STRUCTURAL TYPES OF TWO-TERM CONSONANT CLUSTERS IN RUSSIAN

Normakhmat Panjievich Panjiev
Candidate of Philology, Associate Professor
Head of the Department of Russian Linguistics
Termez State University, Termez, **UZBEKISTAN**

ABSTRACT

The article investigates the structural features of consonant clusters of the vocabulary of the Russian language, taking into account the restrictions on the participation, sequence and number of sounds in their formation. The identified two-term consonant clusters are classified into structural types at the level of subclasses of sounds at the place of formation of consonants that form consonant clusters. The typicality and rarity of consonant clusters are characterized on the basis of their representation in the vocabulary of the Russian language based on the materials of the dictionary "Dictionary of the Russian language" by S.I. Ozhegov. The reasons for the rarity of consonant clusters of types NT, Nts, NS, NN, TT, Tts, Sts, depending on the structure, are indicated: in them, the preceding sounds are more open than the subsequent sounds, i.e. in their structure there is a deviation from the law of ascending sonority. The analysis of two-term consonant clusters was carried out using positional and distributive techniques of the descriptive method.

Keywords: Consonant; clusters; initial; types; subclasses; way of education; typicality, rarity.

INTRODUCTION

The study of consonant compatibility will help to understand the general and peculiarity in the sound side of languages. The study of consonant clusters of the Russian language reveals the peculiarities of the compatibility of sounds and their syntagmatic types in the Russian language. The relevance of the issue is due to the fact that the rules of consonant compatibility and its features in many ways, like nothing else, reflect the phonological-phonetic state of the language [26. 284]. Consequently, this explains the significant interest of modern linguistics in the study of the rules that determine the compatibility of the sound elements of languages and their functioning.

The problem of the compatibility of consonant sounds, the classification of consonant clusters (hereinafter referred to as CC) by constitutional features, and the determination of their frequency did not remain unnoticed by well-known linguists who studied CC on the material of monosyllabic words (Meylon 1936; Mentserat 1950; Werner 1974; Avazboev 1986), their pronunciation (Ban 1963; Terekhova 1966; Ganiev 1966; Avanesov 1972), the laws of compatibility (Panov 1967), the relative frequency in speech (Zinder 1958; Nikonov 1962; Bogomazov 1969 ; Verbitskaya 1969), phonetic and phonological structure (Miloslavsky 1967; Beldiyan 1968; Toporov 1971), pronunciation difficulties (Frumkina 1968; Bogomazov 1968; Paufoshima 1973) However, some questions of CC (the question of the reason for the rarity and typicality of the presented clusters in words) attract the attention of linguists and currently. This is dictated by the fact that a) the data obtained in the work, are of great importance for identifying the compatible tendencies of consonant sounds operating at the present stage of the development of the Russian language and can be useful for further research in the field of phonotactics of the Russian language, may be involved in the development of a general

problem of consonant compatibility in languages; b) its results can be used in teaching the Russian language to non-Russian, as well as in the creation of textbooks and teaching aids on Russian phonetics for non-Russians. This determines the need for further research on consonant clusters in the Russian language.

In this work, a study of two-term CC words according to S.I. Ozhegov's dictionary "Dictionary of the Russian language" (21, 845p.) Was carried out with their classification depending on the method of formation of the involved elements that form these CC, rarities of some types are determined. Words with initial CC were extracted from the dictionary and phonetically transcribed to determine their sound structure, CC was classified into structural types, and their representation in the vocabulary was determined.

In the study of CC, positional and distributive techniques of the descriptive method were used (positional for the recognition of the positional structure of sound units of the language, distributive in the study of the environment of linguistic sound units and their classification) [16. 219-252).

