

On the Prosodic Approach for English Syllabifications: Revising some Allophonic Phenomena,
Elaborating Foot-Based Strengthening and Weakening Processes and the Inapplicability to Early English

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Jensen (2000) argues against ambisyllabification (Kahn 1980, Gussenhoven 1986 and Rubach 1996) and resyllabification (Selkirk 1982 and Borowsky 1986) for English and posits the prosodic approach for syllabifications, where foot, prosodic word, utterance and others serve as contexts for phonological rules. Syllable-based explanations (see 1) might function as a generalization, but have some exceptions: coda consonants in the onset (see 2), different allophones in identical stress environments (see 3) and others. The prosodic approach is superior to syllabic ones since it can explicitly account for such flaws. This paper suggests some opinions, which replace those in Jensen.

The condition of syllabic consonant formation is defined as (minimal) foot, instead of the coda of an unstressed syllable. However, a type of recent syllabic consonants does not conform to his generalization. In (4), the foot-initial sonorant consonant is resyllabified to the nuclei of the unstressed syllable in the preceding foot. Impossible derivations for PDE syllabic consonants consist of those across word-boundary and those into a stressed syllable. The examples like the ones in (4) imply that the condition for the syllabic consonant formations is prosodic word, not foot. A higher prosodic unit is unnecessary and the syllable is definitely unstressed regarding the derivation.

On the basis of the example like (5), utterance is specified for American English tapping. All of the lower conditions include the process. The definition is applied to the occurrence of the tapping within the coda, but not to the resyllabified tapping. Examining the latter, if underlying onset-initial alveolar stops are pronounced as the tap, the prosodic condition is phonological phrase due to the examples across word boundary such as (6). In prosodic conditions higher than it, the resyllabified tapping does not happen.

The prosodic condition of clear vs. dark 'l' is analyzed as foot in Jensen (2000). I consider that the definition makes sense, but that other additional account is necessary. In order to discuss this issue, a phonetic motivation becomes the key factor. (for phonology with phonetic motivation, see Kirchner 2001, Flemming 2002, Hall 2004, Hayes and Steriade 2004, Howell and Wicka 2007, Blevins 2008 and others.) Clear 'l' is articulated when followed by /j/ and dark 'l' when followed by /w/. Relatively, the former variant has similar tongue posture to /j/ and the latter one to /w/, but not vice versa. It means the difference of whether or not the back of the tongue is raised. Despite the foot-based analysis, clear 'l' has some difference on the basis of the following vowel. The fact that /l/ is less clear when followed by a back vowel is also accounted for by the position that the back of the tongue is raised.

Some phonetic conditions hold to aspirated stops, which have a wide range of articulatory degrees. The degrees are demonstrated in (7), where emphatic *ten* has the strongest aspiration and the word *stem* no aspiration and the order of the words shows the demotion of strong aspiration. First, stronger aspiration for emphatic *ten* than for normal *ten* is caused by pause in the former. Since air flow is interrupted during the pause, the aspiration becomes very strong. Second, aspiration is stronger when a voiceless stop is singleton. When a voiceless stop is followed by a vowel, lip-opening naturally becomes wider. The articulation of vowels necessitates lip-opening irrespective of the sorts of them, while that of sonorant consonants, more or less, have closer lips. Wider lip-opening facilitates stronger aspiration. Third, while Jensen defines the condition of strengthening processes for consonants as foot-initial, it implies that those in unstressed syllables occur in word-initial. In essence, word-initial consonants have phonetic strengthening.

As Jensen claims, weakening processes (in his term [+lax]) occur in foot-medial and foot-final positions. The two positions, however, contain a certain difference. Common weakening processes include syllabic consonant formation, American English tapping and Glottaling. By way of comparison, syllabic consonant formation is typical to foot-final and other weakening processes are to foot-medial (see 8-10). Syllabic consonants occur in nuclei and a coda consonant and an unstressed vowel tend not to follow within a foot: the other processes occur in the coda and are followed by an unstressed syllable within a foot.

Given foot-initial strengthening and non-foot-initial weakening, the following classification comes to light. Allophones that occur only in either position undergo the higher degrees of strengthening or weakening processes (e.g. 11 and 12). Allophones appearing in both of the environments resist foot-based generalization and represent the ones that undergo the slight degree of strengthening or weakening processes (e.g. 13).

