

Abstract

for presentation (phonology session)
at CESCL, Budapest, 29-31 May, 2006

On representations of coronals (and velars) across theories

The purpose of this presentation is to demonstrate that it is not an absolute theoretical necessity that coronals lack a phonologically relevant place of articulation, by giving an overview of various analyses for the internal representation of coronal and velar segments in more recent phonological literature.* This overview will reveal that in the various proposals it is *not predominant* at all that coronals should be unspecified (or underspecified) for place of articulation (*contra* Paradis–Prunet 1991). This talk will, therefore, add to an accumulating body of both empirical facts and theoretical considerations that indicate that it is *velars*, rather than coronals, that *lack a phonologically relevant place of articulation*.

In particular, there is a wide-spread opinion that coronals seem to be 'closely associated' with frontness (front / [-back] vowels), and palatality. In other words, coronals do not lack a place of articulation, but – varying according to the individual theories – have [+front] (or [-back]), / element (for palatality), and so on, in their representation. This leaves open the possibility for velars to lack place specifications. Two sets of data will be cited to lend further support for this view: from the history of Chinese and from Ancient Greek.

The presentation concentrates then on analyses, from a range of theoretical perspectives, that suppose some place specification in coronals. The theoretical frameworks that will be treated include proposals in feature theory (Halle 2005), Dependency Phonology (Anderson and Ewen 1987, Anderson and Durand 1986) as well as Government Phonology (Harris 1994, Harris and Lindsey 1995; Broadbent 1991, Backley 1993, Cyran 1997). Crucially, the presentation concentrates exclusively on what these theories have to say about the segmental representations they assume.

In approaches that are based on binary distinctive features, coronals and velars (and labials) had the following representation (for place) *à la* SPE:

- | | | |
|-----|-----------|----------------------|
| (1) | Coronals: | [+coronal] [-labial] |
| | Labials: | [-coronal] [+labial] |
| | Velars: | [-coronal] [-labial] |

In a classical SPE-style framework, nothing could be unspecified. Notice as well that velar place can only be defined by making (negative) reference to *two other* places, but not to one of its own. More recent approaches have shown a shift in that all vowels are standardly assumed to have a Dorsal node, as well as velars themselves (*cf.* Kenstowicz 1994, Chpt 9 for a similar opinion). Halle (2005) in an article on palatalizations, extending this standard feature theoretical analysis, now proposed that front vowels are in fact [Dorsal] and [Coronal], sharing the latter with coronals, of course. This proposal not only indicates an *explicit* connection between coronals and front vowels, but also presupposes that coronals do have an underlying place specification (which is shared with front vowels).

Dependency Phonology (Anderson – Durand 1986:38) holds that dentals and alveolars are {l,d} and {ll}, respectively, while velars are also specified: {l,u}. All contain {l} for linguality ({u}=labiality, {d}=dentality). What is crucial in this analysis is that dentals and velars are of equal complexity as for their representation.

Government Phonology (GP) will be treated in more detail (mainly out of personal preference). In Harris and Lindsey 1995, Harris 1994, the element *R* was assumed to stand for

coronality (in fact the idea goes back to precursors of GP). Backley (1993), admittedly under the influence of underspecification theory and the idea of coronal unmarkedness, points out a number of problems with this element. He offered the element *A*, 'lowness', as a solution for a number of objections against *R*. This was also applied by Cyran (1997) for various distributional facts in Irish. It is not my purpose here to argue for either of these views. In fact, either of them leaves velars to be headed by the 'empty element' or the 'cold headedness' element (which are really the same object, as will be discussed), while specifying coronals. However, I would also like to draw attention to some data that seem to go in favour of frontness / palatality (*I* element) *residing* in coronals (or some subset of coronals at least). The following data come from Ancient Greek where all IE labio-velars changed to dentals before front vowels (only a sample is added below):

(2)	IE *k ^w	→ t	*k ^w e	> t̪e	'and'
			*k ^w is	> t̪is	'who?'
			*k ^w et ^w ores	> t̪ettares/t̪essares	'four'
			*penk ^w e	> pent̪e	'five'

These developments can be analyzed as palatalizations where the palatality spreads from the vowel to *form* a dental, so the /t̪/'s above contain palatality.

These analyses above strongly show that coronals can indeed be associated with a number of place-defining features: frontness, A-ness, R-ness. Coronal placelessness is not a necessary assumption then. On the other hand, velars are shown to be (a) either no less complex than coronals, or (b) defined in terms of the other place-defining features, or (c) they are just left empty. The latter two definitely show velars to lack a place specification of their own.

References:

- Anderson, John, and Jacques Durand. 1986. Dependency phonology. In: Durand 1986:1-54.
- Anderson, John M, and Colin J Ewen. 1987. Principles of Dependency Phonology. CUP, Cambridge.
- Backley, Phillip. 1993. Coronal: the undesirable element. In: Working Papers in Linguistics 5: 301-323. UCL, London.
- Cyran, Eugeniusz. 1997. Resonance Elements in Phonology – A Study in Munster Irish. In: PASE Studies and Monographs. Vol. 3. Lublin.
- Durand, Jacques (ed.) 1986. Dependency and Non-Linear Phonology. Croom Helm, London, Sydney, Dover.
- Halle, Morris. 2005. Palatalization / Velar Softening: What it is and what it tells us about the nature of language. In: Linguistic Inquiry 36/1: pp.23-41.
- Harris, John. 1994. English Sound Structure. Blackwell, Cambridge, Massachusetts.
- Harris, John and Geoff Lindsey. 1995. The elements of phonological representations. In: Durand and Katamba 1995:34-79.
- Kenstowicz, Michael. 1994. Phonology in Generative Grammar. Blackwell, Cambridge, Massachusetts.
- Paradis, Carole and Jean-François Prunet (eds). 1991. The Special Status of Coronals: external and internal evidence. Academic Press, San Diego.

* Part of the research for this presentation was made possible by the Hungarian State Eötvös Scholarship.