

Underlying vs. Derived Palatals in Xhosa

Neutralization of an ‘unnatural’ pattern

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Introduction

Xhosa (Bantu) has “unnatural” palatalization:

Labials shift to the nearest palatal, sometimes with an accompanying manner change [1,2]:

- ▶ [pʰ] → [tʃʰ] [ɓ] → [cʰ] [m] → [ɲ]
- ▶ [pʰ] → [tʃʰ] [b] → [dʒ] [mb] → [ndʒ]

▶ Triggered by [w], but not by [i, j]

▶ Applies to labials, but not to coronals

- uku-fund-a uku-fund-w-a
 INF-study-FV INF-study-PASS-FV
- uku-^{ta}mb-a uku-^{ta}ndʒ-w-a
 INF-wash-FV INF-wash-PASS-FV
- uku-lu^m-a uku-luⁿ-w-a
 INF-bite-FV INF-bite-pass-FV

Are derived vs. underlying palatals completely or incompletely neutralized?

Participants and Stimuli

6 native speakers of Xhosa from Eastern Cape, South Africa. 40 nonce words: 20 ending in palatalization undergoers [m, mb] and 20 ending in underlying palatals [ɲ, ndʒ], plus 40 real word fillers. Stimuli were given in Xhosa orthography.

Undergoers	Underlying
iyahlama [ija- ^{ta} m-a]	iyaxhanja [ija- ^{ha} ndʒ-a]
iyanoma [ija-nom-a]	iyasonja [ija-so nd ʒ-a]
iyasamba [ija-sa- ^{mb} a]	iyatshonya [ija-tʃon-a]
iyacomba [ija-o- ^{mb} a]	iyabanya [ija- ^{ba} n-a]

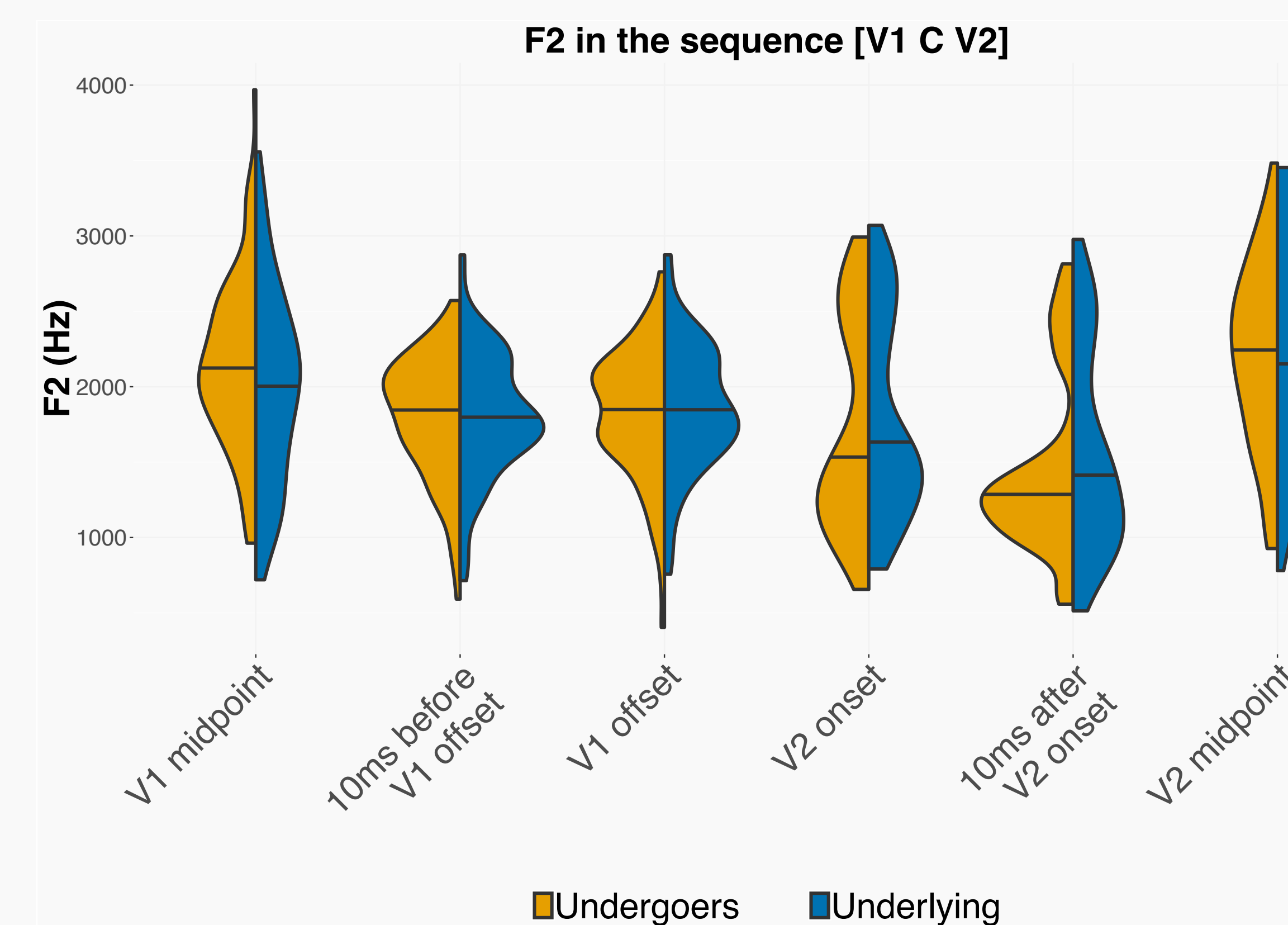
Experimental Task

Wug-type task [3]: participants saw an active verb and were asked to produce the passive:

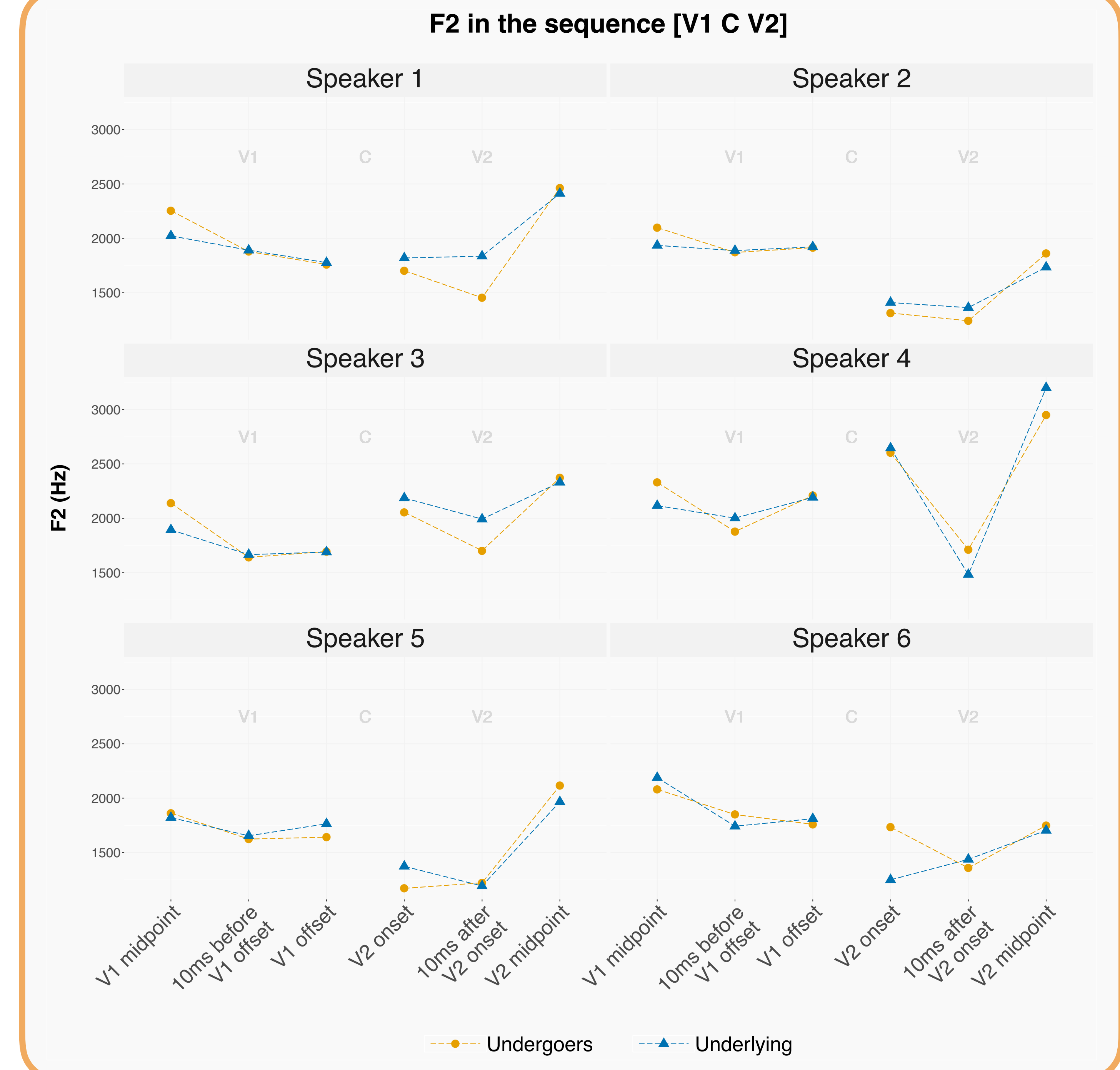
active	passive
ukwenza	ukwenziwa
iyafamba	iya_____wa

Results

77% of undergoers and 100% of underlying palatals were produced as palatal. Non-palatalized tokens were excluded. Incomplete neutralization predicts undergoers will show weaker cues to palatal place (e.g. F2) than underlying palatals.



No pooled comparisons were significant (even at $\alpha=0.05$). S2 & S6 showed one difference each at $\alpha=0.05$, but only S2’s V2 post-onset F2 was in the direction predicted by incomplete neutralization.



Discussion

No measurable difference was found between derived and underlying palatals in Xhosa. While “absence of significance is not significance of absence”, the similar pattern across speakers strengthens the claim of neutralization, especially if it holds for additional speakers and for other acoustic cues to palatalization (under analysis). If so, this palatalization process would join the ranks of a limited set of neutralizations argued to be complete (e.g. Korean manner [4]).

[1] McLaren, J. (1942). *A Xhosa Grammar*. Longman, Green, and Co., 3rd edition.

[2] Doke, C. M. (1954). *The Southern Bantu Languages*. Oxford University Press, London.

[3] Berko, J. (1958). The child’s learning of English morphology. *Word*, 14:150–177.

[4] Kim H. and A. Jongman (1996). Acoustic and perceptual evidence for complete neutralization of manner of articulation in Korean. *Journal of Phonetics*, 24:295–312.