On the Syllabic Consonants in Present-Day English

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Abstract

/tən/, /dən/, /təl/ and /dəl/, on the one hand, are the typical phonemes of syllabic consonants. On the other hand, /ʃən/ most plausibly gives rise to the syllabic consonants. /tər/ and /dər/ can be syllabic. However, because lip-rounded consonants strengthen the character of consonantal phonemes, they are not so appropriate. Apart from phonemes, some familiar words also could be almost always syllabic. From the historical perspective, we can say that the position of syllabic consonants is typically the second syllables of two-syllabic words and that the underlying schwa does not always exist. In terms of the syllable structure, the syllables which include syllabic consonants are totally different from both stressed syllables and the other unstressed syllables.

1. Introduction

Usually, the nuclei of syllables are vowels. However, in English they

are occasionally occupied by consonants. In such cases we call them syllabic. The syllabic consonants in Present-Day English (henceforth, PE) have been dealt with by many researchers (e.g. Bell(1978), Maidment(2000), Nakamura(1998), Nanjo(1998), Oda(2000a), Wells(1965), (1995)). However, it seems that some remain to be questioned and to be unresolved. In this paper I will throw light on some ambiguous phenomena of the syllabic consonants in PE.

2. The Frequency of Syllabic Consonants

As we know, PE has so many syllabic consonants. The most important reason to note is the phonetic implementation of the nasal release ([tn̩], [dn̩]) and the lateral release ([tl̩], [dl̩]), not to mention the affuluence of schwa. To make this clear, look at the following examples.

(1) a. button ['bʌt.n̩], ['bʌʔ.n̩]
b. hidden ['hɪd.n̩]
c. bottle ['bɑt̬.l̩], ['bɒt.l̩]
d. needle ['ni:d.l̩]

Although Wells(1995) illustrate the new type of syllabic consonants in Received Pronunciation (RP), those can be explained from my account. Look at the following, which are pointed out by Wells(1995).

(2) a. bitterly ['bɪt.l̩.i]
b. catalogue ['kæt.l̩.ɒg]
c. detonate ['det.n̩.eɪt]

Therefore, /tən/, /dən/, /təl/ and /dəl/ give rise to syllabic consonants most often.[1] There are adequate reasons to testify this phenomenon. Maddieson and Precoda(1992:45) explain that " ··· segments arise from favouring sequences of articulatory gestures which involve less articulatory movement in the transition from one segment to the next, and acoustic sequences with sufficient auditory contrast." Furthemore, it is likely that the alveolar ridge is the unmarked place of articulation in English consonants.

Let us consider the clusters [tr̩] and [dr̩], which show less (or no) articulatory movement and which have sufficient auditory contrast.

(3) a. centering ['sent.r̩.ɪŋ] b. secondary (in RP) ['sek.ən.dr̩.i]

However, they involve lip-roundings. I consider that lip-rounded consonants strengthen the character of a consonantal phoneme. To take an example, [tr̩] sounds more consonantal than [tl̩]. According to Oda(in preparation), syllabic consonants tend to have a vocalic character. Therefore, /tər/ and /dər/ are not the exactly common type which constitutes syllabic consonants.

As we have observed, [tn̩], [dn̩], [tl̩] and [dl̩] outnumber in terms of quantity. However, for the proportion of the occurrence of syllabic consonants, [ʃn̩] arise most often as the phonetic implementation of syllabic consonants, that is, the representation without schwa. It is because /ʃən/ always happen adjacent to stressed syllables. I analyze that if weak

syllables occur next to a stressed syllable, syllabic consonants easily happen.

(4) a. station b. nutrition c. construction
['steɪʃ.n̩] [nju:'trɪʃ.n̩] [kən'strʌk.ʃn̩]

Up to now, I have seen the frequencies of the common syllabic consonants. However, there are some environments that even the syllabic [n̩] and [l̩] seldom arise.(2) The first to note is the appearance of long vowels or diphthongs instead of schwa, whose example is shown below.

