ENGLISH SYLLABLE AND ITS PHONOTACTIC FEATURES

S.Solijonov, M.Qosimova

Ушбу мақола сўз структурасининг асосий бирликларидан бўлмиш бўғиннинг ички структуравий бирликлари – ядро ва унинг атрофидаги элементлар – ундош товушлар бирикмаларини ўрганишга бағишланган.

Калит сўзлар: *бўғин структураси, фонотактик қоидалар, бўғин ядроси, бўғин ясовчи сонантлар, фонемалар дистрибуцияси, ундош товушлар бирикмаси, очиқ бўғин, ёпиқ бўғин, енгил бўғин, оғир бўғин.*

В данной статье рассматриваются вопросы силлабической структуры английского слова, соотношения между внутренними структурными единицами слога – ядра и окружающих его консонантных сочетаний и фонотактических правил английской речи.

Ключевые слова: *силлабическая структура, фонотактические правила, ядро слога, слогообразующие сонанты, дистрибуция фонем, сочетание согласных, открытый слог, закрытый слог, легкий слог, тяжелый слог.*

The article is devoted to the study of problems of the syllabic structure of the English words, the correlations between the nucleus and the consonant clusters, the phonotactic rules of the English speech.

Key words: *syllabic structure, phonotactic rules, onset, coda, nucleus, syllabic sonorants, distribution of phonemes, consonant clusters, open syllable, closed syllable, light syllable, heavy syllable.*

As the basic unit of written and spoken language, the syllable is an important component of pronunciation, since dividing words into syllables correctly is of great importance. Being one of the components of the phonetic structure of the word the syllable has always been the object of phonetic investigations since it combines the properties of both segmental and suprasegmental units of the language. This article is devoted to the problems of the syllabic structure of English words, to the analysis of one of its internal substructures – codas, their combinabilities and permissible combinations of phonemes (phonotactic rules) in codas in English.

Analysing the structure of the syllable we may find out that the structure includes the nucleus which consists of a vowel and allowable initial and final consonant clusters (onsets and codas). According to one of the oldest conceptions the syllable consists of a vowel, surrounded by consonants. If the function of the vowel in the syllable is to serve as its nucleus or peak, then the function of the consonants is to be the margins of the syllable. Syllables have the following formal internal structure: onset (initial consonant cluster), nucleus and coda (final consonant cluster) and the structural formula for the English syllable can be drawn as:

So a syllable is a unit of sound composed of a central peak of sonority (usually a vowel) and the consonants that cluster around this central peak and these clusters consist of combinations of allowable segments and typical sound sequences. If we analyse **the structural properties of the syllable** we observe that syllables require a nucleus, which is usually a vowel, and optionally onset or coda, which are usually consonants or consonant clusters:

- **Onset-** Initial segment of a syllable, Optional
- **Nucleus-**Central segment of a syllable, Obligatory
- **Coda-**Closing segment of a syllable, Optional

In case when the syllables have an onset (the **initial segment** of the syllable) in English words they may start with 1, 2 or 3 consonants and its presence is **optional.**

The central segment of the syllablewhich is the peak of sonority is called the “nucleus” and usually the nucleus is a vowel, although the sonorants [l, m and n] can also be the nucleus of a syllable in English, but this property of the above mentioned sonorants is not investigated in our research, consequently such consonant combinations as C+S(sonorant) in the following words are not taken into account- [(r)i**ðm**], [(s)i:**zn**],[(p)en**sl**]. The nucleus, as the term suggests, is the core or essential part of a syllable and its presence in a syllable is **obligatory.**

As it has already been mentioned the consonant or the consonant cluster, which follows the peak of sonority, is called the “coda” (closing segment of the syllable) and its presence is optional.

A coda-less syllable of the form CV[ti:], CCV[trai], CCCV[stro:] is called an open syllable (or covered),

С.Солижонов *– АДУ инглиз тили фонетикаси ва лексикаси кафедраси доценти, филология фанлари номзоди;*
М.Қосимова *– шу кафедра ўқитувчиси.*

while a syllable that has a coda (VC[it], VCC[a:sk], VCCC, [a:sks] etc.) is called a closed syllable (or covered).

