/t/-voicing in English as preventable self-weakening

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This paper analyses /t/-voicing in English (aka flapping or tapping) as preventable self-weakening. It is argued that [ɾ] is the phonetic realisation of an underlying /t/ in the conjunction of a purely phonetic non-inhibitive context and the lack of a phonological inhibitive context. The analysis uses the Government Phonology approach to syllable structure. The phonetic context is taken to be any case in which a potential [ɾ] is flanked by two vowels, with an optional nasal or liquid intervening between [ɾ] and the preceding vowel, while the following vowel may be included in a syllabic liquid. The inhibitive context, without which /t/-voicing is free to occur, is claimed to be the presence of the /t/ in an onset in a strong position, i.e. either licensed by a nucleus hosting a stressed vowel or a domain-initial onset.

The typical, textbook contexts in which /t/-voicing occurs (in American dialects of English) are illustrated in (1) and (2), with examples, but not transcriptions, taken from Kahn (1976: 92–95).

(1)   word-internally, after a stressed and before an unstressed vowel (possibly included in a syllabic liquid)

   butter [ˈbʌɾɚ], *city* [ˈsɪɾi], *later* [ˈleɪɾɚ], *capital* [ˈkæpɪɾl]

(2)   word-finally, before a vowel-initial word (possibly a stressed vowel)

   set Oscar on the radio [ɾˈɑː], *get Ann home on time* [ɾˈæ]

/t/-voicing does not occur word-internally before a stressed vowel, as shown in (3), and word-initially, even before an unstressed vowel, as shown in (4); the examples are taken from Kahn (1976: 92–95).

(3)   *latex* [ˈleɪˌtʰeks]

(4)   *buy tomatoes* [t]

In an *SPE* type of analysis the examples shown in (1), (3), and (4), when confronted with the examples shown in (2), result in a disjunctive condition on the rule with relation to '#' and [±stress] (see Kahn 1976: 96). Kahn's answer is a set of ordered rules that derive aspiration, ambisyllabicity, and /t/-voicing. The main doubt that the present analysis raises is the fact that whatever rule derives [ɾ] from /t/ must be sensitive to the actual phonetic realisation thereof, since pre- and post-pausal [ɾ]'s are hard to come by as realisations of /t/ in English.

The present analysis dispenses with any phonology-internal derivation of /t/→[ɾ] and leaves it entirely to phonetics. [ɾ] is claimed to be the default realisation in the non-inhibitive phonetic context (hence the term self-weakening) and is only prevented when the underlying /t/ shipped to phonetics is domain-initial (no matter what follows it) or licensed by a stressed vowel (in which case it is interpreted as an aspirate, viz. [tʰ]).

Crucially, for dialects in which /t/-voicing may occur word-finally but not word-medially — this appears to be the case in what used to be called 'Received Pronunciation,' in British English — the present analysis can differentiate the two contexts (domain-final vs. domain-medial), which is hard to achieve in analyses that derive /t/-voicing from a derivable syllable structure with ambisyllabicity across boundaries, e.g. Kahn (1976) or Gussenhoven (1986). The present analysis makes no use of the notions of ambisyllabicity or syllable structure derivation. In Government Phonology the

syllable structure is part of the lexical entry, and the traditional coda is not a constituent; a domain-final consonant is in an onset licensed by an empty nucleus.