

Cologne German velarisation and virtual geminates

Cologne German, i.e. the variety of German spoken in the city of Cologne, exhibits an extraordinary process of velarisation. As shown under (1), the dentals [t,d,n,nt,nd] found in German are sometimes represented by velars in Cologne ("N"=velar nasal, "S"=<sch>, "E"=schwa).

(1)	Germ	Col	German	Cologne		
	a. n	N	braun	brung	[bruN]	
			t	heute	hüek	[hyk]
			d	schneiden	schnigge	[SnigE]
	b. nt	Nk	bunt	bungk	[buNk]	
			nd	binden	binge	[biNE]

The process at hand is classically used in dialectological textbooks (e.g. Schwarz 1950) because of its interesting geographic distribution. In fact, it extends well beyond Cologne, velarised words being attested all over the Rhine valley up to High Alemannic, in the Netherlands as well as in more eastern varieties of Middle German.

One consequence of the fact that the literature has always tackled the geographic distribution of this velarisation is a lack of studies that are concerned with its phonological properties. Which is the environment that triggers the process? Did it affect the whole lexicon?

This kind of question can be answered only if a corpus of more than a handful of words is examined (dialectological custom is to work with 3 words, i.e. *Pfund*, *Hund*, *Wein*). I have therefore attempted to establish the exhaustive list of velarised items, which features 97 words.

Even though the relevance of the preceding context was identified early, appropriate generalisations were not drawn. Hönig (1877) and Münch (1904) do state the correct description of the phenomenon concerning simplex dentals as under (2a), but fail to connect it with the case of dental clusters given under (2b) (MHG=Middle High German).

- (2) a. MHG [t,d,n] > Cologne [k,g,N] / {ii,uu,yy} ___
 b. MHG [nt,nd] > Cologne [Nk,Ng] / {i,u,y} ___

That is, MHG long high vowels trigger velarisation of following simplex dentals (they undergo NHG diphthongisation in standard German, which leaves us with the correspondence NHG [aw,aj,Oj]+dental = Cologne [u,i,y]+velar), whereas their short versions provoke velarisation of dental clusters. Thus, the Cologne representatives of German diphthongs that originate in MHG diphthongs as well are never flanked by velars, e.g. Col *Bein*, ***Bing* "leg" < MHG *bein*.

Another interesting result coming out of the 97-word corpus is that Umlaut also triggers velarisation. Indeed, items such as Cologne *Häng*, *Räng*, *Wäng*, *schänge*, *Bäng* = German *Hände*, *Ränder*, *Wände*, *schinden*, *Bände* disobey (2) in that a mid instead of the expected high vowel precedes the velarised consonant. Umlaut is singled out as the triggering factor since singular forms of these words (or the preterit *schand* in the case of *schänge*), just as in German, are dental AND lack Umlaut: Col *Hand*, *Rand*, *Wand*, *Band*. This holds also true for

primary Umlaut, as demonstrated by Cologne *Eng, blänge, wänge, lengelahn* = German *blenden, wenden, Ende, lendenlahm* (*blenden, wenden* are causatives derived from the preterit of former Umlaut-triggering –jan verbs related to *blind, winden, Ende, Lende* < Germ **andija, *landī/jō*). Umlaut triggering velarisation is not surprising in the light of (2) because it is nothing more than a the high vowel [i] moving from the suffix into the stem, and thereby penetrating the dental.

Unlike other movements that are oriented backwards, this velarisation is neither connected to syllable structure (as e.g. English "l-darkening" in Codas), nor is it the result of dissimilation. Just as palatalisations, it depends on the influence of an adjacent vowel. These characteristics leave it unparalleled.

The generalisation coming out of (2) must grant the ability of triggering velarisation to all MHG high vowels and only to those, conceiving of the additional condition on length as an independent factor.

