

Internal Reduplication in Tigre (Rose 2003)

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Phenomenon

Reduplication in Tigre frequentative verbs:

- Reduplication of exactly one consonant
- Affects the template of the verb
- Can be applied recursively up to three times

Outlook

Analysis: Frequentative is an infix accompanied by output requirements

- 1 Introduction
- 2 **The Data**
 - Intensive Verbs
 - The Frequentative
- 3 The Analysis
 - Precursor 1: Infix Hypothesis
 - Precursor 2: Template Hypothesis
 - Enriched Infixation
 - Further Restrictions
- 4 Examples
- 5 Conclusion
 - Summary
 - How Problems Were Resolved

Observation

Intensive verbs have the same shape as type C verbs: (Cə)Ca:CəC

- (1) A: məs-l-a: 'resemble' → ma:səl-a: 'resemble many people'
 B: məssəl-a: 'give examples' → ma:səl-a: 'give many examples'
 C: ma:səl-a: 'be diplomatic' → *

Note

Type C verbs are excluded from this process.

Observation I

In addition to a shape very similar to the intensive the frequentative involves **reduplication** of the penultimate consonant.

- (2) kətb-a: 'write' → kə**ta**:təb-a: 'write a little'
 wəlləb-a: 'glance around' → wə**la**:ləb-a: 'glance around once in a while'

Note

This form encodes **diminutive**, but is called 'frequentative', because the same form expresses frequentative in other Ethiopian Semitic languages.

Observation II

The frequentative can be applied to a very wide range of different verbs.

(3) Type C:

bɑ:rək 'bless' → bə**ra**:rək-a: 'bless a little'

Bilateral root:

læff-a: 'pass by' → lə**fa**:fəf-a: 'pass back and forth'

Root with glide:

los-a: 'mix' → lə**wa**:wəs-a: 'mix a little'

Quadliteral root:

dəngəs'-a: 'become scared' → dənə**ga**:gəs'-a: 'become slightly scared'

Reduplicated root:

nək**nək**-a: 'shake in hysterics' → nəkə**na**:nək-a: 'shake a little'

Observation III

In Tigre this reduplication process can be applied **up to three times** within the same root.

- (4)
- | | |
|-------------------|----------------------------------|
| dəgm-a: | 'tell, relate' |
| dəga:gəm-a: | 'tell stories occasionally' |
| dəga:ga:gəm-a: | 'tell stories very occasionally' |
| dəga:ga:ga:gəm-a: | 'tell stories infrequently' |

Note

- Other Ethiopian Semitic languages have multiple reduplications with different morphemes; Muher and Chaha not at all.
- Rose (2003) attributes this to different rankings of the INTEGRITY constraint.

- (5) INTEGRITY—"No Breaking" (McCarthy and Prince 1995: 124)
 No element in S_1 has multiple correspondents in S_2 .

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Hypothesis

The frequentative is an infix [-Ca:-].

Problem

This hypothesis cannot derive that all frequentatives follow the same template:

- (6) dəgm-a: → dəga:gəm-a: (*dəga:gma-a:) 'tell'
 wəlləb-a: → wəla:ləb-a: (*wəla:lləb-a:) 'look both ways'
 ba:rək-a: → bəra:rək-a: (*ba:ra:rək-a:) 'bless'

Hypothesis

The frequentative has its own 'Type D' template.

Problem I

The frequentative template looks very similar to the template of quadrilateral roots. This pattern would be just accidental.

(7)		Perfective	Imperfective/Jussive
	Quadrilateral	məskər-a:	li-məskir
	Frequentative	dəgɑ:gəm-a:	li-dəgɑ:gim

Problem II

One would need separate templates for trilateral and quadrilateral roots:

(8)	Trilateral:	CəC _i a:C _j əC-
	Quadrilateral:	CəCəC _i a:C _j əC-

Problem III

It would be very difficult to account for the repetition of reduplication.

Hypothesis

The frequentative is an infix in the regular verb. The output form must meet the following requirements:

- (9) a. Template match
- b. Root realisation
- c. Frequentative realisation

Note

This rule refers to the **regular verb** as opposed to the root, so that other processes such as other reduplications can apply beforehand.

