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## Journal of Phonetics

Volume 30, Issue 3, July 2002, Pages 373-396

Regular Article

# Categorical and gradient properties of assimilation in alveolar to velar sequences: evidence from EPG and EMA data

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<https://doi.org/10.1006/jpho.2001.0162>

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## Abstract

Place assimilation in English is now widely considered to be a gradual phonetic, not categorical process. This view is partly based on previous EPG evidence of partial alveolar assimilations which lack complete stop closure on the alveolar ridge but show a residual tongue blade/body gesture. This study reports EPG data from 10 speakers producing, at varying rates of speech, two experimental sequences, /n#k/ and /n#k/ (the latter a lexical velar “velar sequence with which apparent cases of complete assimilation can be compared). In fast speech, four distinct assimilatory strategies were identified. Two subjects never assimilated, four always assimilated in what appeared to be a complete fashion and the remaining four were the most interesting, showing considerable intra-speaker variability. Two of these four produced the expected continuum of assimilatory

forms including partials. Unexpectedly, the other two produced either full alveolars or complete assimilations in the manner of a binary opposition. Follow-up EMA analysis yielded no evidence of the reduced coronal gestures found to be absent in the EPG-only data for two the speakers who, when they assimilated, did so in a complete fashion. Although no claims are made regarding higher-order representations, we interpret this as evidence of marked individual differences in assimilation strategy.



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