

The key to Czech vowel length

One major typological feature that sets apart Czech and Slovak from other Slavic languages is the existence of contrastive vowel length in these languages. Czech vowel length has been extensively studied since the 19th century. However, no generalisation of any kind could be uncovered. Diachronically, it does not relate to either Indo-European or Common Slavic vowel length, nor does it show any kinship with Baltic tones and East/ South Slavic accent. Synchronically, closed syllable shortening (kráva vs. krav, kravka "cow NOMsg, GENpl, dim") appears to coexist with closed syllable lengthening (nůž vs. nože, nůžky "knife NOMsg, GENsg, scissors"). In sum, any attempt to propose a regularity underlying this system seems desperate. Vowel length in Czech is therefore reputed to be anarchic and unpredictable. This situation is mirrored in grammars by pages of amorphous lists of grammatical categories that exhibit length or shortness.

Czech vowel length is driven by a simple mechanism that is known from other languages: templates. That is, a certain amount of vocalic space is associated to a given morphological and/ or semantic category. If concatenation of underlying long and short vowels produces more morae than the specific category allows for, shortening is observed. If it produces less vocalic weight than the category at stake demands, lengthening ensues. This kind of templatic structure is a typical feature of Afro-Asiatic languages, and I believe that the templatic regularities I present have not been discovered before because nobody has ever looked at the relevant data through the prism of templates: these are commonly held to be a typological peculiarity of Afro-Asiatic, absent from Indo-European.

In order to illustrate the preceding claim, only a few of the instances of templatic activity that I have identified may be quoted in the frame of an abstract.

In Scheer (forth), it is demonstrated that there is a templatic restriction on the morphological item [vowel-final prefix+root] for denominal nouns: the vocalic weight of this object is exactly three morae. If the root is long, the prefix will be short; if the root is short, the prefix will be long. Table (1) shows this regularity for the diminutive/ agentive suffix -ek, -ka, -ec. As prefixes may be long only if they are attached to a demoninal noun whose root is short, the ban against words with both long prefixes and roots is surface-true: for the prefix za- for instance, *zá - √...VV... does not occur at all in Czech.

The regularity concerning iterative-formation that is illustrated in table (2)-(3) follows the same pattern, and it governs the entire paradigm. Iteratives are made in verb-classes 3, 5 and 6, that is involving the thematic elements -e-, -a- and -ova-, respectively (identification of the other classes mentioned in the column "derivation": 1=athematic, 2=-nou-, 4=-i-). Under (2a), it is demonstrated that non-iteratives bearing a short root-vowel whose iteratives are made in classes 3 and 5 produce results with long root-vowels. This is true for all timbres and irrespectively of the class the verb originates in. As can be seen in (2b), no effect is observed if the base-verb possesses a long root. However, iterativity cannot be held responsible for lengthening since the same derivation provokes shortening if the iterative belongs to class 6, as shown in the lefthand column of (3). Again, shortening occurs with all timbres and verbs from any origin. If on the other hand the root-vowel is short in the non-iterative, the derivation does not manipulate vowel quantity, cf. the righthand column of (3). Hence, the correct generalization covering all data mentioned is as follows: [root+thematic element] of an iterative weigh exactly three morae. If concatenation produces bimoraic items (=short root+e/a), lengthening occurs; if on the other hand iteratives weighing four morae are derived (=long root+ova), shortening takes place. In any event, the obtaining iterative weighs exactly three morae. Again, this behaviour is of truly templatic nature: a semantically defined category (here: iterativity) whose Signifiant is expressed by a concatenation of several morphemes (here: [root+thematic vowel]) commands a restriction of the vocalic space that its members must fill in.

The last example illustrated in this abstract concerns comparatives of adjectives (4a) and adverbs (4b). Both comparatives of adjectives and adverbs possess a long and a short allomorph. Comparatives of adjectives are built either by suffixing -ější or -ší, whose distribution may not be predicted (apart from the fact that the class of items bearing the short allomorph is small, unproductive and concerns "basic" vocabulary, while the former suffix is productive, expanding and attached to all loans). In case the long -ější is suffixed, concatenation does not produce any modification of vowel length: nový – novější "new", hloupý – hloupější "stupid". This is also true if the short allomorph -ší is attached to a short root: slabý – slabší "weak", sladký – sladší "sweet". However, long roots shorten systematically if their comparative takes -ší: blízký – bližší "near" etc., cf. (4a) which provides the exhaustive record of items of this kind. The formation of comparatives of adverbs is parallel to what has been described so far in that the concatenation of the long allomorph -ěji does not produce any length-alternation: slabý, suchý (adj) – slabší, sušší (comp adj) – slabě, suše (adv) – slaběji, sušeji (comp adv) "weak, dry". And as before, the short allomorph -ě triggers a modification of the length of the root-vowel. This time, however, lengthening occurs instead of shortening: drahý (adj) – dražší (comp adj) – draze (adv) – draže (comp adv) "expensive" etc., cf. (4b) which is exhaustive as well.

