



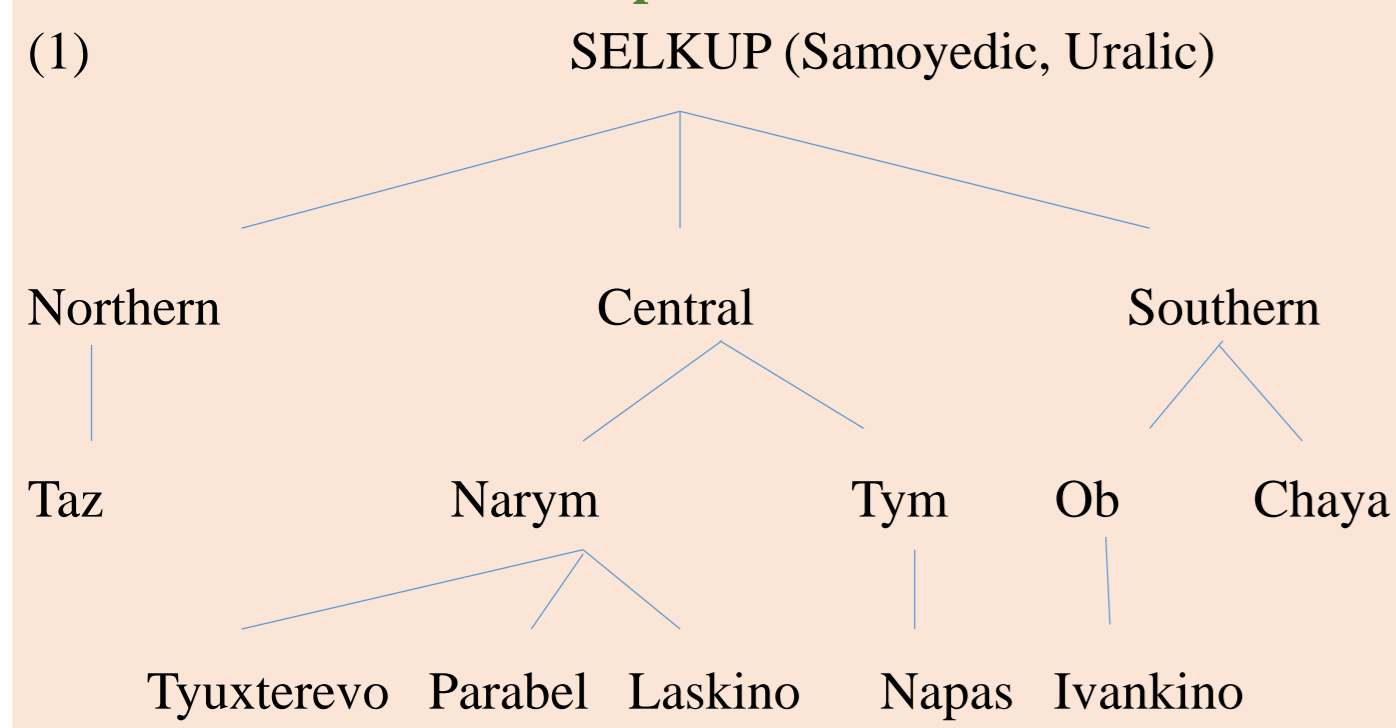
## Introduction

I present here a novel approach to lexical accent and apply it to the problem of morpheme-triggered exceptionality in Selkup (Samoyedic). I extend the Primary Accent First (PAF) theory, a non-metrical parametric approach that represents word accent and rhythm separately and that does not use feet. PAF correctly accounts for accent location in a large variety of languages, but encounters difficulties with lexical accent systems and with systems that combine phonological weight and lexical accent ("hybrid" systems).

