

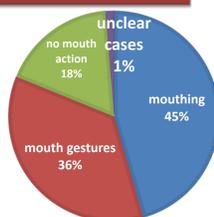
Seeing stress? Temporal reduction in Russian sign language mouthing

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Reduced mouthing

- Mouthing is the most frequent mouth action type in RSL (Bauer 2019)
- Mouthing usually occurs temporally reduced
- Mouthing is reduced when its parts are invisible, as in the DGS example *wi(chtig)* 'important' or in the RSL example *Novosib(irk)* in (1) (Boyes Braem 2001: 104; Bauer 2019: 22).



school.acc novosib lear

(1) IX SCHOOL GRADUATE ENTER NOVOSIBIRSK LEARN
'I graduated school and entered the university in Novosibirsk'

- Previous studies suggested that the stressed part of the spoken language item is the most important one for the mouthing: all mouthings in NGT contain at least the stressed syllable, which indicates that signers have access to the rhythmic structure of spoken words (Bank, Crasborn & van Hout, 2011:264; Bank 2014: 40-42).
- It is possible, because a stressed syllable is longer and more strongly articulated, with less vowel reduction than an unstressed syllable (Grice & Baumann 2006).

We test this view with the RSL data and ask:

- How does temporal reduction of RSL mouthing occur?
- Is the stressed part of the spoken Russian word always mouthed in RSL?

Why RSL?

- RSL - a sign language surrounded by a spoken language with a different word stress pattern as hitherto analyzed.
- Spoken Russian is a free-stress language, i.e. the stress can fall on any syllable in a word: cf. printer 'printer', professor 'professor', inženér 'engineer'.
- The stress is movable in the sense that different morphological forms of a lexeme may have different syllable structures: stol 'table-NOM', stolá 'table-GEN'.

Russian Sign Language Corpus

The online corpus of RSL (<http://rsl.nstu.ru>, Burkova 2012-2015) was made during the project "Corpus-Based Research on Morphosyntax and Vocabulary of the Russian Sign Language" funded by Russian Foundation for Basic Research.

- over 180 texts filmed from 59 RSL signers – men and women (18 to 63 years) with varying degrees of deafness: deaf, hard-of-hearing and CODA.
- Novosibirsk & Moscow.
- spontaneous speech (narratives and dialogues), texts on the basis of stimulus materials (cartoons retelling, picture based storytelling) & some elicitation data.

Methods

Methods:

- 30 randomly selected RSL signs with the three-syllable citation form in spoken Russian
- ca. 1400 tokens

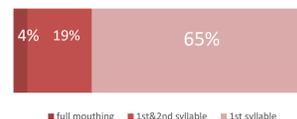
RSL sign	Russian citation form	full mouthing	1st syllable mouthed	1-2 syllables mouthed	other syllables mouthed
1 GRANDMOTHER	<u>бабушка</u>	8% бабушка	46% баб	24% бабуш	
2 SPEAK	<u>говорить</u>		59% гов	29% гово	6% гови
3 GIRL	<u>девушка</u>		65% дев	24% девуш	6% уш
4 WOOD	<u>дерево</u>	63 % дерево	26% де	11% дере	
5 INTERESTING	<u>интересный</u>		44% ин	32% инте	
6 COMPUTER	<u>компьютер</u>		83% комп	17% компу	
7 BEAUTIFUL	<u>красивый</u>	6% красивый	33% кра	39% краси	22% сив
8 STORE	<u>магазин</u>		87% маг	7% магаз	
9 SMALL	<u>маленький</u>		81% ма	15% мале	4% ле
10 MAN	<u>мужчина</u>		63% муж	4% мужчи	31% муна
11 FOR-EXAMPLE	<u>например</u>		18% на	3% напри	47% при 26% пример
12 NOVOSIBIRSK	<u>Новосибирск</u>		42% нов	10% ново	
13 NORMAL	<u>нормальный</u>		67% ном	33% норма	
14 MONKEY	<u>обезьяна</u>		75% об	12% обез	
15 RETURN	<u>обратно</u>		61% об	39% обра	
16 COMMUNICATE	<u>общаться</u>		80% общ	10% обща	
17 CLASSMATE	<u>однокашник</u>		100% од	0%	
18 TENT	<u>палатка</u>		60% па	40% пала	
19 HELP	<u>помогать</u>		64% пом	29% пома	
20 CORRECT	<u>правильный</u>		93% пра	7% прави	
21 WORK	<u>работать</u>		81% раб	13% рабо	2% работаю
22 CHEER	<u>радоваться</u>		92% рад	9% радо	
23 CHILD	<u>ребенок</u>		38% реб	54% ребё	8% бёнок
24 DOG	<u>собака</u>	14% собака	52% со	28% соба	
25 CALM	<u>спокойный</u>		79% спо	21% споко	
26 TRY	<u>стараться</u>		38% ста	31% стара	20% раю
27 COLD	<u>холодный</u>		100% ха	0%	
28 GOOD	<u>хороший</u>	7% хороший	32 % ха	32% харо	19% ро
29 PERSON	<u>человек</u>	11% человек	84% чев	5% чела	
30 FEEL	<u>чувствовать</u>		95% чув	0%	5% чувса

*Syllables stressed in spoken Russian are in red and underlined.



МУЖ
МУЖЧИНА ,man'

Total



Results

- The most common type of temporal reduction is pronouncing only the first syllable (65% of all cases) independent of the word stress
- Two first syllables are articulated in 19%
- Mouthing is fully pronounced in 4%



КОМ
КОМЬЮТЕР ,computer'



МАГ
МАГАЗИН ,store'



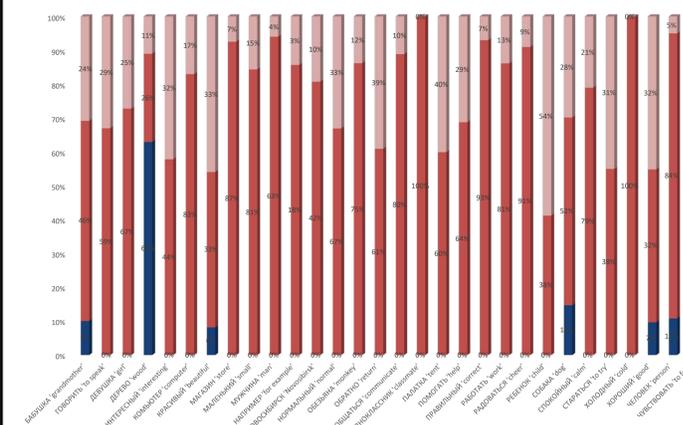
БАБ
БАБУШКА ,grandma'



НОР
НОРМАЛЬНЫЙ ,normal'



ОБ
ОБЕЗЬЯНА ,monkey'



- Stressed syllables are not consistently mouthed
- Emphasis lies on the first syllable
- Signers have no access to the rhythmic structure of Russian spoken words, but appear to be influenced by the written modality

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