(5) hostile
['hɑst.əl], ['hɑst.aɪl]

In this case, again, the phonetic implementation of the lateral release of /təl/ is a great factor. The second to note is the appearance of sonorants next to syllabic consonants. Look at the following example.

(6) final
['faɪn.əl]

In the case of (6), syllabic consonants may happen (cf. Shimaoka(1995)), but not so often. Incidentally, Oda(in preparation) do not use the term *nasal stop*. It should be called *nasal*, a kind of sonorant. In addition to the examples above, in some cases, underlying sonorant never become a syllabic consonant, which is shown below

(7) a. consonant b. intonation
* ['kɑns.ən.n̩t] [ˌɪn.tə'neɪʃ.n̩]

Because PE does not have geminates as a phonological inventory, the syllabic

[n̩] in (7a) is impossible. Furthemore, although we have observed that /tən/ gives rise to syllabic consonants so often, it is not always. As Wells(2000) imply, stressed nuclei tend to maximize the possible margins. Therefore, in the case of (7b), /n/ becomes the onset of the stressed syllable.

Furthemore, some of the most common type of the words almost always tend to have syllabic consonants as a phonetic representation.

(8) a. often b. seven
['ɔ:f.n̩] ['sev.n̩]

As the above exmples show, some familiar words in PE tend to have the higher frequencies of syllabic consonants.

3. The Historical Explanation

In this section, I will illustrate some historical phenomena so that the syllabic consonants in PE will be explained more clearly. (However, I will avoid using the phonological theory.)

First, it seems that the syllabic consonants in Old English (henceforth, OE) occur in the second syllables of the two-syllabic words in almost all cases. Look at the following examples.

(9) a. *Maldon* l.265 gisl 'hostage' b. *GenA* l.937 adl 'disease'
[ji:s.l̩] [ɑ:d.l̩]
c. *Beo* l.1431 bearhtm 'brightness'
[bæɑrxt.m̩]

As we know, the syllabic consonants in OE are not so common as those in PE.

As we noted above, typologically speaking, syllabic consonants most often occur in the second syllables of two-syllabic words. It is illustrated from the viewpoint of historical phonology.

(10) a. maple ['meɪp.l̩] b. heaven ['hev.n̩]

Both words in (10) actually continue to exist from OE up to PE and each syllabic consonant has been syllabic since the Middle English period.[3] However, the syllabic consonants in PE occur so often in three-syllabic words. It is not only because of the phonetic implementation of the nasal release and the lateral release but because of the affluence of schwa.

Second, Wells(1995) points out that the syllabic consonants in PE are the result of the phonetic implementation of underlying schwa plus sonorant. I admit that this is true synchronically. However, this is not right from the diachronic perspective, which is proved by the example below.

(11) a. *GenA* 1.86 setl 'seat, settle' [set.l̩] b. settle ['set.l̩]

In the example above, /l/ in the second syllable has been syllabic before the first appearance of schwa in the English history.[4] In other words, the example in (11a) does not include underlying schwa. Therefore, the observation by Wells(1995) is not true in the diachronic way, although this

is only a exceptional case. However, I can say that if segments remain to be a syllabic consonant for a long period, the segment readily become syllabic as a phonetic implementation.

4. The Syllable Type of Syllabic Consonants

Of course, the phonetic and phonological system is not arbitrary. Therefore, there must be some pattern. Let us turn to the syllable type in which the syllabic consonants in PE occur.

The syllables which include syllabic consonants usually does not have onsets nor codas.

(12) a. startle ['stɑ:rt.l̩] b. middle ['mɪd.l̩] c. disposal [dɪ'spoʊz.l̩] d. written ['rɪ t.n̩]

Actually, in such syllables, neither onsets nor codas tend to serve as a foil for the nuclei. However, the syllables which include syllabic consonants sometimes have the marginal consonants, which are illustrated below.