Applying the prosodic approach to Early English, it is incapable of better analyzing allophonic distributions. In OE the possible cases for the prosodic approach involve germination (cf. 14) and voiceless fricatives (cf. 15). The germination is accounted for by ambisyllabicity and the prosodic approach is unnecessary. It might appear that the condition for the voiceless fricatives is foot-initial for [h] and non-foot-initial for C CEDILLA and [x], but the foot-initial [h] does not hold to the one in foot-initial unstressed syllables. It occurs in the onset of stressed syllables and the three phonetic forms are partly grounded in articulatory phonetics. ME has a similar account to that in OE.

Examples

- (1) American English city, better [t] – the onset in the latter syllable
tap – the coda in the preceding syllable
British English the central approximant of /r/ - the onset (e.g. courageous, reduce, walrus)
the tap – the coda (e.g. courage, period, for example)
Clear 'r' – the onset (e.g. leap, million, alll over)
Dark 'r' – the coda (e.g. belll, allways, battle)
- (2) American English tap go to, see you tomorrow (in the onset, not in the coda)
(These allophones are accounted for by claiming that the tap occurs in non-foot-initial positions.)
- (3) American English flap capitalistic
aspirated stops militaristic, Mediterranean
(Jensen argues that syllabic analysis does not hold and that foot-based analysis can better explain the phenomenon.)
- (4) Syllabic [l] in the word intellectul
Syllabic [n] in the word cardnality (Wells 1995)
- (5) Have a seat. I'll be right back.
- (6) go to, see you tomorrow
- (7) ten (emphatically stressed), ten (normal stress), train, temperamental, tomorrow, later, mattress, stem
- (8) little, middle, seven,
- (9) centrer, little, daddy
- (10) button, Gatwick, brightly
- (11) aspirated stops (a strengthening process) today, tonight, time, twice
- (12) AmE taps (a weakening process) city, gett up, putt on, go to
- (13) the central approximant of /r/ reduce, red, Henry, walrus
- (14) libban 'live', cuppe 'cup'
- (15) [h] hus 'house', hlaf 'loaf', [x] dohtor 'daughter', ruh 'rough', C CEDILLA riht 'right', cniht 'boy'

References

- Blevins, J. (2008) "Phonetic Explanation without Compromise," *Diachronica* 25, 1-19.
- Borowsky, T. (1986) *Topics in the Lexical Phonology of English*, Doctoral Dissertation, University of Massachusetts at Amherst. [published by Garland, 1990.]
- Flemming, E. (1995) *Auditory Representations in Phonology*, Doctoral Dissertation, UCLA. [published by Routledge, 2002.]
- Gussenhoven, C. (1986) "English Plosive Allophones and Ambisyllabicity," *Gramma* 10, 119-141.
- Hall, T. A. (2004) "On the Nongemination of /r/ in West Germanic Twenty-one Years Later," *Folia Linguistica Historica* 25, 211-234.
- Hayes, B. and D. Steriade (2004) "Introduction: The Phonetic Bases of Phonological Markedness," *Phonetically Based Phonology*, eds. by B. Hayes, R. Kirchner, and D. Steriade, 1-33, Cambridge: Cambridge University Press.
- Howell, R. B. and K. S. Wicka (2007) "A Phonetic Account of Anglian Smoothing," *Folia Linguistica Historica* 28, 187-214.
- Iverson, G. K. and J. C. Salmons (2003) "Laryngeal Enhancement in Early English," *Phonology* 20, 43-74.
- Jensen, J. T. (1993) *English Phonology*, Amsterdam and Philadelphia: John Benjamins.
- Jensen, J. T. (2000) "Against Ambisyllabicity," *Phonology* 17, 187-235.
- Kahn, D. (1976) *Syllable-Based Generalizations in English Phonology*, Doctoral Dissertation, MIT. [published by Garland, 1980.]
- Kiparsky, P. (1979) "Metrical Structure is Cyclic," *Linguistic Inquiry* 10, 421-441.
- Kirchner, R. (1998) *An Effort-Based Approach to Consonant Lenition*, Doctoral Dissertation, UCLA. [published by Routledge, 2001.]
- Minkova, D. (2003) *Alliteration and Sound Change in Early English*, Cambridge: Cambridge University Press.
- Rubach, J. (1996) "Shortening and Ambisyllabicity in English," *Phonology* 13, 197-237.
- Selkirk, E. O. (1982) "Syllables," *The Structure of Phonological Representations Part 2*, eds. by H. van der Hulst and N. Smith, 337-383, Dordrecht: Foris.
- Wells, J. C. (1995) "New Syllabic Consonants in English," *Studies in General and English Phonetics: Essay in Honour of Professor J. D. O'Connor*, ed. by J. Windsor Lewis, 401-412, London: Routledge.