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ON ARTICULATORY-ACOUSTIC PECULIARITIES OF OCCLUSIVE SONORANTS OF ENGLISH

This article deals with articulatory-acoustic peculiarities of occlusive sonorants of the English language. Pronunciation variants of sonorants and their characteristic features are analyzed in the article. Syllable formation of sonorants is their differentiating form from other consonants in English. This rule is characteristic only for sonorants of the English language. English sonorants /m, n, l/ can form a syllable in final position. In this position English sonorants form a syllable with another consonants. In order to get better understanding one must learn phonetic difficulties of pronunciation and modification of English sonorants.

The article analyzed the variability and characteristic features of sonorants. The syllable formation of sonorants, unlike other consonants, is evident as their distinctive form. This distinction is specific only to the phonotactic rules of English. In English, the sonorants /m, n, l/ have the property of forming syllables in post-word position. They can form a syllable when working with another consonant. To understand their variability and differences in pronunciation, we must delve deeper into the articulatory-acoustic properties of sonorants.

When studying the articulatory-acoustic tones of phonemes [m], [n], [ŋ] are distinguished from other consonants because they are longer, denser and more muscular when pronounced. Studies prove that during the pronunciation of sonorant sounds, muscle tension in the speech organs increases to a greater extent. This is due to their long, dense articulation. When articulated, the dimensions of the resonators expand, increase. In particular, as the shape and size of the mouth resonator changes as it expands, sonorants are pronounced with a vowel-like effect, which leads to the formation of the syllable-forming function of sonorants.

Key words: *sonorants, variant, syllabic sonorants, articulation, placement.*

Introduction. The phonemes that make up the phonological system of the language are syllable-linear or segmental units, that is, phonemes of a certain length that follow one another in the speech chain. The speech chain is characterized by super-segmental features present in the segmental units and realized simultaneously with them in the speech process. Phonemes linked to each other form thousands of combinations that act as an indicator of meaningful units of language. Noting the importance of studying the commonalities of discrete units in the speech stream, F. Veysalli writes that “Without studying the interaction of language units in the speech chain, it is impossible to achieve serious scientific achievements. The units that are meaningful in language and can be freely processed – morphemes, lexemes – are basically combinations of two or more phonemes in a straight line” [3, p. 67].

The purpose of the article is to analyze the articulatory-acoustic properties of occlusion sonorants of the English language.

The main problem. In the process of speech and communication, two closely related types of means of

expression are used: segmental and suprasegmental. Segmental units contain the sounds of the language and their combinations arranged in a straight line. Suprasegmental units, on the other hand, do not exist separately. They co-exist with segmental units and act on them. Suprasegmental units include accent, tone, length, intonation [8, p. 7].

It is known that phonological systems of all world languages are composed of vowel and consonant semi systems. In traditional phonetic studies, the differentiation of vowels and consonants was based on a physiological principle, and this difference was explained by the fact that during the pronunciation of vowels, the air flow did not meet any obstacles, and in the formation of consonants, the air flow encountered certain obstacles in the oral cavity. However, the advent of phonology has turned this theory upside down, since phonology acts from linguistic criteria. The explanation of certain differences between phonological systems of languages by acoustic or physiological criteria cannot be taken as a serious scientific basis. The quantity and quality of phonemes in the language is related to the system characteristics of those languages.

The study of phoneme systems of languages on a contrasting basis has confrontative and phonological significance. All components of phonological systems of comparable languages – phonemic compositions, phonological structures, functional load of individual phonemes, conjugation features of phonemes are compared and studied in confrontative direction studies. Phonematic analysis of a language requires, first of all, to identify its phoneme inventory and options for the manifestation of phonemes in syntagmatic.

One of the aspects of fundamental importance in phonological studies is the discovery of “signs that are the same for all variants of the phoneme and distinguish it from other phonemes”. Determining the phonological content of a phoneme is important in terms of phonological encounters. Note that in the phonological system of this or that language, phonemes create a paradigmatic and syntagmatic relationship between themselves.

Although vowels and consonants function differently in the system and in speech in separate languages, their differentiation is universal and is also due to the acoustic-physiological nature of the expressive plan of the language. From an acoustic point of view, the differentiation of vowels and consonants is due to the presence of a clear formant structure in the first (vowels) and the absence of this feature in the second. In addition, vowels, in comparison with consonants, are sounds of greater total energy and are characterized by the fact that tone prevails in vowels and noise in consonants. According to L.R.Zinder, none of these criteria is sufficient to establish a precise boundary between vowels and consonants.

The most common criterion for distinguishing vowels and consonants is the centralization criterion proposed by Jan Baudouin de Courtenay.

According to this criterion, the stress in the pronunciation of consonants is due to the fact that they are concentrated anywhere in any member of the organs of pronunciation, and in this place a characteristic noise of consonants appears. However, stress in the formation of vowels is in a form that is common in pronunciation terms. Thus, if there is a centering anywhere in the speech apparatus, such a sound is a consonant, and if there is no centering, then such a sound is a vowel [5, p. 121].

