

Intervocalic voicing is lenition (not spreading)

Problem: Lenition or assimilation, not both. Intervocalic voicing is known to be an instance of lenition: the intervocalic context is a typical lenition site. If so, intervocalic voicing couldn't be a case of assimilation, i.e. of the transmission of some phonological prime from the assimilating to the assimilated item. Lenition is positional and does not involve any transmission of primes: coda consonants for instance lenite no matter what the segmental environment, i.e. whether the preceding vowel is front, back, mid, high or low, and whatever the following consonant. Positionally defined lenition contrasts with assimilation, where instead some property is transmitted from a trigger to a target. It is therefore inconsistent to say that a process is an instance of lenition but in fact involves the transmission of some melodic prime (see Honeybone 2002: 205ff).

Existing analyses. This is especially true if, as is the case for vowels under typical assumptions regarding their internal structure, the allegedly donating segment does not possess the prime that it is supposed to transmit (here [voice]). In order to account for the participation of spontaneously voiced sonorants and vowels in the laryngeal phonology of non-spontaneously voiced obstruents, either an additional prime is introduced (Rice's 1993 [sonorant voice]) or featural representations are underspecified and [voice] is only introduced at a particular stage in the derivation (before or after obstruents have exchanged this prime, Itô & Mester 1986: 59f). These devices address the distinction between sonorant and obstruent voicing, but have nothing to say about the basic inconsistency mentioned: a process cannot be both lenition and assimilation.

Intervocalic voicing is (phonological) lenition plus (phonetic) contamination. The lenition cum transmission analysis is only inconsistent under the assumption (which is tacitly made by all approaches mentioned) that both processes are phonological in kind. Nothing withstands a scenario whereby phonology effects lenition and then the contamination of obstruents by vocalic properties occurs upon phonetic interpretation (spell-out from phonology to phonetics, cue constraints in Boersma & Hamann's BiPhon model). There is good evidence that intervocalic voicing is indeed lenition: for example, it typically occurs in a diachronic lenition trajectory that takes voiceless stops to fricatives or nothing in a number of steps, the first being voicing (e.g. Lass 1984: 178, Szigetvári 2008: 101ff). Since lenition is phonological in kind (nobody doubts that), the transmission of voicing in intervocalic voicing must not be phonological if the aforementioned inconsistency is to be avoided.

Analysis. Intervocalic voicing occurs in both voice and spread glottis languages. The analysis in the latter environment where voiceless obstruents bear [spread glottis] (or H) is straightforward: a phonological process of lenition eliminates laryngeal primes in intervocalic position, leaving a neutral C° ($p^H at^H a \rightarrow p^H at^\circ a$) that goes to phonetic interpretation where (in spread glottis languages) C° receive a voiced interpretation anyway ($t^\circ \leftrightarrow [d]$). In voice languages, the same phonological process eliminating laryngeal primes is active and now concerns intervocalic obstruents that bear [voice] (or L) ($p^\circ ad^L a \rightarrow p^\circ ad^\circ a$). These delaryngealized items and lexically neutral C° are thus made phonologically identical: ($p^\circ at^\circ a = p^\circ ad^\circ a$): d° and t° are the same object (d/t only keeps trace of their lexical identity in the interest of exposition). Phonetic interpretation then is context-sensitive: neutral consonants C° are spelt out as voiced only in intervocalic position. That is, the neutral word-initial p° in $p^\circ at^\circ a$ for example will continue to come out voiceless (unlike the intervocalic t° in this word and the delaryngealized d° in $p^\circ ad^\circ a$).

That delaryngealization is under truly phonological control and lenitive in kind is shown by the existence of patterns where obstruents in strong position are shielded against voicing. Western Romance is a case in point. First consider that in the evolution of this language family, like in many other cases, sonorants have the same influence as vowels and intervocalic voicing in fact is intersonorant voicing (where "sonorant" = vowels and sonorants). Hence voicing occurs in intervocalic contexts (V_V , Lat. RIPA > Fr. rive, Port. riba "river bank") and between a vowel and a sonorant (V_R , Lat. LIBRU, DUPLU > Fr. livre, double "book, double"). In strong post-consonantal position R_V , though, sonorants have no bearing on the voicing of obstruents: Lat. TALPA, VERSARE, CANTARE > Fr. taupe, verser, chanter "mole, to pour, to sing".