORM} & \text{short} \\
\text{LID} & + \\
\text{...} & \\
\hline
\end{array}
\]

\[
\begin{array}{|c|}
\hline
\text{FORM} & \langle x \rangle \\
\hline
\text{SYN} & \text{CAT} \\
\text{VFORM} & \text{long} \\
\text{LID} & + \\
\text{...} & \\
\hline
\end{array},
\begin{array}{|c|}
\hline
\text{FORM} & \langle y \rangle \\
\hline
\text{SYN} & \text{CAT} \\
\text{VFORM} & \text{frame} \\
\text{LID} & + \\
\text{...} & \\
\hline
\end{array}
\]
3 **Semantics**

- Attenuative Reduplication conveys a diminished interpretation of the predicate
- We represent this through the use of scales\(^1\)
- The relevant scales can be of different types
  - inherent to the predicate
  - given byaspectual interpretation
  - ...  
- less intense with gradable predicates.

\[(50)\]  
\text{a. } Mo’nn ennjoy-enjoy konser la apre mo’nn ale.  
\text{1SG’PERF enjoy-enjoy.SF concert DEF then 1SG’PERF go.LF}  
\text{I have somewhat enjoyed the concert then I left.}  
\text{b. Avan mo bien dekouver so zve mo ti pe before 1SG.POSS well discover.SF 3SG.POSS game 1SG PST PROG}  
\text{krwar-krwar li. believe-believe.SF 3SG}  
\text{Before I got to know the real him, I was somewhat believing him.}

- less frequent with punctual predicates ; iterativity and/or distributive

\[(51)\]  
\text{a. Mari perdi-perdi pasians ena fwa.}  
\text{Mary lose-lose-SF patience have time}  
\text{Mary loses her temper once in a while.}  
\text{b. Mo zip pe tom-tonbe.}  
\text{1SG.POSS skirt PROG fall-fall.LF}  
\text{My skirt keeps falling.}

\[(52)\]  
\text{Bann aksidan ariv-arive.}  
\text{PL accident happen-happen-LF}  
\text{Accidents happen once in a while.}

- unachieved event with incremental theme predicates ; pluractional

\[(53)\]  
\text{a. Zan inn ranz-ranz so lakaz.}  
\text{John PERF build-build.SF 3SG.POSS house}  
\text{John has somewhat build his house.}  
\text{b. Mari ti pe manz-manz enn banann talerla.}  
\text{Mary PST PROG eat-eat.SF IND banana earlier}  
\text{Mary was nibbling a banana earlier.}

- shorter duration; cumulative effect; non-iterative

---
\[^1\]This section is largely inspired by Kennedy & McNally (2005) work on adjectives.
(54)  a.  Fouzer la inn pous-pouse apre li’nn seti.
fern DEF PERF grow-grow.LF then 3SG.PERF stunted
The fern has somewhat grown then got stunted.
b. Sima la inn dirsi-dirsi.
cement DEF PERF harden-harden.LF
The cement has somewhat harden

3.1 Attenuation and Pluractionality

Verbal AR is not necessarily pluractional (cf. (Tovena & Kihm, 2008)):

(55)  Lisien la inn mord-mord Lemmy.
dog the PERF bite-bite.SF Lemmy
The dog lightly bit Lemmy
The dog nibbled Lemmy

In some cases, a pluractional interpretation is impossible:

(56)  Fouzer la inn pous-pous.
Fern the PERF grow-grow.LF
The fern somewhat grew
* The fern grew by little bursts of growing

3.2 Adjective Reduplication

Before turning to verbs, we study the reduplication of adjectives. The interpretation of verbal reduplication is biased by aspectual interpretations, a point we will be turning to later on:

(57)  a. #Laport la ferme-ferme.
      door the closed-closed
      The door is somewhat closed
b.  Zan inn ferm-ferm laport.
      John PERF close-close.SF door
      John repeatedly and infrequently closed the door

3.2.1 Scales

The basic semantics for a gradable predicate is as in (58).