## THE DESCRIPTION

### 1. Background information

#### 1.1. The dialects of Selkup



#### 1.2. The vowel system

Based on instrumental investigation and phonological contrast, Sheshenin (2011: 78) establishes the following vowel system for Central Selkup (for the Ob Chumyikup dialect):

(2) i	y	ɨ	u
e	ø	ə	o
æ		a	

#### 1.3. The accent system of the C. and S. Selkup is unbounded

(3) 'fɔndɨʃpugu	cover-INF
kyʒambu'gu	urinate-INF

#### 1.4. Accent is contrastive

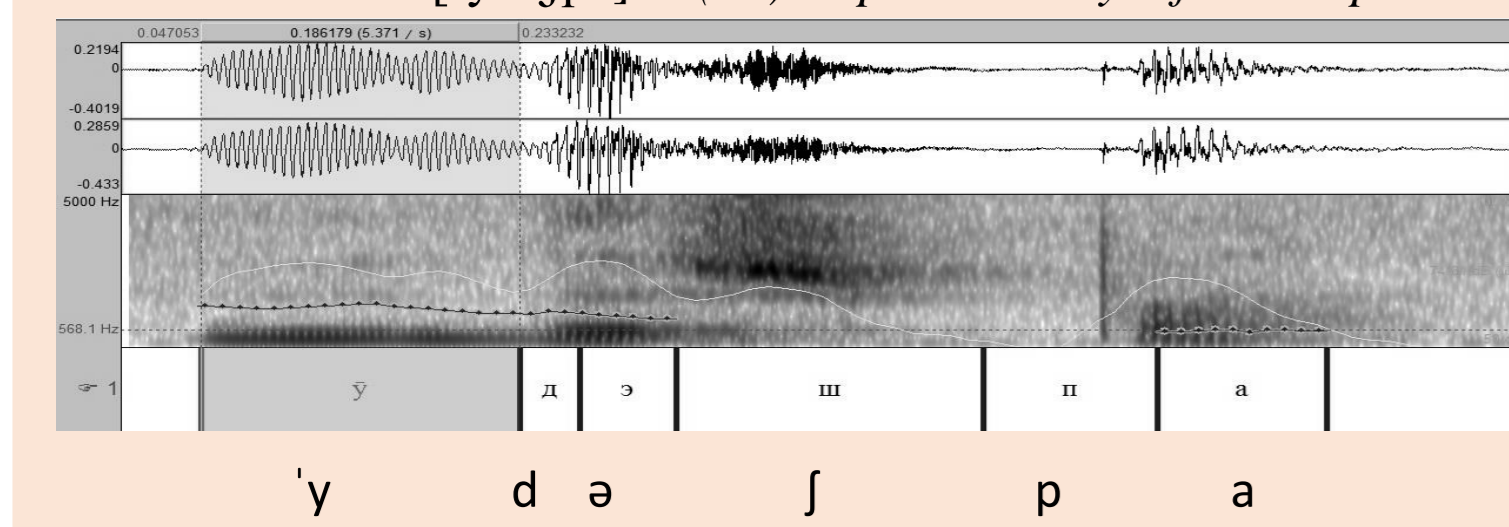
One easily finds tens of minimal stress pairs in C. and S. Selkup, e.g. (4); therefore, accent is contrastive in these dialects.