The Main Findings and Results
The study of the vocabulary material showed that at the beginning of the words of the Russian language, 195 various two-term CCs are presented, characterizing some features: 1 / two-term combinations such as *вв-, сс* are impossible at the beginning of the word [19. 158-161), because they are pronounced as one long sound; 2 / combinations of consonants such as *сж - /сжатый/, сш-/сшибать/, сч - /счастье/,* because *с* before *ж, ш, ч* is assimilated at the place of formation and is pronounced as */ж:/атый, /ш:/ибать, /ш':/астье;* 3 / only 26 consonants act as the first member in two-term combinations (/П /, /Т /, /К /,/Б /,/Д /,/Г/, /Ц /,/С /,/Ш /,/Х /,/Ф /,/В /,/З /,/Ж /,/М /,/Н /,/Л /,/Р   /П′/,/Т′/,/Б′/,/Д′/,/Ч′/, /,/В′/,/Л′/,/Р′/), тогда как второго – 35 (/П /, /Т /, /К /,/Б /,/Д /,/Г/, /Ц /,/С /,/Ш /,/Х /,/Ф /,/В /,/З /,/Ж /,/М /,/Н/ ,/Л/, /Р/, /П′/, /Т′/, /Б′/, /Д′/, /Ч′/, /Ф′/, /С′/, /Ш′/, /В′/, /З′/, /М′/, /Н′/, /Л′/,/Р′/, /К′/,/Г′/, /х′/); 4 / two-membered CC starting with **л, м, н, п, р, ц, ч, ш** are found only inside the root, and the rest are both inside the root and at the junction of the root and the prefix; 5 / the sounds /с/ , /в/, /ш/, /ф/, /п/, /з/, /г/ , /к/, /ж/; are very active in relation to the connection with subsequent sounds; and with the preceding ones, all sonorous and / in / [5. 87; 112; p.15; 4, p.7]; 6 / as the first consonants in two-membered CC, if we take into account the groups of consonants according to the method of formation, the predominant place is occupied by gap ones, which form 103 combinations out of 195 of all initial ones, This is more than 53% of all two-membered initial CC. The formation of the CC of the remaining groups is as follows: the stop-plosive form 60 combinations (or 30% of all initial combinations), the stop-pass, sonor – 26 (more than 13%), and the affricates – 6 (3%), as the second sounds – sonorants are more active, which form 99 combinations with previous consonants (more than 50% of initial combinations). The activity of noisy plosive-plosive and slotted ones is the same. Together they form 91 combinations (about 47%). The remaining 3% of the combination falls on the affricate.

The initial two-term CC form the following structural types of subclasses of sounds according to the method of formation: (T – occlusive-plosive, ts – affricates, S – slotted, N – occlusive-anadromous and trembling sonorous)

T (T, N, S, ts) – who, birdie, weaver, where, bird; blessing, splashing, thunderstorm, ancient, maple; nail, twice, quarter, hard; bee.

N + (T, N, S, ts) – lie, mercury, lie, blush; baby, many, young, opinion; deceitful, to jerk, revenge, zeal; rush.

S + (T, N, S, ts*) – вбок, вползти, ждать, вбежать, впятеро, здесь; влага, знак, зрачок, влюбить, въ* S + (T, N, S, ts) - sideways, crawl in, wait, run in, five, here; moisture, sign, pupil, fall in love, entry, snake; enter, rank, capture, star; cling, scene, yesterday.

ts + (T, N, S) - read; smack, member; swagger, color.

In them, T, N, S act as the first element, which form with subsequent sounds of four types, ts - only three; as the second – T, N, S, which, joining the previous ones, form four types each, ts - three,

A closer analysis of the initial two-membered CC reveals that some sounds are more active in relation to the connection with preceding and subsequent consonants than others, which explains the typicality and rarity of the main types of CC according to the method of formation. So, some types of CC are typical, because they are represented by many specific combinations of different sounds. So, SN represented by 49 combinations of sounds, TN-37, ST - 32, SS-19, TS-16; others, on the contrary, are rare TT - 6, Tts - 1, Sts - 3, NT - 7, Nts - 1, NS - 8, NN - 10. Although, according to the rules of compatibility, all plosive plosives can be combined with plosive pushers (пт – птица), affricates (пч – пчела); slotted with affricates (сц – сцена); sonorous with explosive (лб – лба), affricates (мч – мчаться), slit (рв – рвать), sonorant (мне), in reality they represent far from the same number of specific combinations of consonants.

What is the reason for the rarity of the two-membered consonant clusters NT, Nts, NS, NN, TT, Tts, Sts?

It seems to us that the solution to this question has a direct bearing on syllabic division. R.I. Avanesov writes that "the use of certain combinations in the indicated positions (ie the beginning, middle, end of a word – N.P.) is determined by the structure of the syllable of the Russian language and the laws of syllable division" (2, p. 225) /

Consider the consonant clusters NT, Nts, NS, NN, in which the initial sound is N.
As it was said, combinations of the NT type are represented by 7 combinations of different sounds - /лб/(лба), /лг/(лгать), /л′г/(льгота), /л′д/ (льдина), /рд'/(рдеть), /рт /(ртуть), /рт'/(ртище); NS - 8 -/рж/(ржавчина), /лж/(лживый), /л′в/(львица), /мх′/(мхи), /мш/ (мшистый), /мш'/(мщение), рв(рвать), рв'(рветь); Nts- 1 - /мч/ (мчаться). So, at the beginning of words there are only 16 combinations, the first member of which is the sonorant / N /, and the second is the noisy T, S? Ts

But at the same time, the same combinations are in reverse order, i.e. when the sonorous / N / is the second term in two-term combinations, and the noisy / T, ts, S / is the first, it is realized at the beginning of the word in numerous combinations. In the material under study, N ends up with 99 seeds out of 195. Therefore, it is understandable to note that "… combinations of the beginning of a word, <u>in which the second element is sonorous and combinations of the end of a word, where the first element is sonorous, have the greatest frequency in the modern Russian language</u>" [17. 70]. This conclusion is confirmed by the distributive analysis of speech in a text of 550,000 characters, where combinations of the TN type were encountered 6428 times, i.e. took the first

place in frequency among all the initial types of CC, with 7 NT and 23 NS, who took the last places [6. 87].