The picture is completed when observing that MHG long high vowels shorten when triggering velarisation, as may be seen under (1). The regular Cologne reflexes of long high vowels is unchanged, as for example in MHG *wîp, hûs, tiuvel* > Col [viip, huus, dyvE]. When triggering velarisation, however, the same vowels come out short: MHG *brûn, snîden, hiute* > Col [bruN, SnigE, hyk].

This configuration suggests a process whereby the overall space/weight occupied by the vowel and the consonant is constant (T=dental, K=velar): MHG VVT > Col VKK. In this view, the product of velarisation is a geminate. Velarisation does not occur after short vowels because no gemination could ensue: a short vowel is unable to cede a skeletal slot in order for the velar to geminate. Finally, dental clusters may geminate after short vowels because they do not need to geminate through velarisation: they are already double.

The alleged velar geminates are phonetically simplex, cf. (1). Hence, a diachronic picture of the following kind could be argued for: 1) in MHG, long high vowels precede simplex dentals (=VVT), 2) in an unrecorded intermediate stage, velarisation, gemination and ensuing vowel-shortening take place (=VKK), and finally 3) in modern Cologne, velars have undergone degemination, so that their synchronic underlying and surface structure is simplex (=VK).

This scenario, however, must be abandoned in the light of a synchronically active process occurring in Cologne German. Historical as well as imported [g] systematically surface as [j] without any contextual condition: compare German *gespielt, ungeheuer, gross, Glück, egal, Propaganda, balgen, geärgert, Gig* = Cologne *jespillt, unjeheuer, jroos, Jlüick, ejaal, propajanda, baljen, jeärjert, Jig*. Note that recent loans also undergo /g/-->[j], cf. *Propaganda, Gig*. It should thus be expected that there is no [g] in Cologne at all. This prediction, however, is not borne out: [g] may be observed in all and only the cases where it originates in velarisation, cf. [SnigE] *schneiden*. Hence, [g] in velarised words must be different from /g/. Its resistance against /g/-->[j] is straightforward if its phonological identity is /gg/. As a consequence, we must recognise an object which is underlyingly double, but phonetically simple: a virtual geminate.

Since virtual geminates never appear on the surface as such, they instantiate a case of Absolute Neutralisation in the sense of Kiparsky (1968). Both the discussion during the 70s (e.g. Kenstowicz & Kisseberth (1979:211ff) and more recent literature in Government Phonology (Harris 1996, Harris & Lindsey 1990, 1995) aim at restricting the expressive power of the grammar in putting a ban on phonological objects that may never be observed on the surface. Harris (1994) for example requires Full Interpretability for every single phonological structure at any derivational level. As a consequence, there may be no difference in phonological and phonetic structure, and hence virtual geminates should not exist. If they do, however, Full Interpretability must be partly released.

- Harris, John 1994. *English Sound Structure*. London: Blackwell.
- Harris, J. (1996). Full interpretability in phonology. *Current trends in Phonology: Models and Methods*, edited by J. Durand & B. Laks, 305-332. Salford: ESRI.
- Harris, J. & G. Lindsey (1990). Phonetic interpretation in generative grammar. *UCL Working Papers in Linguistics* 2, 355-369.
- Harris, J. & G. Lindsey (1995). The elements of phonological representation. *Frontiers of Phonology*, edited by J. Durand & F. Katamba, 34-79. London: Longman.
- Hönig, Fritz 1877. *Wörterbuch der Kölner Mundart*. Köln ²1952: Bachem.
- Kenstowicz, Michael & Charles Kisseberth 1979. *Generative Phonology. Description and Theory*. San Diego: Academic Press.
- Kiparsky, Paul 1968. *How abstract is Phonology?* Bloomington: Indiana University Linguistics Club.
- Münch, Ferdinand 1904. *Grammatik der ripuarisch-fränkischen Mundart*. Bonn: Cohen.
- Schwarz, Ernst 1950. *Die deutschen Mundarten*. Göttingen: Vandenhoeck & Ruprecht.