#### (4) A minimal stress pair (Parabel Selkup)

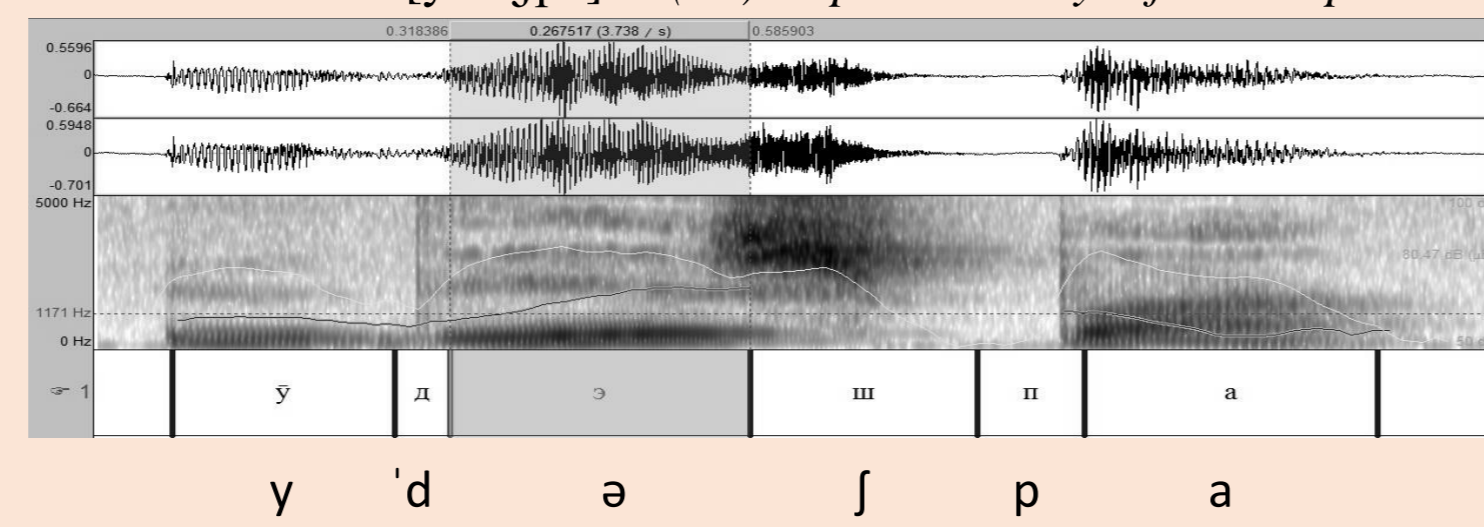
a. 'ydaʃpa	fall-PRES-3Sg (about a night)
b. y'daʃpa	get drunk-PAST-3Sg

FIGURE 1. The acoustic analysis of a minimal stress pair in (4) (from Normanskaya et al. 2011). The Parabel variety of Narym Selkup.

#### a. The utterance ['ydaʃpa] in (4a) as produced by a female speaker.



#### b. The utterance [y'daʃpa] in (4b) as produced by a female speaker.



✓ Accent in Central and Southern Selkup dialects is contrastive and, therefore, not phonologically predictable. Selkup is thus a lexical accent system (cf. Normanskaya et al. 2011, Normanskaya 2011, 2012).

## 2. From data to accentual generalizations

### 2.1. The accent pattern

#### The Napas dialect

#### (5) unaccented root-accented suffix

kap't-e	current (berry)
ki'g'-e	river

#### With multiple suffixes:

(7) unaccented root, /-eʃ/ and /-gu/ accented, /-pu/ and /-i/ unaccented	
i'l-eʃ-pu-gu	weigh.off-INF
tʃ'on'd-eʃ-pu-gu	girder-INF
nəd-i-'gu	marry-INF

#### (6) accented root-accented suffix

'ʒapt-e	smell
'a:d-e	deer
'ky:ʒ-e	urine

But if a root is lexically accented, then it is stressed.

#### (8) an accented root

'ig'-eʃ-pu-gu	detach-INF
'kil-eʃ-pu-gu	cast.aside-INF
'fer-eʃ-pu-gu	break.in-INF

✓ In words with at least one lexically accented morpheme, the leftmost accented morpheme is stressed.

#### (9) unaccented root-unaccented suffix

'loy-a	fox	mak-a	stick
'lak-a	thing	motʃ'-a	heel

✓ Words consisting of unaccented morphemes alone have default initial accent.

### 2.2. The accent rule (Napas variety of Tym Selkup)

(10) Accent falls on the leftmost accented morpheme of the word, otherwise on the initial syllable.

### 2.3. The "accent-categorizing" suffixes

These are suffixes which are always stressed, regardless of the lexical (un)accentedness of other morphemes in the word. For example, in the Parabel variety, the semelfactive suffix -ol/-al is always stressed (11).

#### (11) The Parabel variety

#### a. unaccented root – categorizing suff – unaccented suff – accented suffix /-gu/

kad-'ol-bi-gu	scratch
yt-'al-ʒu-gu	make drunk

#### b. accented root – categorizing suff – accented suffix /-gu/

ta'p-ol-gu	kick (of an animal)-SEMEL-INF
ta'p-ol-dʒe-gu	kick-SEMEL-INF
ko'b-al-gu	scour-SEMEL-INF

Certain morphemes are accented or unaccented depending on the variety of Selkup. For example:

FIGURE 2. Accentuatedness varies across Selkup dialects.