- (10) a. /nk/ (underlying)
- b. nəknək (total reduplication)
- c. nəkəna:nək (frequentative)

Template Match

The output of a frequentative must conform to the following shape:

- (11) Perfective: CəCCəC
Imperfective/jussive: CəCCiC

Question

Where does the template come from?

Answer

- There is no explicit ‘frequentative template’
- ‘The frequentative makes use of pre-existing templates used for other verb forms’ (Rose 2003: 120)
- The choice of template is based on the number of consonants in the root.

Root Realisation

All root consonants must be present in the frequentative.

(12)		Regular	Frequentative
	/dwr/	dor-a:	dəwɑ:wər-a:

Question I

Why does the frequentative reduplicate only one consonant?

Answer

There are OT constraints penalising word-internal reduplication:

- (14)
- a. CONTIGUITY (cf. McCarthy and Prince 1995: 123)
The root forms a contiguous string.
 - b. MORPHOLOGICAL EXPRESSION
Reduplication must be realised.
 - c. MAX_{B-R} (McCarthy and Prince 1995: 16)
Every segment in the base has a correspondent in the reduplicant.

Example

I: gərəf RED+a:	MORPHEXP	CONTIG	MAX _{B-R}
☞ a. gəra:rəf		**	*
b. gərfa:rəf		***!	
c. gərəfa:rəf		***!*	
d. ga:rəf	*!	*	**

Question II

How do we know that reduplication is leftwards?

Answer

- Rightward reduplication would involve infixation of a non-syllable [a:C] before the final vowel.
- There are hints in the behaviour of other Ethiopian Semitic languages.

- (15)
- Tigrinya gemination: $bəddəl-ə \rightarrow bədad**dd**əl-ə$
 - Chaha devoicing: $səpər-ə-m \rightarrow səp**ə**pər-ə-m$

Observation I

Two glottural consonants may not co-occur if they are separated by just a vowel:

- (16)
- | | Type A | Causative | |
|----|---------|-------------|-----------------|
| a. | k'ətla: | ʔa-k'təla: | 'cause to kill' |
| b. | ħadga: | ʔaħ-ħadəga: | 'make leave' |

Observation II

Reduplication in Frequentatives is **not** affected by this:

- (17) baʔasa: 'fight' → baʔa:ʔasa: 'fight a little'
 → ba:ʔasa:

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(18)	/gərəf RED+a:/	Template Match	Root Realisation	Frequentative Realisation
✓ a.	gə ra :rəf	✓	✓	✓
b.	gə ra :rrəf	*	✓	✓
c.	gə ʔa :rəf	✓	✓	*
d.	gə ra :f	*	*	✓

(19)	/dəngəs' RED+a:/	Template Match	Root Realisation	Frequentative Realisation
✓ a.	dənəga:gəs'	✓	✓	✓
b.	dəna:gəs'	✓	✓	*
c.	dəna:nəgəs'	*	✓	*

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Data

- (20)
- | | | | | |
|----|--------------------------|----------|---|-------------|
| a. | Reduplication: | ba:rək | → | bəra:rək |
| b. | Similarity to intensive: | dəngəs' | → | dəna:gəs' |
| c. | Changing template: | kətb | → | kəta:təb |
| d. | Recursive application: | kəta:təb | → | kəta:ta:təb |

Analysis

- There is a [Ca:] **infix**
- The infix imposes extra **requirements** onto the surface form
- The reduplication is aware of the **regular** form of the verb

Infix Problem: The Verb Templates

Solution: The Template Match requirement overrides the verb template

Template Problem I: Similarity of Frequentatives with Quadliterals

Solution: 'The frequentative makes use of pre-existing templates used for other verb forms' (Rose 2003: 120)

Template Problem II: Multiple Templates for One Form

Solution: All verbs use the same mechanism for choosing templates.

Template Problem III: Recursive Reduplication

Solution: The whole infixation-reduplication cycle is simply repeated.

- McCarthy, John J. and Alan Prince. 1995. 'Faithfulness and reduplicative identity.' Jill Beckman, Suzanne Urbanczyk, and Laura Walsh Dickey (eds.), *Papers in Optimality Theory, University of Massachusetts Occasional Papers in Linguistics*, vol. 18. Amherst, MA: GLSA, 249–384.
- Rose, Sharon. 2003. 'Triple take: Tigre and the case of internal reduplication.' *San Diego Linguistic Papers* 1, 109–128.