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Phonological interactions of articulatorily distant classes have always been one of the most important issues of modern phonological enterprise. However, the number of formal solutions proposed by theoretical models and endless discussions concerning their explanatory power and limitations make it necessary to subject the postulated primes to constant revision concerning both their number and character. This is an inevitable approach in the search for an optimal set of phonological primes which are able to describe phonological systems of natural language. This is even more so as the amount of new cross-linguistic data is growing continuously. Such a methodological approach finds the reflection in contemporary phonological literature. In other words, one of the most serious challenges for modern phonology nowadays is to establish the character of primes utilized to code speech sounds. This is not an easy task insofar as the proposed primes should at the same time allow for a convincing explanation of phonological phenomena. However, it has been repeatedly pointed out that large amounts of such phenomena still remain problematic because the classical acoustic-perceptual and articulatory-based models are not suitably equipped to deal with them. One of such problematic areas include common interactions between vowels and consonants which results in divergent views on their internal structure, e.g. Clements and Hume (1995), Harris and Lindsey (1995), Padgett (2002), and Flemming (2002), among many others. Another, no less important, issue concerns the phonological patterning of articulatorily distant consonant classes, e.g. Ladefoged (2005), Flemming (2005), and Mielke (2008). This can be illustrated on the example of labials and velars which interact phonologically on a massive scale. Since the representation of labials is pretty uncontroversial, in this talk we concentrate on the internal structure of velars which has recently captured much attention in the literature. This is especially true in Element Theory (ET) – a model which recognizes only certain acoustic properties present in the speech signal as linguistically important. Interestingly, along with the progression of the model, the representation of velars has changed. At the early phase of ET formation, labials and velars are represented by different elements. Labials, non-low back vowels, and the labial glide contain the element |U|, while velars are defined by the neutral element (Harris and Lindsey 1995), empty-headedness (Cyran 1997, 2010; Huber 2007), or an additional element (Scheer 2004). Recently, however, all these proposals have been discarded in favor of a solution which establishes a direct relationship between the two categories (Backley 2011). Building on the idea put forth in Broadbent (1996), Backley claims that both velars and labials share the same element |U|. What differentiates both categories is the status of this resonance element, namely, it is headed in labials |U̲|, but non-headed in velars |U|. In this way, labials and velars are formally related, and at the same time, phonologically distinct.

The analysis of the data presented in the discussion puts us in the position of the supporters of the latter solution. To put it differently, the main aim of this short talk is to back the solution according to which labials and velars share a resonance element. Since the evidence on the intimate phonological relationship between labials and velars is massive, the discussion is narrowed down to only some examples of the relationship between velars and labials in some southern dialects of contemporary Polish. The reason why we have decided to discuss this particular piece of evidence is that it categorically refutes the claim that velars are empty headed, i.e. that they lack a resonance element. The observation that in southern dialects velars can be realized as labials in the non-labial context (no labial vowel or consonant in the vicinity), weighs in favor of this conclusion. More specifically, apart from a common shift of the word final /x/ > /k/ in the dialects of Lesser Poland (south-eastern Poland) (Urbańczyk 1968; Dejna 1981), there are some /x/ > /f/ developments further to the

south in the Spiš area (Polish-Slovakian border). The shifts in question, i.e. /x/ > /k/ or /f/, occur predominantly in two contexts: word-finally (1a) and in some consonant clusters (1b).

(1) Dialectal developments of the velar fricative in Polish (Dejna 1981)

	Standard Polish	*Lesser Poland*	*South*	*gloss*
a.	[x]	[x] > [k]	[x] > [f]	
	da[x]	da[k]	da[f]	*roof*
	me[x]	me[k]	me[f]	*moss*
	gro[x]	gro[k]	gro[f]	*pea*
	ty[x] stary[x]	ty[k] stary[k]	ty[f] stary[f]	*these old*
b.	[x]wała	[k]wała	------	*glory*
	p[x]ła	p[k]ła	------	*flea*
	t[x]órze	t[k]órze	t[f]órze	*coward, pl.*
	[k]tóry	------	[f]tóry	*which*

In (1a) the velar fricative in the Standard variety is shifted to [k] or [f] word-finally in some dialects of Lesser Poland. Similar developments can be observed in (1b) with the difference that here the shift takes place in consonant clusters. Some forms are claimed to be derived by analogy, i.e. the shift is motivated by the presence of the shift or lack of it in related forms. For example, in some dialects a noun in gen.pl. may receive the ending -[ux], e.g. *syn*[ux], St. Pol. *syn*[uf] 'son, gen.pl.' which agrees with the form of the determiner and adjective, i.e. *ty*[x] *dobry*[x] 'these good, gen.pl.' In other dialects, however, we can observe the opposite direction of the development in that the latter forms *ty*[x] *dobry*[x] 'these good, gen.pl.' are realized phonetically with the final labial fricative *ty*[f] *dobry*[f], which in turn are assumed to be modeled on *syn*[uf] 'son, gen.pl'. In the latter dialects, these endings are claimed to have influenced the phonetic realization of nouns in loc.pl. in that they terminate with [f], e.g. St. Pol. *na pola*[x] - dial. *na pola*[f] 'in the fields', St. Pol. *w ręka*[x] – dial. [v rentsaf] 'in the hands'. The data to be presented include also a cluster simplification pattern found in the dialects of Lesser Poland and Mazovia, which can be schematized as [xw] > [xv] > [xf] > [f] and exemplified by some place names and proper nouns, e.g. *Bogu*[f]*ał* < *Bogu*[xf]*ał*, [f]*alimir* < [xf]*alimir*, *fała* < [xf]*ała* 'glory', [fʲ]*ila* < [xfʲ]*ila* 'moment' (Dejna 1981). The latter developments will be contrasted with similar simplifications in the Kurp and Northern Mazovian dialects, e.g. [fɕ]*ołek* ~ [ɕ]*ołek* 'violet', [gvʑ]*azdy* ~ [gʑ]*azdy* 'stars', [mɲ]*asto* ~ [ɲ]*asto* 'city' (Czaplicki 1998). The cluster simplification here consists in, first, the strengthening of the soft labial [fʲ vʲ mʲ] to [ɕ] or [ç] and then deletion of the preceding labial fricative (or nasal).

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