	-a	-ol/-al
Napas	unaccented	accented
Parabel	accented	"accent-categorizing"

Although lexical accentuatedness of individual suffixes varies across dialects of Central and Southern Selkup, the accent rule holds for all dialects (Normanskaya 2012).

## THE ACCOUNT

### 3. The PAF theory

✓ The main motivation for PAF, as opposed to metrical theory, is that stress represents two separate phenomena: accent and rhythm differ wrt weight sensitivity, parsing direction and the foot inventory (binary/ternary, LH/RH, syllabic/moraic) etc (Hulst and Goedemans 2014). Therefore, in many cases, stress cannot be captured with a single stress algorithm, suggesting that a non-metrical theory of accent should be employed.

✓ The Primary Accent First (PAF) theory (Hulst 1996, 2010, 2012) is a non-metrical parametric approach to accent assignment which represents word accent and rhythm separately and does not use feet.

✓ The main parameters of the PAF theory are:

#### (12) The parameters of the PAF theory

- a. Domain Type (Bounded/Unbounded)
- b. Domain Edge (L/R) if Domain Type (Bounded)
- c. Extrametricality (L/R)
- d. Project weight (Y/N)
- e. Select (L/R)
- f. Default (L/R)

### The Problem

The patterns in (11) reveal that, in certain cases, accent doesn't fall on the leftmost heavy morpheme, thus violating the accent rule (10). The PAF theory by itself fails to capture the pattern in (11): setting Select (L) captures the general case described in (10), but not the pattern in (11).

I solve this problem by extending the PAF theory as below by introducing the *diacritic weight scale*.

### 4. Diacritic weight and weight scales

#### 4.1. Weight: phonological and diacritic

Morphemes, like syllables, are able to attract or repel stress. Hulst (1999:19) identifies this ability as "diacritic weight". Syllable weight and diacritic weight differ in that the former is phonologically motivated while the latter is arbitrary. Therefore, diacritic weight may be viewed as an abstract "strength" of morphemes. However, it is reasonable to group instead both as "weight" because, in some languages (Mari, Uzbek), both syllable and morphological weight co-occur.

#### 4.2. Diacritic weight and lexical accent

Diacritic weight should be preferred over lexical accent because accent is categorical, while weight is ordinal: this property of weight allows us to order morphemes in a language-specific *diacritic weight scale*, by analogy with phonological weight scales (see Gordon 2006: 27-28).

FIGURE 3. Examples of phonological weight scales (from Gordon 2006)

Klamath (isolate; Oregon, USA)	CVV(C) > CVC > CV
Moro (Niger-Kongo; Sudan)	CVC > full V > reduced V
Kobon (Trans-New Guinea; PNGK)	low V > mid V > high V > reduced V
Asheninca (Maipurean; Peru)	CVV > Ca(C),Ce(C),Co(C),CiC > Ci > Ci

✓ I submit that Central and Southern dialects of Selkup have the diacritic weight scale in (13):

(13) superheavy > heavy > light

where heavy morphemes attract accent, light morphemes do not and the superheavy morphemes receive accent regardless of the weight of other morphemes in the word.

### 5. The weight grid

The scale in (13) can be represented phonologically in terms of a *weight grid* in (14) (in the spirit of Prince 1983 and Hulst 1984:67-68 who suggest to grid weight and of Parker (1989:9-12) who grids *sonority* - traditionally expressed as a scale). The grid in (11) encodes weight degrees.

#### (14) The weight grid

sup	h	l
*	*	*
*	*	
*		

### 6. The grammar of Selkup

Extended PAF theory = PAF parameters + Weight Grids

We can now formulate an *accent assignment mechanism* for Central and Southern Selkup which consists of the grid in (14) and the set of PAF parameter settings in (15):

(15)	Domain type: Unbounded	Select: Left
	EM: No	Default: Left
	Project weight: Yes	

### 7. Sample derivations

**Convention:** Project Weight projects the heaviest morphemes in the word, according to the weight scale. If all morphemes are light, Project Weight has nothing to project.