(13) a. construction [kən'strʌk.ʃn̩] b. didn't ['dɪd.nt̩] c. tangle ['tæŋ.gl̩] d. reminiscence [ˌrem.ɪ'nɪ.s.n̩s]

e. potent ['poʊt.nt̩]

As we can see from the examples above, the margins of syllabic consonants must be a strong consonant. Incidentally, Oda(2000b) points out that among the fricative consonants in PE, /ʃ/ is the first strongest consonant and /s/

is the second strongest consonant. As a result, the margin of syllabic consonants must be a strong consonant.[5] Therefore, the syllables which include syllabic consonants are totally diffrent from both stressed syllables and the other unstressed syllables. It is partly because stressed syllables tend to maximize both onsets and codas, which is actually illustrated by Wells(2000). Furthemore, it is partly because unstressed syllables usually have weak margins.

5. Conclusion

In this paper, I have dealt with some intersting phenomena of syllabic consonants. It would be very useful to be concerned with wide variety of things. However, it seems to me that open question still remains.

Notes

(1) As Wells(1995) points out, underlying sonorants in coda become syllabic due to the syncope of schwa; for example, /əl/ chages to [l̩].

(2) [n̩] and [l̩] most often occur as a syllabic consonant in PE.

(3) Of course, this statment is based on the phonological reconstruction.

(4) As for the appearance and the origin of schwa, Oda(1999) may be helpful.

(5) I consider that the lower the sonority scale is, the stronger the segment becomes.

References

Bell,A. (1978) "Syllabic Consonants," Universals of Human Language Vol.2 Phobology, ed. by J.H.Greenberg, 153~201, Stanford University Press, Stanford.

Maddieson,I. and K.Precoda (1992) "Syllable Structure and Phonetic Models," Phonology 9, 45~60

Maidment,J.A. (2000) "The Status of Syllabic /l/ in present-day RP," Eigo Onseigaku (English Phonetics) 3, 31~39.

Nakamura,M. (1998) "Chouon-Ketsugou-karamita Eigo-no Onsetsu-Shuonteki-Shiin (Coarticulation and Syllabic Consonants in English) Eigo Onseigaku (English Phonetics) 2, 265~286.

Nanjo,K. (1998) "Eigo-Onseigaku-no Joushiki Saikou (Update Our Knowledge of English Phonetics)," Eigo Onseigaku (English Phonetics) 2, 235~245.

Oda,T. (1999) "The Transitional Period between OE and ME -from the Segmental Perspective," paper presented at workshop, A Transitional Period? —Harbinger and Aftermath, 17th Annual Meeting of the English Linguistic Society of Japan.

Oda,T. (2000a) "More on Syllabic Consonants —both Phonetic and Phonological," Eigo Onseigaku (English Phonetics) 3, 227~236.

Oda,T. (2000b) "Gendai-Eigo-no sC Renketsu-no Muhyousei oyobi Onsetsu-Kouzou-

nitsuite [On the Unmarkedness and the Syllable Structure of so-called sC Clusters in Present-Day English]," paper presented at The English Phonetic Society of Japan Kansai Brunch 3rd Conference.

Oda,T. (in preparation) "Boinsei-Kyoumeion to Sono-Onshitsu-nitsuite [On so-called Vocalic Sonorants and Their Nature]," paper presented at workshop, Saikin-no Eigo-Onseigaku-Kenkyuu-to Sono-Seika [The Recent Investigation of English Phonetics and Its Effect], 18th Annual Meeting of the English Linguistic Society of Japan.

Shimaoka,T. (ed.) (1995) New Basics for Listening & Speaking, New English World.

Wells,J.C. (1965) "The Phonological Status of Syllabic Consonants in English RP," Phonetica 13, 110-113.

Wells,J.C. (1995) "New Syllabic Consonants in English," ed. by J.W.Lewis Studies in General and English Phonetics: Essay in Honour of Professor J.D.O'Connor, 401-412, Routledge, London.

Wells,J.C. (2000) Longman Pronunciation Dictionary, New Edition, Longman, London.

Yamada,N. (1994) Phonological Changes in English: A Functional Explanation in Historical Phonology, ms., Doctorial Dissertation, Tsuda College, Tokyo.