

An ultrasound study of coronal stop deletion in Persian

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This study investigates residual gestures from an apparently deleted consonant. Persian optionally allows the simplification of word-final coronal stops when preceded by obstruents or the homorganic nasal /n/. For example, the words /ræft/ “went”, /duxʔ/ “sew” and /qæsd/ “intension”, are optionally simplified into [ræf], [dux] and [qæs] in fast or casual speech. What is not clear is whether there is any coronal gesture left after simplification occurs.

For a related coronal deletion pattern in English, Browman & Goldstein (1990b) hypothesized that the alveolar closure gesture for the /t/ in *must be* having the narrow phonetic transcription of [mʌsbi] is still present in the fluent/casual speech but it is completely overlapped or hidden by the labial closure gesture.

Ten Persian native speakers participated in this study. Real time images of the tongue were collected during casual conversation using the Terason T3000 ultrasound system. Palatoglossatron (Baker, 2005) was used to trace the tongue tip and blade in each tongue image and alveolar ridge in each palate image. The subjects’ /t/ simplification rates ranged from 2% to 98%. Some of the /t/ tokens are articulatorily the same as unsimplified /t/s, others are the same as /t/-less controls, and some are in between. Deeper analyses regarding individual tokens are provided.

References

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