(16) a.	* Select (L)	b.	* Select (Left)
	* Project Weight		* Project weight
			* * Lexicon
	tʃapt-e		tvele-gu
	l h		h h
	[tʃap'te]		[t'velegu]
c.	* Select (L)	d. The default case	* Default
	* Project Weight		
	tap-ol-gu		loy-a
	h sup h		l l
	[ta'pɔlgu]		[lɔya] fox

## THE CONCLUSION

✓ I presented (for the first time in English) an accentual description of Central Selkup (10)-(11), drawing heavily on recent Russian-language descriptions (Normanskaya et al. 2011; Normanskaya 2011, 2012).

✓ I captured the accentual behavior described formally in terms of a particular set of PAF parameters and a *diacritic weight scale* translated into a *weight grid* introduced here

✓ This novel Extended PAF approach to lexical accent systems receives independent support. The existence of languages with syllable weight and languages with diacritic weight leads us to expect finding both weight types within the same language. This prediction is borne out by, e.g., Eastern Literary Mari and Uzbek.

✓ In these systems, the diacritic and syllable weight can be ordered into a single "hybrid weight scale" (Vaxman 2014). The Extended PAF theory, which incorporates such a scale, effectively accounts for "hybrid" accent systems. This theory thus provides a unified approach to accent assignment in (at least) certain lexical and "hybrid" systems.

## References

Goedemans, R. & H. van der Hulst (2014). The separation of accent and rhythm: Evidence from StressTyp. In H. van der Hulst (ed.) *Word stress: Theoretical and typological issues*. Cambridge; New York: CUP. 119-145.

Gordon, M. (2006). *Syllable weight: Phonetics, phonology, typology*. New York; London: Routledge.

Hulst, H. van der (1984). *Syllable structure and stress in Dutch*. Dordrecht: Foris.

Hulst, H. van der (1996). Separating primary and secondary accent. In R. Goedemans, H. van der Hulst & E. Visch (eds.) *Stress patterns of the world*. HIL Publication, 2. The Hague: Holland Academic Graphics.

Hulst, H. van der (1999). Word accent. In H. van der Hulst (ed.). *Word prosodic systems in the languages of Europe*. Berlin; New York: Mouton de Gruyter. 3-116.

Hulst, H. van der (2010). Representing accent. *Phonological Studies*, 13, 117-128.

Normanskaya, J. (2011). Prasamodijskoe udarenie i ego vnešnie sootvetstvija. Čast' I. *Uralo-Altajskie Issledovanija*, 1(6). [in Russian]

Normanskaya, J. (2012). Udarenie v central'nyx i južnyx sel'kupsix dialektax. *Vestnik Tomskogo Gosudarstvennogo Pedagogičeskogo Universiteta*, 1. [in Russian]

Normanskaya, J., N. A. Fedotov & S. E. Šešenin (2011). Udarenie v govore obskix čumyl'kupov sel'kupskogo jazyka, ego sootvetstvija v jazyke pervyx sel'kupsix knig i v lesnom dialekte neneckogo jazyka. genezis prasamodijskogo vokalizma v zavisimosti ot prosodičeskix faktorov. *Congressus XI. Internationalis Feno-Ugristarum. Pars V: Dissertationes Sectionum Et Symposiumum Ad Linguisticam*. Piliscaba, August 9-14, 2010. [in Russian]

Parker, S. (1989). The sonority grid in Chamucuro phonology. *Linguistic Analysis*, 19 (1-2).

Prince, A. S. (1983). Relating to the Grid. *Linguistic Inquiry*, 14 (1), 19-100.

Sheshenin, S. (2011). O nekotoryx osobennostax vokalizmagovora obskix čumyl'kupov sel'kupskogo jazyka v eksperimental'no-fonetičeskom osveščanii. *Uralo-Altajskie Issledovanija*, 2(5), 76-88. [in Russian]

Vaxman, Alexandre (2014). The smell of morphemes in the PAF theory: the case of Eastern Mari. Poster presented at the 4<sup>th</sup> Workshop on Accent and Stress, Leiden University, August 15-17, 2014.