A representational analysis of Czech palatalization

1. Claim. Different Czech suffixes trigger different patterns of palatalisation on the final segment of the root they attach to. We analyse these patterns as resulting from the presence of three different floating palatalisers in the phonological make-up of these suffixes.

2. Data. ***2.1 Big and small palatalisation.*** Scheer (2001) identifies two degrees of palatalization (PAL): 'small' (e.g. /k/→[ʦ]) and 'big' (e.g. /k/→[ʧ]). For instance, while LOC/DAT.F.SG *-ě* triggers small PAL (e.g. *lou*[k]*a–lou*[ʦ]*e* 'meadow'), P.PRT *-ěn* triggers big PAL (e.g. *zat*[k]*nout–zat*[ʧ]*en* 'arrested'). Czech segments and their palatalized versions are given in Table 1 (we focus on voiceless consonants for reasons of space; the shading highlights the similarity between the segments and the strength of the effect). Some segments are affected by one type of PAL only. For example, small PAL does not affect /ʦ/ and /s/ (e.g. *Bystri*[ʦ]*a* - *Bystri*[ʦ]*e* 'Bystrica', *mí*[s]*a–mí*[s]*e* 'bowl'), whereas big PAL does (e.g. *pé*[ʦ]*i–pe*[ʧ]*en* 'baked', *hlá*[s]*it–hlá*[ʧ]*en* 'reported'). The opposite holds for labials: whereas they are not affected by big PAL (e.g. *zato*[p]*it–zato*[p]*en* 'flooded'), in small PAL, labials surface as plain labials followed by [i] (e.g. *stou*[p]a–*stou*[pi]ě 'rise'), or, if the labial is nasal, by [ɲ] (e.g. *zi*[m]*a–zi*[mɲ]*ě* 'winter'). For other segments, no difference can be observed between small and big PAL. For instance, /x/ turns into [ʃ] in both cases (e.g. *stře*[x]*a–stře*[ʃ]*e* 'roof', *nad*[x]*nout–nad*[ʃ]*en* 'excited'), and /n/ and /r/ turn into [ɲ] and [r̝], respectively). ***2.2 Additional patterns.*** Suffixes beyond those considered by Scheer, like CMPR *-ěj* and CAUS *-i*, suggest the existence of additional patterns (Table 2). These suffixes pattern with big palatalisers if the root ends with a velar (top section of Table 2), and with small palatalisers if the root ends with a coronal. If the root ends in a labial, CMPR *-ěj* behaves like small palatalisers, whereas CAUS *-i* behaves like big palatalisers. We now face a total of four patterns, which we reduce to three by (for now) setting aside the labials. This allows us to collapse the two middle columns of Table 2, which are identical except for the bottom section of the table, into a new, 'medium' pattern (see Table 3).

Table 1: Palatalization patterns I

	small	big
/k/	/ʦ/	/ʧ/
/x/	/ʃ/	/ʃ/
/t/	/c/	/ʦ/
/ʦ/	/ʦ/	/ʧ/
/s/	/s/	/ʃ/
/n/	/ɲ/	/ɲ/
/r/	/r̝/	/r̝/
/p/	/pi/	/p/
/f/	/fi/	/f/
/m/	/mɲ/	/m/

Table 2: Palatalization patterns II - SR

	small	CMPR *-ěj*	CAUS *-i*	big
/k/	/ʦ/	/ʧ/	/ʧ/	/ʧ/
/x/	/ʃ/	/ʃ/	/ʃ/	/ʃ/
/t/	/c/	/c/	/c/	/ʦ/
/ʦ/	/ʦ/	?	?	/ʧ/
/s/	/s/	/s/	/s/	/ʃ/
/n/	/ɲ/	/ɲ/	/ɲ/	/ɲ/
/r/	/r̝/	/r̝/	/r̝/	/r̝/
/p/	/pi/	/pi/	/p/	/p/
/f/	/fi/	/fi/	/f/	/f/
/m/	/mɲ/	/mɲ/	/m/	/m/