Hence, the generalization in order establishes a causal relation between the length of the suffix and the length of the root: if the suffix weighs two morae as in the case of -ší, shortening of the root is observed; if the suffix weighs one mora as in the case of -ě, lengthening of the root ensues. As before, the overall weight of all comparatives (suffixed by short allomorphs) is "exactly three morae".

Vowel length also turns out to be templatic in infinitives (znát – poznat "know, recognize") and diminutives (vlak – vláček "train, dim" vs. kýbl – kyblík "bucket, dim"). It may be interpreted as such in agentives in –ač/ -ič and –tel and short forms of primary adjectives (zdravý – zdrav "healthy"). As a matter of fact, templatic activity is not marginal at all in Czech, it occurs all through its morphology and controls certain central categories like iteratives and infinitives.

Apart from the empirical relevance of these findings, typological and theoretical questions are raised: the common typological statement according to which templatic morphology is an (almost) exclusive property of Afro-Asiatic languages has to be revised. There does not seem to be any implicational relation between a certain language-family and templaticity. On the other hand, Czech templaticity is not exactly identical with what is known from Semitic: 1) Czech does only count vowels, consonants are totally irrelevant, 2) Czech templates never enjoy morphemic status: their semantic identity is always marked by regular concatenative morphology (-t for infinitives, -ek/-ík /... for diminutives etc).

These issues will be addressed, as well as the question of how the exact limits of the template are defined.

(1) *zá - √...VV...	
za - √...VV...	zá - √...V...
zadávká, zahálka "idler fem", zahálka "idleness", zahrádka, zahrádkář, zacházka, zachránce, zachránkyně, zajižďka, zakázka, zakázkový, zanáška, zarážka, zastávka, zatáčka, zavijec	zádržka, zádumčivec, zádumčivost, zádumčivý, záhumenek, záchytka, zájemce, zájemkyně, základka, záklopka, zákonodárce, zákožka, zákrsek, zákusek, záložka, zálepka, zámeček, zámyčka, záměnka, záměrka, záminka, zámotek, zánožka, západka, zápalka, záporka, zápisek, zápletka, zápletkový, zápražka, záprška, záprtek, zápujčka, zármutek, zárodečný, zárodek, zárodkový, zářivka, zásilka, zásmážka, zásuvka, zástěrka, zástěrkař, zástěrkový, zástrčka, zástřešek, zástupce, zástupkyně, zášijek, zátočka, zátylek, závažek, závdavek, závodčí, závorka, závěrečný, závěrka, závěsek, závěska, závlačka, zázvorka

(2)	X > 3 –e, -ět				X > 5 –at			
	iterative lengthening				iterative lengthening			
a.	derivation	V	VV		derivation	V	VV	
	2>3	i-í	minout	míjet	2>5	i-í	všimnout si	všímat si
	3>3	e-í	hledět	-hlížet		e-é	lehnout	lěhat
		o-á	vonět	-vánět		e-í	zapomenout	zapomínat
	4>3	a-á	hasit	-hášet		o-á	uhodnout	hádat
		e-í	jezdit	jíždět		e-ou	poslechnout	poslouchat
		ě-í	dělit	-dílet	3>5	e-é	letět	létat
		i-í	klidit	-klízet		e-í	hledět	hlídat
		o-á	hodit	házet		ě-í	běžet	-bíhat
		u – ou	sušit	-soušet		y-ý	slyšet	slychat
		y – ý	myslit	-mýšlet	4>5	a-á	skočit	skákat
						o-á	chopit	chápat
						u-ou	mluvit	-mlouvat
					5>5	ø-í	-slat	-sílat
b.	no effect				no effect			
		VV	VV			VV	VV	
	2>3	í-í	bídnout	-bízet	1>5	ou-ou	tlouci	-tloukat
		á-á	hlásit	ohlášet		ů-ů	růst	-růstat
			hájit	hájet	2>5	í-í	líznout	lízat
		ou-ou	trousit	-troušet		á-á	mávnout	mávat