(58)  \[\text{[adj]} : \lambda d \lambda x. \text{adj'}(x) = d\]

Unmodified gradable adjectives combine with a “null morpheme” pos to derive a property of individuals:

(59)  \[\text{[pos]} : \lambda G \lambda x. \exists d [\text{standard}(d)(G)(C) \land G(d)(x)]\]

Gradable predicates are associated to scales. The degree argument of the adjective belongs to one of these scales. A scale is made up of:

1. A set of degrees that represent measurement values
2. A dimension $\Delta$ that indicates the kind of measurement

3. An ordering relation $R$

Example:

- *hot* and *cold* share the same dimension (temperature), the same set of degrees (the values that can be given to temperature), but differ by their orderings (this is characteristic of antonym pairs)

A scale can be *open* or *closed*:

- A closed scale has a minimal and a maximal element: *full, invisible, closed*…
- An open scale lacks a minimal, a maximal element or both: *long, expensive, old, wet, pure*.

### 3.2.2 Absolute and Relative Predicates

Scalar predicates can be of two types:

1. **Relative** predicates need a contextually given standard to be evaluated:

   \[(60)\]
   
   a. The mission to Mars is expensive.
   b. In Paris, a coffee is expensive.

2. **Absolute** predicates come with their own conventionally fixed standard:

   \[(61)\]
   
   a. The glass is full.
   b. The table is wet.

Absolute predicates can be either *partial* or *total*:

- **Partial** predicates hold as long as a minimal degree of the property is possessed by the argument of the predicate

  \[(62)\]
  
  a. The table is wet.
  b. The cloth is torn.

- **Total** predicates hold only if the argument of the predicate possesses the highest degree of the property:

  \[(63)\]
  
  a. The glass is full.
  b. The table is dry.

We use two tests to determine whether an absolute adjective has a maximum or a minimum standard:

1. **“Partiality” entailments**: Provided an adjective $adj$ is indeed absolute, an assertion of the form $x$ is partially/half $adj$:
Minimum standards: entails that \( x \) is \( \text{adj} \):

(64) a. The door is half/partially open. \( \models \) The door is open.
    b. The table is partially wet. \( \models \) The table is wet.

Maximum standards: entails that \( x \) is \text{not adj}:

(65) a. The plant is partially dead. \( \models \) The plant is not dead.
    b. The glass is partially full. \( \models \) The glass is not full.

2. Comparatives: Provided the adjective is indeed absolute:

Minimum standards: entailment to the unmarked form for the stronger argument:

(66) The floor is wetter than the countertop. \( \models \) The floor is wet.

Maximum standards: entailment to the negation of the unmarked form for the weaker argument:

(67) The floor is drier than the countertop. \( \models \) The countertop is not dry.

3.3 Empirical Observations

Non-gradable adjectives cannot be reduplicated

(68) *Latab la anbwa-anbwa.
    table the wooden-wooden
    This table is somewhat wooden

Relative adjectives can be reduplicated, no matter what:

(69) a. Larivier la fon-fon sa kote la.
    river the deep-deep this side the
    The river is kinda deep on this side.
    b. Zan enn tipti-tipti garson.
    John is small-small boy
John is kinda small.

**Absolute adjectives** can be reduplicated iff. they are partial predicates:

(70) a. Latab la mouye-mouye.
    table  the wet-wet
    The table is sort of wet

b. Enn landrwa tapaz-tapaz.
    this place noisy-noisy
    This place is sort of noisy

(71) a. #Laport la ferme-ferme.
    door  the closed-closed
    The door is somewhat closed

b. #Bar la drwat-drwat.
    Rod the straight-straight
    The rod is sort of straight.