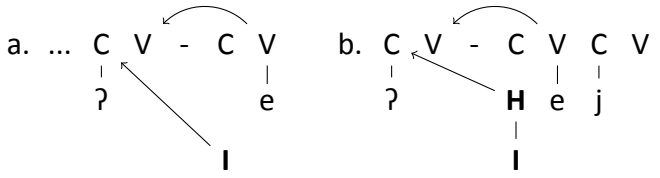
Table 3: Velars and coronals

	small	medium	big
	I	**H.I**	**H.I̲**
ʔ	ʔ.**I**	ʔ.**H.I**	ʔ.**H.I̲**
H	H.**I**	**H.I**	**H.I̲**
ʔ.A	ʔ.A.**I**	ʔ.**H**.A.**I**	ʔ.**H**.A.**I̲**
ʔ.I	ʔ.**I**	ʔ.**H.I**	ʔ
H.A	H.A.**I**	**H**.A.**I**	**H**.A.**I̲**
L	L.**I**	L.**H.I**	L.**H.I̲**
A	A.**I**	A.**H.I**	A.**H.I̲**

3. Analysis. ***3.1 UR, velars and alveolars.*** We provide a representational analysis based on Element Theory (ET, Backley 2011) and strict CV (Lowenstamm 1996, Sheer 2004). We argue that PAL triggers consist of floating sets of elements, which belong to the UR of the relevant suffixes together with other melodic material. Palatalisers must be floating because PAL can be triggered by front and back vowels (Beranová 2009), suggesting that the PAL trigger is not the 'visible' vowel of the suffix. The URs of Czech velar and coronal segments of Table 2 are given in the leftmost column of Table 3. The headings of the other columns show the melodic identity

of the thee different floating palatalisers: **I**, **H.I**, and **H.I̲**. In the case of velars and coronals the palatalisers associate with the left-most available C/V slot (Figure 1), resulting in the representations given in the three rightmost columns of Table 3, which combine the UR of the first column with three different palatalisers (marked in bold). Note that some similar-sounding segments have different URs, but, importantly, no single UR has two different phonetic interpretations. We maintain that this is not a problem, but rather supports a substance-free, strictly modular, take on phonology, where URs depend on phonological behaviour, rather than on phonetics.

Figure 1: DAT/LOC.F.SG *-ě*, /k/→[ʦ] *vs* CMPR *-ěj*, /k/→[ʧ]



3.2 Labials. The difference between CMPR *-ěj* and CAUS *-i* following labials does not depend on the melodic makeup of the palataliser, but rather on the different CV profile of these suffixes. We argue that the floating sets of elements responsible for PAL do not merge with the root-final C slot because the latter contains the U element, which cannot be combined with the I element of the palataliser (because they are on the same tier; Figure 2a). As a consequence, the floating set of elements containing I associates with to following available slot, i.e. the root-final empty V, and surfaces as *i* (Figure 2b). This is independently supported by the behaviour of *ě*, which (i) patterns with long vowels (e.g. it does not undergo templatic lengthening in the infinitive (e.g. *přispě-l* 'contributed' ∼ *přispě-t* 'to contribute' vs *nes-l* 'borne' ∼ *nés-t* 'to bear'), and (ii) can be preceded by a C cluster, suggesting that *i* can govern a preceding alternating site, thus is in a V node (e.g. *barv-a*.N.SG, *barev*.G.PL, *barv-ě*.LOC.SG 'color'). If the suffix has a different CV profile, i.e. if it consists of floating material only, then the floating palataliser associates with the available V slot together with the other floating material (Figure 3). As a result, the palataliser fails to surface independently. We argue that the same happens to P.PRT *-ěn*, where the I element of the floating palataliser merges with the I element contained in the floating /e/.

Figure 2: CMPR *-ěj*, /p/→[pi]

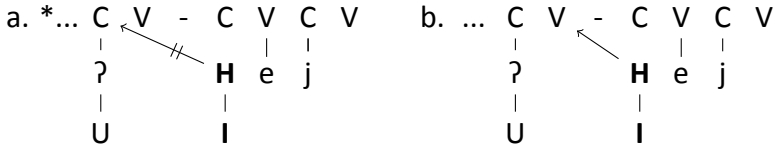
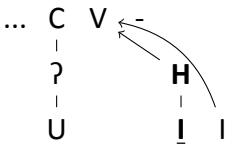


Figure 3: CAUS *-i*, /p/→[pi]



References. Backley, P. 2011. *Introduction to Element Theory*. EUP. ● Beranová, A. 2009. Palatalizující sufixy v současné češtině. MA thesis, Brno. ● Lowenstamm, J. 1996. CV as the only syllable type. *Current trends in phonology* ● Scheer, T. 2001. Čeština ve Warśawě. Handout. ● Scheer T. 2004. *A Lateral Theory of Phonology*. De Gruyter.