

Articulatory overlap as a function of voicing in French and German consonant clusters

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The effects of laryngeal specification on the timing of supra-laryngeal articulations have so far received little attention. Previous research has shown that German – but not French – mixed-voicing clusters are produced with less articulatory overlap than phonologically fully voiced clusters. Articulatory and acoustic data of labial and velar stops as simple onsets and in stop+/l/ clusters are examined to probe the causes for this cross-linguistic difference in the light of the different voicing implementations of French and German. The absence of overlap in German mixed-voicing clusters is attributed to the requirement of a time slot for the stop's aspiration phase. Since French does not commonly have aspirated stops French clusters are expected to pattern with the voiced German clusters. The results confirm that voicing patterns established for simple onsets in the literature in terms of VOT (voice onset time) of both German and French also obtain in clusters. Furthermore, the data show that contrary to the expectations French clusters pattern with German mixed-voicing clusters. This low degree of overlap in both voiceless and voiced French clusters indicates that overlap is restricted by aerodynamic requirements which result from the implementations of the voicing contrast.

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