According to Prof. D. Jones, the difference between “vowels and consonants” is not a physiological difference. This distinction is based on acoustic relationships. According to Prof. D. Jones, vowels are very extremely different from consonants. This is true in most cases, but some consonants are more musical. Here you can attribute sonorous consonants.

In this context, sonorants take an intermediate position between vowels and consonant sounds. In their articulation, as in the articulation of vowels, music and voice is loud. There are seven sonorous-sounds in English: [m], [n], [ŋ], [l], [r], [j], [w].

In English, sonorants are divided into two groups: occlusive sonorants and constrictive sonorants. The sonorants [m], [n], [ŋ] are occlusive sonorants, and the consonants [l], [r], [j], [w] are constrictive sonorants. Occlusive sonorants are also nasal sonorants. During their articulation, the organs of speech create a complete occlusion, the soft palate drops down, blocking the path of the oral cavity, and airflow exits the nasal cavity. Therefore, they are called nasal sonorants. In occlusive consonants, there is complete closure in any organs of speech during articulation. For example, when pronouncing [m] the closure occurs on the lips, when pronouncing [n] the closure occurs between the nasopharynx and the lip, and when pronouncing the phoneme [ŋ] the closure occurs between the back of the tongue and the soft palate.

In the articulation of nasal sonorants, the expulsion of airflow through the nose is taken for the main characteristic. Although some sources note that only the nasal organ is important during the pronunciation of these sonorants, some literature also suggests that the oral cavity plays a role here [7, p. 68]. This is because in the articulation of these phonemes, the oral cavity is not closed, but space is opened for the nasal cavity. So, two pathways are open here. In this respect, nasal sonorants are different from other explosive sibilant consonants. The open second resonator makes them sound more musical, sonorically.

During the experimental and phonetic study of sonorants it was investigated that these are sounds that cause more muscle tension. In other words, sonorants [m], [n], [l] are pronounced with more muscle tension than other consonants [6, p. 198].

When communicating with each other, people do not use sounds one by one, but phrases and sentences created by these sounds in combination. It is an important condition for people to have clear, precise speech in order to understand each other. The clearer, fuller and more literate a person’s speech, the easier it is to communicate. For this, human speech is also an important factor. And the clarity of this speech is due to the skillful, competent use of a certain language by a person. In order to skillfully use the language, it is important to know the rules of pronunciation of this language, its intonation features, word creation.

Sounds combine to form a syllable; syllables combine to form words. The syllable is also one of the smallest units of speech in the language. Each of the

words and phrases has its own unique syllabic structure. And the syllable is a phonetic unit. It needs to be approached and studied from a phonological point of view. As in phonetics, sound is approached from 4 aspects, the syllable is approached from these aspects-acoustic, articulatory, functional and perceptive.

Another distinctive feature of occlusive sonorants is their ability to form syllables. In linguistics, there are two types of approaches to understanding the syllable. From a physiological point of view, the formation of a syllable is a small unit resulting from the combination of one or several sounds and their pronunciation in the same breath. From an acoustic point of view, any of the sounds spoken in this syllable is different from the others in terms of loudness or articulation. Among these sounds, vowels are the most distinctive. Because they play an important role in spelling. And they cause separation from other sounds – consonants. Consonants, on the other hand, cannot form syllables. But some consonants – sonorants – have a syllable-forming character at certain moments. They can form syllables because they differ from other consonants due to their musicality, harmony [1, p. 25].

In some literatures, the syllable-forming property of the phoneme [ŋ] is not mentioned. However, it has been proven in modern literature that this sound is also capable of forming syllables. Of these sonorants, [n] forms the majority of syllables. The phonemes [m] and [ŋ] form syllables in rare cases. The syllable formation of sonorants occurs when their words stand next to another consonant in position. They form a syllable with a consonant before them. For example:

Garden ['g a: d n]; film [f ɪ l m]

Didn't ['d ɪ d n t], the negation of the verb “to do”.

It should be noted that Sonorants in the formation of a syllable depend on the nature of the vowel that precedes them. So, if the vowel in front of them is a long sound or diphthong, then they form a syllable together with another consonant. As we see in the word “garden”, /dn/ forms a syllable together. However, if the vowel that precedes the sonorous conjunction is a short sound, the sonorant itself forms a syllable. Because, since short sounds cannot stop at an open syllable, they are necessarily bordered by a closed syllable, which causes the sonorant to remain alone and form a syllable itself.

