

# Rhyming in Echo Reduplication\*

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Echo reduplication produces pairs of rhymed sequences

## Roadmap:

- The basics of Russian *xuj*-reduplication
- *Rime suffisante* in *xuj*-reduplication and Russian rhymed poetry
- The role of *intervals* in *xuj*-reduplication
- Rhyming in echo reduplication outside Russian

## 1 The basics of Russian *xuj*-reduplication

*Xuj*-reduplication (*X*-RED) is one of the most productive echo-reduplicating processes in colloquial, low register Russian (see a description in Belikov 1990). It can apply to almost any phonological word (including phrases with single stress, as in (1c)) to derive an echo-reduplicated variant in which some material of the second copy is overwritten with the string *xuj* ('penis').

- |     |   |                        |
|-----|---|------------------------|
| (1) | a. mál'čik- <i>xuj</i> ál'čik                                 | 'boy-shmoy'            |
|     | b. voróčat'sja- <i>xuj</i> óčat'sja/ <i>xuj</i> róčat'sja/... | 'tumble-shmumble'      |
|     | c. ná pol- <i>xuj</i> ápol                                    | 'onto the floor - ...' |

*X*-RED can also apply to phrases containing more than one stressed words. In that case *xuj* targets the word bearing the main stress:

- |     |   |
|-----|---|
| (2) | a. [Tvojà naúka], [tvojà <i>xuj</i> júka] – mne do vsego etogo dela net.<br>'[Your science], [your shmience] – I don't give a damn about it all.'         |
|     | b. [Žár' egò], [ <i>xuj</i> ár' egò] – nicego xorošego iz etogo m'asa ne vyjdet.<br>'[Fry it], [shmy it] – you won't get anything good out of this meat.' |

- *X* can overwrite any string that directly precedes the stressed vowel or some segment preceding the stressed vowel: **bardák-*xuj*ák/*xuj*dák/*xuj*(a)rdak**.
- If the base word ends with a stressed vowel, the consonant preceding it has to be preserved in the *X*-reduplicant: **vodá-*xuj*(o)dá/\**xuj*á, kakadu- *xuj*(a)dú/\**xuj*ú**.
- In general, full repetition of the base word is prohibited: **mál'čik-*xuj*(\*m)ál'čik**.

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- Full repetition is allowed if the base word is monosyllabic and ends with a vowel: *go-xujgo* – or if the base word starts with a stressed vowel: *óda-xujóda*.

A constraint-based analysis:

- Input: Word-*Xuj* pair;
- Constraints ensuring there is a correspondence between (a substring of the) base and (a substring of) the reduplicant:  $CORR_{BR}(CD) = \{MAX_{BR}(CD), DEP_{BR}(CD), IDENT-F_{BR}(CD), LINEARITY_{BR}(CD), CONTIGUITY_{BR}(CD)\}$ , where CD stands for “correspondence domain”;
- A constraint requiring the correspondence domain to contain stress:  $STRESS(CD)$ ;
- The ban on correspondence domains consisting of just one segment:  $CD > 1$ ;
- The ban on the full repetition of the word:  $CD \neq Word_{INPUT}$ ;
- An alignment constraint  $ALIGN-RIGHT(CD)$
- Input-output faithfulness:  $CORR_{IO} = \{MAX_{IO}, DEP_{IO}, IDENT-F_{IO}, LINEARITY_{IO}, CONTIGUITY_{IO}\}$ .

(3)

<vodá, xuj>	AL-R (CD)	CD > 1	STRESS(CD)	CORR <sub>BR</sub> (CD)	CD ≠ Word <sub>INPUT</sub>
vo[dá] xuj[dá]					
vod[á] xuj[á]		*!			
v[odá] xuj[odá]					
vo[dá] [dá]xuj	*!				
vo[dá] xuj[dú]				*!	
[vodá] xuj[vodá]					*!

(4)

<bardák, xuj>	AL-R (CD)	CD > 1	STRESS(CD)	CORR <sub>BR</sub> (CD)	CD ≠ Word <sub>INPUT</sub>
bardák[k] xuj[k]		*	*		
bard[ák] xuj[ák]					
bar[dák] xuj[dák]					
ba[rdák] xuj[rdák]					
b[ardák] xuj[ardák]					
[bardák] xuj[bardák]					*!

(5)

< máľčik, xuj>	AL-R (CD)	CD > 1	STRESS(CD)	CORR <sub>BR</sub> (CD)	CD ≠ Word <sub>INPUT</sub>
máľč[ik] xuj[ik]			*!		
m[áľčik] xuj[áľčik]					

(6)

<gó, xuj>	AL-R (CD)	CD > 1	CORR(CD)	CD≠Word <sub>INPUT</sub>
☞ [gó] xuj[gó]				*
g[ó] xuj[ó]		*!		
[gó] [gó]xuj	*!			
[gó] xuj[gú]			*!	

## 2 Rime suffisante in xuj-reduplication and Russian rhymed poetry

The preservation of the consonant preceding the stressed vowel if that vowel is word-final is also observed in Russian classic poetry, cf. Žirmunskij 1923 (in French poetry as well, cf. *rime suffisante* in Grammont 1937):

(7) *Rime suffisante* requirement<sup>1</sup>

For two words with stressed word-final vowels to rhyme, it is necessary that the consonants preceding the stressed vowels are identical.

