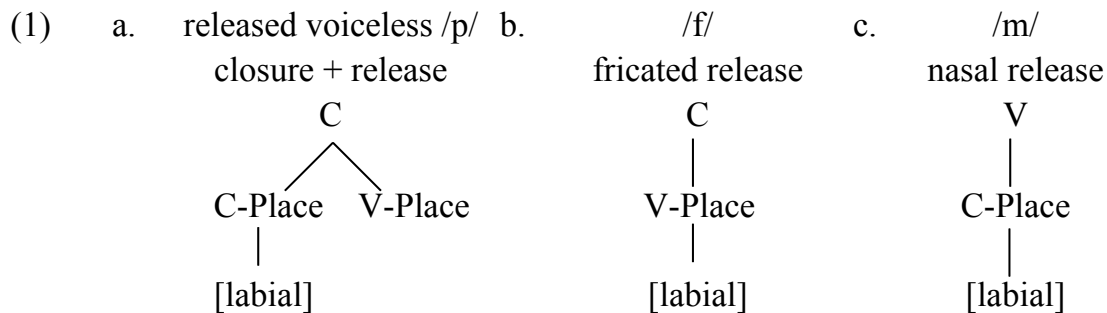


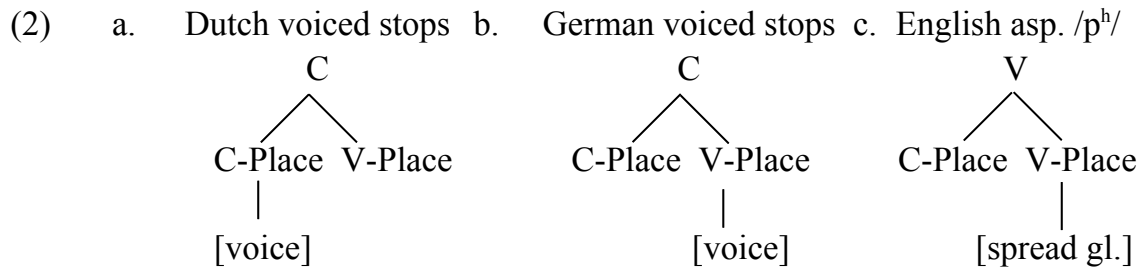
Stricture and voicing

A long-standing issue in the phonology of Dutch is the asymmetry in voicing assimilation across morphological boundaries between stops and fricatives. Voiced fricatives never trigger regressive voicing assimilation, but they may be targets of progressive voicing assimilation after surface voiceless obstruents. In this talk, I would like to provide a model of phonological representations that accounts for this asymmetry. Moreover, I will show how obstruent devoicing in Dutch and German and voicing assimilation in Dutch and English can be elegantly accounted for within this model.

In stricture theory (Grijzenhout 2001), obstruents are represented by a root-node ‘C’, whereas sonorants are represented by a root-node ‘V’. In this framework, the feature [continuant] is abandoned. Instead, C-Place represents complete oral closure and V-Place indicates oral release. Thus, (1a) is the phonological representation for a released stop (/p/ because the C-Place node for oral closure dominates the labial place-feature), (1b) is the phonological representation for a fricative and (1c) represents a sonorant stop, i.e. a nasal.



With respect to laryngeal properties of stops, we first note that speakers of Dutch do not perceive differences in positive VOT values, whereas German speakers do (Grijzenhout & Pohl, *subm.*). In Dutch, both prevoicing and the duration of oral closure determine whether an obstruent is perceived as being voiced or not. In German, the acoustic cue seems to be the duration of ‘voicelessness’ after release of the closure. In English, voicing in lax obstruents is variable and may even be absent, whereas tense obstruents are characterised by aspiration. Broadly speaking, voicing in Dutch is a property of the closure phase (C-Place), whereas voicing in German is a property of the release phase (V-Place)¹ and aspiration in English is a property of the post-closure phase:

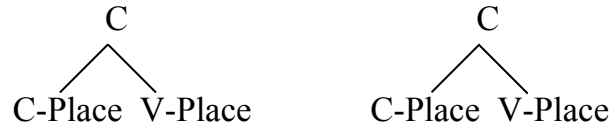


In Dutch and German, tense stops are not specified for a laryngeal feature (3a,b), but German tense stops may be ‘enhanced’ and acquire the feature [spread glottis] under V-Place in initial position within a foot (the result being a representation similar to the one for English aspirated

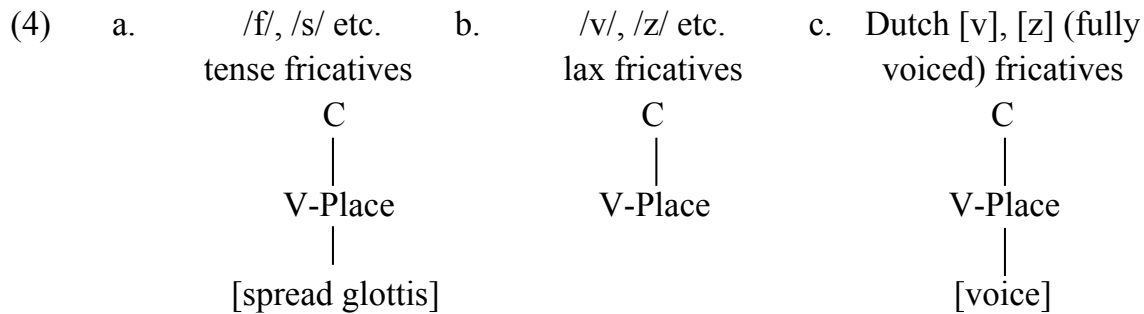
¹ Note that so-called ‘fully voiced’ stops between vowels in Dutch and German may be represented by the feature [voice] under both C-Place and V-Place.

stops in (2c)).

- (3) a. Dutch tense stops b. German tense stops



Laryngeal distinctions in fricatives are represented by means of the feature [spread glottis] in Dutch, German and English (see 4a versus 4b). In certain phonological environments (e.g., before a voiced stop in a voicing assimilation context such as *draa/x/ + -baar* → *draa[fb]aar* ‘portable’ or between a tense vowel and another vowel as in *even* [e:v´] ‘just’), lax fricatives may be fully voiced in Dutch (4c):



Dutch regressive voicing assimilation is always triggered by a voiced stop and may be accounted for by leftward spreading of [voice] under C-Place to a preceding segment (*k dacht* → *[gd]acht* ‘I thought’; *duik + boot* → *dui[gb]oot* ‘submarine’). In German, [voice] under V-Place does not spread leftward to a preceding segment due to the intervening C-Place node and it does not spread rightward either. In most varieties of English, [spread glottis] must be shared between neighbouring segments within the same prosodic word (e.g., initially in *clown* = [klɹ]own and word-finally in *cat* + /z/ → *ca[ts]*).

I assume that Dutch and German final devoicing of stops involves delinking of the feature [voice] and with e.g., Iverson & Salmons (1999) I assume that in many dialects, final devoicing also involves association of the feature [spread glottis] for stops and fricatives (which may spread rightward in varieties of Dutch: *rond + vaart* → (final devoicing & fortition) *ron[t] vaart* → (progressive [spread glottis] spreading) *ron[tʃ]aart* ‘cruise’).

The framework of stricture theory was developed to explain alternations in manner of articulation, but it also offers an attractive account of laryngeal contrasts. Within stricture theory, we may express laryngeal aspects as properties of a closure phase or release phase of stops. In many languages, the feature for laryngeal contrasts is the same one for stops and fricatives (e.g., [voice] in Catalan and [spread glottis] in Icelandic). The curiosity of Dutch and German is that the laryngeal contrast is expressed by [voice] for stops and [spread glottis] for fricatives. The two languages differ in the association of [voice] under C-Place or V-Place. Dutch allows spreading of [voice] whereas German does not and German allows foot-initial enhancement by [spread glottis] for segments unspecified for [voice].