A Landmark Underspecification Account of the Patterning of Glottal Stop

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This dissertation addresses the asymmetry in patterning between laryngeal and supralaryngeal consonants. In this dissertation, I consider four patterns: (1) required identity-across-glottals (in $V_1 ? V_2$, $V_1 = V_2$); (2) hiatus resolution-like processes in $V ? V$ ($V ? V \approx VV$); (3) prohibition of glottal stop from syllable onset or coda; and (4) temporal instability of sequences with glottal stop (e.g. vowel intrusion: $V_x ? C \rightarrow V_x ? V^x C$, coalescence of $C ?$ to $C'$). I present a unified analysis of these patterns within the framework of Articulatory Phonology (Browman and Goldstein 1986, et seq.), in which utterances are comprised of abstract articulatory gestures (rather than segments or features).

I argue that the exceptional behavior of glottal stop is a function of its acoustic properties: in contrast to oral stop consonants, glottal stop does not condition formant
transitions, and therefore lacks the landmarks of ONSET (marking the beginning of the gesture) and OFFSET (marking the end of the gesture). Based on data on temporal relations within syllables and sequences (e.g. in Browman and Goldstein 2000), I propose that the ONSET and OFFSET landmarks are points of alignment for phasing relations that underlie syllabification and sequentiality. Because it lacks these crucial landmarks (the Landmark Underspecification proposal), glottal stop cannot participate unambiguously in syllabic or sequential phasing relations.

This approach provides an account of each of the patterns described above. Hiatus resolution-across-glottals occurs because the glottal stop cannot satisfy the constraint that requires syllable onsets to be precisely phased with respect to the following vowel; glottal stop is therefore not a satisfactory syllable onset. Languages in which the vowels flanking laryngeal consonants are required to be identical exhibit a subset case of the hiatus resolution pattern, differing only in the strategies employed to repair hiatus. Similarly, glottal stop is disallowed pre- or postvocally in some languages because it cannot obey the constraints on phasing of onset or coda consonants with respect to syllable nuclei. Finally, the lack of clear cues to the temporal position of glottal stop lead underlying sequences with glottal stop to surface non-sequentially, manifested as vowel intrusion or as coalescence of the glottal stop with a vowel or consonant.

Among the languages discussed are Yatzachi Zapotec (Otomanguean), Yucatec Maya (Mayan), Kekchi (Mayan), Arbore (Cushitic), Tukang Besi (Malayo-Polynesian), Kashaya (Pomoan) and Yurok (Algic).
This dissertation is dedicated to:

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