(cf. studies showing that this requirement is indeed at work in Russian 19<sup>th</sup> century poetry: Kalbous 1995, Shaw 2002)

(8) ruká *doesn't rhyme with* pilá  
          *rhymes with* poká  
rukáv *rhymes with* piláf

(9) a. ruká-\*xujá  
      b. rukáv-xujáv

→ The rime suffisante requirement is active in X-RED because X-RED must produce a pair of rhymed strings

## 3 The role of intervals in X-RED

- The units invoked by constraints on the *rhyming domain* (RD) structure are V-to-V *intervals* (Steriade 2010).
- *Intervals* are continuous strings of sounds that start with a vowel and end right before the next one:  
[ ɪ n t ] [ ə ɪ v ] [ ə l ]
- Some intervals or strings of intervals are *rhyming domains* (RDs). Phonological properties of those vary across different poetic traditions. In classic European poetry, RDs most commonly start with a stressed vowel and end with the end of the word.

<sup>1</sup> The *rime suffisante* effects in Russian verse were first described in a poetic treaty by Antioch Kantemir (1744): “dull [=stress-final] rhymes that end with vowels must have at least one identical letter, but actually the more letters the better. For instance, *snozá* and *vexá* is a better rhyme than *krupá* and *sová*; *tesló* and *vesló* is even better”.

- It is conceivable that correspondence domains in *X*-RED are rhyming domains.

Evidence for intervals in *X*-RED:

- Normally (putting *rime suffisante* cases aside) it suffices to have a sequence of intervals starting with the stressed one as a correspondence domain: **bardák-xuják**.
  - There is a strong dispreference for *X*-reduplicating words starting with a consonant cluster C1C2 preserving C2 (as opposed to overwriting the whole cluster):
- (10) a. grácija-xujácija/??xujrácija  
 b. nagrása-xujáda/xujráda
- **grácija-xujácija** is preferred to ??**gracija-xujrácija** because only in the former case it is possible to establish *RD* (V-to-V) *correspondence*: **gr[ácija]-xuj[ácija]**.
  - *RD* in *X*-RED doesn't have start with a stressed vowel. It can start earlier. The correspondence requirements are most stringent (absolute identity) within the stressed interval. In preceding intervals absolute identity is not required: **v[odá]-x[ujdá]**.
  - Some clusters of type C1C2 are easier to replace with jC2 in *X*-RED than others:
- (11) a. kóktó-xujktó/xujtó  
 b. kústó-xujstó/??xujtó

This could be evidence for some special correspondence constraints that hold in the prestress part of the *RD*: *RD* *correspondence* in k[o.któ]-x[ujtó] is better than in ??k[u.stó]-x[ujtó]

- [uj] of *xuj* may be a part of a correspondence (=rhyming) domain:

- (12) a. b[újnyj]-x[újnyj]/xuj[újnyj]  
 b. Š[újskij]-x[újskij]/xuj[újskij]



Russian *X*-RED obeys language-specific laws of rhyming (*rime suffisante*). Crucially, the corresponding units in *X*-RED are V-to-V intervals, which is a signature of rhyming in versification cross-linguistically.

## 4 Rhyming in echo reduplication outside Russian

### 4.1 *Sbm*-reduplication and such

Cross-linguistically, it may turn out that all echo-reduplication cases are in fact generated by creating rhyming pairs (cf. similar ideas in Yip 1999).

English *shm*-reduplication:

- The domains of identity in *shm*-reduplication may vary: **unbelievable-*shm*unbelievable / un*shm*believable / un*beshm*ievable.**
- The identity domain is always found at the right edge (ALIGN-R(RD) effect).
- The identity domain always contains the stressed vowel:  
\*unbeliev[able]-unbeliev*sh*[able].

→ This looks like rhyming!

- Since the rules of rhyming are slightly different in English and in Russian, the patterns of echo-reduplication are also slightly different. For instance, there is no *rime suffisante* requirement in English rhyming poetry, and hence, as expected, no such requirement in echo reduplication: **Joe-*Shmoe*.**

Turkish *m*-reduplication, Persian *m*-reduplication, Hindi *v*-reduplication:

(see Nevins and Wagner 2001, Nevins 2004, Ghaniabadi 2005, Zimmerman and Trommer 2011 etc.)

- All these processes seem to create rhyming pairs. Unlike in English and in Russian, there seems to be a requirement to maximize the rhyming domain.

(13) a. *Turkish*  
k[itáp]-m[itáp]/\*máp/\*kimáp

b. *Persian*  
k[etâb]-m[etâb]/\*mâb/\*kemâb

#### 4.2 Tamil *ki*-reduplication

- In Tamil *ki*-reduplication the first syllable of the word/phrase gets overwritten by the syllable *ki*. The vowel in *ki* preserves the [±long] feature of the vowel that it overwrites (see Keane 2001, Nevins and Wagner 2001):

(14) a. puli kili 'tiger and such'  
b. pa:ttu ki:ttu 'sing and such'  
c. ni: ki: 'you and such'  
d. uppu kippu 'salt and such'

- Tamil is stress-initial, so this doesn't look like rhyming in the European sense.

But:

- In Tamil poetry there are regular patterns where two adjacent strings have corresponding first intervals. In these intervals the consonants match in features as does *the quantity, though not the quality of the vowel* (Steriade, p.c., based on the study of a corpus from Niklas 1988):

(15) n[ir]imin man*n*i:r nerunar ru*r*aikoṇarnlu  
m[unr]anta man*n*ar muṭita:kka -v*in*run

v[a:n]irku vaiyakam po:n*r*atu va:n*att*u  
m[i:n]ir kanaiya:r maraman*n*ar -va:n*att*u (Niklas 1988)

\* \* \*

- Russian X-RED is creating rhyming pairs. Just as in rhymed verse, there is a *rime suffisante* requirement, and correspondence domains consist of V-to-V intervals.
- A hypothesis worth exploring: echo reduplication always creates rhyming pairs. It takes some string and a fixed segment and enforces a correspondence in rhyming domains by copying some material from the base to the fixed segment.

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