		X > 6 –ovat			
		shortening		iterative shortening	
				no effect	
		VV	V		
				V	V
2>6	á-a	šlápnout	-šlapovat		
	í-i	píchnout	-pichovat	2>6	í-i řinout se -řinovat
	ý-y	dýchnout	-dychovat		e-e dechnout -dechovat
3>6	á-a	sázet	-sazovat	4>6	á-a tlačit -tlačovat
4>6	á-a	krátit	-kracovat		e-e černit -černovat
	í-i	cítit	cít'ovat		ě-ě měřit -měřovat
	ou-u	soudit	-suzovat		i-i klidit -klizovat
	ý-y	výšit	vyšovat		o-o prosit -prošovat
5>6	á-a	žádat	-žadovat		ø-ø drtit -drcovat
					u-u -ručit -ručovat
					v-v chvtit -chvcovat

(4) a.		b.			
adjective	comp. adjective	adverb	comp. adverb	adverb	comp. adverb
blízký	bližší	drahý	draže	(brzy)	dříve
úzký	užší	dlouhý (<дъл-гý)	déle	(mnohý)	více
nízký	nižší	tichý	tíže, tišeji	(špatný, zlý) (< hoř-)	hůře
krátký	kratší	hustý	houště, hustěji	(< lepí) (dobrý)	lépe
řidký	řidší	chudý	(< stč chůze) chuději	snadný	snáze, snadněji
—	radší	mladý	(< stč mláze) mlaději	zadní	záze, zadněji
krásný	krašší kn, krásnější	tvrdý	(< stč tvrže) tvrději	široký	šíře, šířeji
		(< mení) (malý)	méně	vysoký	výše
				daleký	dále

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Département des Sciences du Langage
98, Boulevard Herroit
F-06000 Nice
FRANCE

Dear organizers of FDSL-4,
please find enclosed a submission to FDSL-4. The relevant data are as follows:

title: The key to Czech vowel length
author: Tobias Scheer
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Sincerely,

Tobias Scheer

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In this talk, I show that vowel length in Czech is driven by a simple mechanism that is known from other languages: templates. That is, a certain amount of vocalic space is associated to a given morphological and/ or semantic category. If concatenation of underlying long and short vowels produces more morae than the specific category allows for, shortening is observed. If it produces less vocalic weight than the category at stake demands, lengthening ensues. This kind of templatic structure is a typical feature of Afro-Asiatic languages, and I believe that the templatic regularities I present have not been discovered before because nobody has ever looked at the relevant data through the prism of templates: these are commonly held to be a typological peculiarity of Afro-Asiatic, absent from Indo-European.

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In my presentation, I provide parallel evidence from infinitives (znát - poznat "know, recognize"), diminutives (vlak

– vláček "train, dim" vs. kýbl – kyblík "bucket, dim"), agentives in –ač/ –ič and –tel and short forms of primary adjectives (zdravý – zdráv "healthy"). As a matter of fact, templatic activity is not marginal at all in Czech, it occurs all through its morphology and controls certain central categories like iteratives and infinitives.

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These issues will be addressed, as well as the question of how the exact limits of the template are defined.

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	u – ou	sušit	-soušet		4>5	y-ý	slyšet	slýchat
	y – ý	mýslit	-mýšlet			a-á	skočit	skákat
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b.	no effect				no effect			
			VV	VV			VV	VV
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		á-á	hlásit	ohlášet		ů-ů	růst	-růstat
			hájit	hájet	2>5	í-í	líznout	lízat
		ou-ou	trousit	-troušet		á-á	mávnout	mávat

(3)	X > 6 –ovat							
	iterative shortening							
	shortening				no effect			
		VV	V			V	V	
2>6	á-a	šlápnout	-šlapovat					
	í-i	píchnout	-pichovat		2>6	i-i	řinout se	-řinovat
	ý-y	dýchnout	-dychovat			e-e	dechnout	-dechovat
3>6	á-a	sázet	-sazovat		4>6	a-a	tlačit	-tlačovat
4>6	á-a	krátit	-kracovat			e-e	černit	-černovat
	í-i	cítit	cit'ovat			ě-ě	měřit	-měřovat
	ou-u	soudit	-suzovat			i-i	klidit	-klizovat
	ý-y	výšit	vyšovat			o-o	prosit	-prošovat
5>6	á-a	žádat	-žadovat			ø-ø	drtit	-drcovat
						u-u	-ručit	-ručovat
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(4) a.		b.			
adjective	comp. adjective	adverb	comp. adverb	adverb	comp. adverb
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krátký	kratší	hustý	houště, hustěji	(< lepí) (dobrý)	lépe
řidký	řidší	chudý	(< stč chůze) chuději	snadný	snáze, snadněji
—	radší	mladý	(< stč mláze) mlaději	zadní	záze, zadněji
krásný	krašší kn, krásnější	tvrdý	(< stč tvrže) tvrději	široký	šíře, šířeji
		(< mení) (malý)	méně	vysoký	výše
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