3.4 Reduplication in comparatives

Reduplication is possible in comparatives:

(72) a. Sa tifi la pli tipti-tipti ki sann la.
    this girl the more small-small than this the
    This girl is more smallish than that one

b. Lemmy pli kontan sant-sante ki Ronnie.
    Lemmy more love.SF sing-sing.LF than Ronnie
    Lemmy likes to hum more than does Ronnie

3.5 Hypothesis

- Reduplication conveys that the predicate holds of its subject at a degree less than the usual standard:\(^2\)

\[
\llbracket\text{adj-adj}\rrbracket : \lambda d \lambda x. \exists d_0 [\text{standard}(d_0)(\llbracket\text{adj}\rrbracket)(C) \land \text{adj}'(x) = d \land d < d_0]
\]

- In the case of unmodified adjectives the above representation combines with *pos*:

\[
\llbracket\text{pos}\rrbracket(\llbracket\text{adj}-\text{adj}\rrbracket) = \exists d [\text{standard}(d)(\llbracket\text{adj-adj}\rrbracket)(C) \land \exists d_0 [\text{standard}(d_0)(\llbracket\text{adj}\rrbracket)(C) \land \text{adj}'(x) = d \land d < d_0]]
\]

- We (cleverly) assume that the standard for reduplicated adjectives is the same as for the non-reduplicated ones:

\(^2\)Thus, the lambda-term functor associated to the AR construction is as follows:

(i) \(\lambda P \lambda d \lambda x. \exists d_0 [(\lambda Q \text{standard}(d_0)(Q)(C))(P \land (P)d)x \land d < d_0]\)
Relative Adjectives have a contextually fixed standard, (74) should be interpretable without too much fuss.

Partial Adjectives denote properties of the following form:

\[
\forall d \text{standard}(d)([\text{adj-adj}](C)) = \text{standard}(d)([\text{adj}](C))
\]

Partial Adjectives denote properties of the following form:

\[
[\text{AdjP}] : \lambda x. \exists d [d > \min(S_A) \land m_A(x) = d]
\]

i.e. \(d\) is standard for \(\text{adj}\) iff. \(d\) is greater than the minimum of the scale associated with \(\text{adj}\). Combined with (74) this gives:

\[
\exists d [\text{standard}(d)([\text{adj-adj}](C)) \land \exists d_0 [d_0 > \min(S_{\text{adj}}) \land \text{adj'}(x) = d \land d < d_0]]
\]

Given (75), this amounts to say that:

- \(d > \min(S_{\text{adj}})\)
- \(d \in [\min(S_{\text{adj}}), d_0[\)
- \(d_0 > \min(S_{\text{adj}})\)

which is a consistent set of constraints.

Total Adjectives denote properties of the following form:

\[
[\text{AdjP}] : \lambda x. \exists d [d = \max(S_A) \land m_A(x) = d]
\]

i.e. \(d\) is standard for \(\text{adj}\) iff. \(d\) is equal to the maximum of the scale associated with \(\text{adj}\). Combined with (74) this gives:

\[
\exists d [\text{standard}(d)([\text{adj-adj}](C)) \land \exists d_0 [d_0 = \max(S_{\text{adj}}) \land \text{adj'}(x) = d \land d < d_0]]
\]

Given (75), this amounts to say that:

- \(d = \max(S_{\text{adj}})\)
- \(d \in [\min(S_{\text{adj}}), \max(S_{\text{adj}})[\)

which is not a consistent set of constraints: this accounts for the non-reduplicability of total adjectives.

3.6 That was for adjectives

Verbal reduplication is more diverse than with adjectives. The scale affected can:

- be inherent to the verb (akin to adjectives)
- come from aspectual coercion

Sometimes no scale is available: reduplication is then impossible.
3.6.1 Overview

Vendler classification:

Activity/accomplishment: reduplicate, because they are scalar predicates

States: reduplicate if there is a “given scale”, usually aspectual

Achievement: cf. states

Semelfactives: are pluractional, i.e. they have an inherent scale of frequency

3.6.2 Sketch of Formalization

- The reduplication construction must be able to pick up a scale associated with the reduplicated predicate

- We must devise a proper interface with aspectual modification (cf. Bonami (2002))

- Comments welcome.

3.6.3 Remaining Issues

(80) a. #Zan kontan-kontan Lemmy.
    John love-love.SF Lemmy
b. #Zan deteste-deteste Lemmy.
    John hate-hate.SF Lemmy
References