Thus, in English syllabic structure which consists of an onset, nucleus and a coda may have certain restrictions, that is onsets and codas should be subjected to phonetic rules of English since phonetic rules may be observed differently in different languages. These restrictions deal usually the number and type of segments that can combine to form syllables and words and they vary greatly from one language to another.

The syllabic structure of a language like its phonemic structure is patterned which means that sounds of the language can be grouped into syllables according to certain rules (phonotactic rules). Phonotactic possibilities of a language determine the rules of syllable division and the capability of consonant and vowel phonemes to be combined. In our research we tried to investigate the nature of the coda substructures of the syllable – VC(coda 1), VCC(coda 2), VCCC (coda 3), VCCCC (coda 4) and all the possible variants of codas with maximal allowable components in the syllable and their combinability with the nucleus. The investigations are based on the materials taken from "English pronouncing dictionary"15th ed.by *D. Jones,ed.by P.Roach,I.Hartman-Cambridge,1997.*

The analysis of the internal structure of syllables in English words has shown that in the position of the nucleus we may find all the English vowel phonemes and they combine with the elements of the coda (consonants) according to phonotactic rules of the language. The analysis of the nature of nucleus in English syllables gives us grounds to affirm that all the 20 vowel phonemes of English may perform the functions of syllable nucleus in English words.

The analysis of codas in words has shown that the English language allows syllable codas ith one, two, three and four consonants. So in English the syllable is formed by any vowel alone or in combination with one or more consonants – not more than four in codas. The analysis of English codas of the type VC[i:t], VCC[i:ts], VCCC[a:sks], VCCCC[(t)eksts] and the distribution of phonemes in these subtypes give us the ground to speak about the following results.

According to the number of participating segments in a syllable the following types may be distinguished – light, heavy and super-heavy. English syllable codas with one consonant (coda 1) may form 20 combinations with the nucleus out of possible 24 combinations. Among all the 24 consonant phonemes of English, the phonemes [h, w, j, and r] cannot be combined with any type of nucleus.

The analysis made in the nature of existing combinations of two consonants in English words has found only 13 consonant phonemes which can be combined with the nucleus through 20 consonants. The number of consonants which can be found in the final position of the codas with three consonants (coda 3) is 4, i.e. the consonants [t,s,z and θ]. In codas with four consonants in the final position (coda 4) the only consonant phoneme [s] is found.

It is known that the beginning and the end of a syllable always coincide with those of the word, this means that the number of members of onsets and codas are always the same in both cases. Our analysis found out that English onsets and codas have their

Pre-initial	Initial	Post-initial	**Vowel**	Pre-final	Final	Post-final
C	C	C	V	C	CC (C)	
_____onset_____			**nucleus**	**_____ coda_____**		

own characteristic features and investigations made in the nature of codas in English syllables allow us to make the following conclusions:

*- The English language allows close syllables (coda*s).

- In English the components of the syllable (elements of onsets and codas) are usually determined by the phonetic rules of the language.

- Each component of the syllable is strictly defined by the phonotactic rules of the language.

- The glottal fricative [h] and sonorants [r,j,w] never occur in the coda of a syllable.

- When a syllable coda has more than one consonant, the more sonorous sounds tend to be first, followed by less sonorant sounds. In other words, sonorant sounds tend to be closer to the syllable nucleus.

- The following phonemes cannot be found in the final position of a two-member consonant cluster of syllable codas in English [g,3,ð, h, l, r, j, w, ŋ].

- The work of the vocal cords are also regulated by the character of the components of the coda in a syllable – the second voiced element of the coda demands the presence of a voiced counterpart in the first position.

- Only the consonants [t,s,z and θ] can be found in the three-consonant codas.

- In the position of the final element of the four-consonant coda only the consonant [s] is found.

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