A phoneme [ŋ] can never stand at the beginning of a word. This means that in the British English version, the word beginning with this sound does not exist. However, it is worth noting that in New Zealand English there are words that begin with the phoneme [ŋ]. This includes various proper names, names of tribes and clans, etc. In the phrases used in British English

with the phoneme [ŋ], we find that this sound is only present at the end of the word and in some cases in the middle of the word. Its graphic form is a combination of the Phonemes “n” and “g”. However, a phoneme [θ] is formed as a result of this combination. For example,

think [θɪŋk]; thinking ['θɪŋkɪŋ]

congo ['kɒŋɡoʊ]; congress ['kɒŋɡres]

It is worth noting that in the case of the use of “con” as a weak prefix, the accent falls on the second syllable and the phoneme [ŋ] does not occur at this time. Let us pay attention to examples:

congress ['kɒŋɡres]; congressional [kən'greʃənəl]

concord (noun) ['kɒŋkɔ:d]; concord (verb) [kən'kɔ:d]

There are some exceptional words in which this change occurs even without an accent. Foreexample, concrete (noun, adjective) ['kɒŋkri:t]; concrete (verb) [kən'kri:t]; concretely (adverb) [kɒŋ'kri:tli].

It should be noted that only sonorants can perform the syllable-forming function in English. They can even form such syllables themselves. This happens due to their harmoniousness, as we have already mentioned, due to their ingenious function [8, p. 122].

The syllable formation of sonorants [m], [n] occurs at the moments when they are processed together with other consonants in the oral position.

For example:

cotton ['kɒt-n]; rhythm ['rɪð-m]

The syllable formation of the phoneme [ŋ] sometimes occurs at the junction of two words. But this sonorant rarely forms a syllable.

I can cry [aɪ kŋ 'kraɪ]

broken key ['brʊkŋ ki:]

Syllable formation of sonoric sounds can also occur when a neutral sound falls in weak prefixes:

particular [pə'tɪkjʊlə] – [prɪ'tɪkjʊlə]

correct [kə'rekt] – ['krɛkt]

The examples given are more often used and found in spoken speech. For a slow tempo of speech, it is not typical for sonorants to form syllables while losing the neutral sound.

The syllable formation of sonorants occurs not only at the end of the word, but also at the end of the morpheme. In some cases, the end of the morpheme may not coincide with the end of the word.

For example: settle [set-l] – settlement [set-l-mət]

If two Sonors work together in this position, each forms a separate syllable. For example: nation ['nei-ŋ] – national ['næʃ-n-l]

The syllable formation of the consonant [n] is more common in the negative form of auxiliary and modal verbs: shouldn't ['ʃʊdnɪt]; mustn't ['mʌsnɪt]

Conclusion. In conclusion, we can say that sonorants are pronounced with a special tension of the speech organs, they are more musical, voiced consonants, although they can form syllables as vowels, but unlike them they cannot carry an accent.

According to its structure, the syllable can consist of one or several sounds. These sounds can combine in a certain order to form a unity in terms of pronunciation. The core of this syllable consists of a vowel. Consonants, on the other hand, create

the circumference of the nucleus. The peak-central element of the syllable becomes a vowel. This is the case in all world languages. By the number of vowels, the syllable of the word is determined. However, in English, along with vowels, some consonants also have a syllabic nature.

It should be noted that in English this function can only be performed by sonants. They can even form such syllables themselves. This is due to their wide range of functions, from the fact that, as we have mentioned, they are affordable.

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Мусаєва П. Б. ПРО АРТИКУЛЯТОРНО-АКУСТИЧНІ ОСОБЛИВОСТІ ОКУЛЮЗИВНИХ СОНОРАНТІВ АНГЛІЙСЬКОЇ МОВИ

У статті розглядаються артикуляційно-акустичні особливості оклюзійних сонорних звуків англійської мови. У статті проаналізовано варіанти вимови сонорних звуків та їх характерні особливості. Складотворення сонорних звуків є їх диференціальною формою від інших приголосних в англійській мові. Це правило характерне лише для сонорних англійської мови. Англійські сонорні /m, n, l/ можуть утворювати склад у кінцевій позиції. У цій позиції англійські сонорні утворюють склад з іншими приголосними. Щоб краще зрозуміти, необхідно вивчити фонетичні труднощі вимови та модифікації англійських сонорних

У статті проаналізовано варіативність та характерні ознаки сонорних. Складотворення сонорних, на відміну від інших приголосних, проявляється як їх відмінна форма. Ця відмінність характерна лише для фонотактичних правил англійської мови. В англійській мові сонорні /m, n, l/ мають властивість утворювати склади в позиції після слова. Вони можуть утворювати склад при роботі з іншим приголосним. Щоб зрозуміти їх варіативність і відмінності у вимові, треба глибше заглибитися в артикуляційно-акустичні властивості сонорних.

При вивченні артикуляційно-акустичних звуків фонем [m], [n], [ŋ] виділяються серед інших приголосних, тому що вони довші, щільніші та мускулістіші при вимові. Дослідження показують, що при вимові сонорних звуків більшою мірою посилюється напруга м'язів мовних органів. Це пов'язано з їх довгим щільним зчленуванням. При шарнірному з'єднанні розміри резонаторів розширюються, збільшуються. Зокрема, у зв'язку зі зміною форми і розмірів ротового резонатора при його розширенні сонорні вимовляються з голосним ефектом, що призводить до формування складотворчої функції сонорних.

Ключові слова: сонорні, варіант, складові сонорні, артикуляція, розміщення.