In the history of the Russian language, i.e. in the ancient Russian language of the late X - early XI centuries, there were, according to V.V. Ivanov, only combinations of the TN type and some others:"… groups of consonants could be formed as a result of a combination of noisy with sonorants and some noisy with each other" [15. 53], which corresponded to the law of ascending sonority. However, the CC "sonorous + noisy" before the loss of the reduced ones were not known to the old Russian language, because this contradicts the basic law of the structure of the structure of the syllable from less sonorous to more sonorous in the old Russian language [14. 232]. But "… the fall of the reduced ones led to the possibility of the appearance of consonants in front of the consonants, previously separated from each other by the weak reduced …, that is, to the formation of different groups of consonants [14. 232].

This period in the history of the language is the time of the appearance of combinations such as NT, NS, Nts. But, nevertheless, why combinations like N + noisy at the beginning of a word in modern Russian have not reached a large distribution in quantitative terms? In this regard, the observations of Ferdinand de Saussure are very interesting: "… a segment of the speech chain can include more than two elements, provided that it goes all the time from a lesser to a greater degree of openness … which gives the impression of continuity". And further: "But it is impossible to pronounce, without interrupting the chain, the reverse series of pn; not because it would be mechanically impossible to take the position for n at the moment of articulation of the opening p, but because the movement of this p, having stumbled upon a smaller degree openness n, cannot be perceived. So, if it is desirable to pronounce rp, it must be done in two steps with a break in the speech chain"[27. 69-70].

But to what extent can we talk about the openness of consonants? We find the answer to this question in the works of V.A. Bogoroditsky [7. 5; 8. 16], who called the sounds of speech, the articulation of which is aimed at reducing the solution of the mouth, "mouth-breakers" (consonants), and the sounds of speech, the articulation of which is aimed at expanding the solution of the mouth, in ultimately, to its full disclosure, he called it "openers" (vowels). And between these extremes there are sonorants, about which A.A. Reformatsky writes: "Especially are the sonorants / nasal, lateral, trembling /, which on the excursion should be referred to as occlusive, i.e. consonants, and recursion - to vowels, since the exit of the air stream occurs when they are formed through the free passage / nasal bypass in the nasal, lateral - in the lateral; at the moment of opening of a vibrating organ - in trembling / "[24. 8].

So, we can assume that sonorants are more open among other consonants, but less open in relation to vowels. If we proceed from this, then it is possible to arrange all sounds from the least openness to the most: stop-plosive, stop-slot, slot, sonorant and vowels. It follows from this that in combinations such as NT, NS, Nts, sounds of varying degrees of openness: any N is more open than T, S, ts, therefore they "do not form a speech chain", i.e. sequential pronunciation

of such combinations is complicated by the fact that first comes N (more open), and then T, S, ts (less open). N.A. Lyubimova, on the basis of experimental analysis, showed that in combination with voiced noisy consonants, sonorants can be vocalized. In this case, the impression of the appeared vowel of the insert is created if its duration is 40-50% of the duration of the entire sonorant. In such cases, monosyllabic words are perceived as two-syllable [19; 2. 57; 10. 100].

This can serve as proof of the atypical nature of the specified type of combinations for the russian language. The proof of the unusualness, the difficulty of combinations with the initial N is the simplification of these groups of consonants in Russian dialects: in front of some of them, a prothetic vowel develops - arzhan, orzhan instead of rye (in the middle of a word it is easier to pronounce the combination hw, because in this position it belongs to different syllables); sometimes there is an insertion of a vowel (razhanoy) inside the combination (12, p. 72). Creates various difficulties in pronunciation and CC such asTT, NN. CC type TTare represented by the following sound combinations: /бд'/ – бдительный, /пт'/ – птица, /пт/ - пташка, /тк/- ткать, /кт/ – кто, /гд'/ - где. When analyzing the sounds of these CC from the point of view of the location of sounds according to the increasing openness, an interesting phenomenon is revealed: out of 6 combinations of this type, 4 /бд'/, /пт'/, /пт/, /тк/ are formed, as can be assumed, according to the law open to more open. We believe that the labial consonants have the least degree of openness. Wed the list given by V.A. Bogoroditsky: "if, as a result of strengthening, the muscles compress the mouth harder, then this is a consonant sound /п/, /б/, /т/, /д/, /к/, /г/, /ц/, /ч/, /ф/, /в/, /с/, /ш/, /ж/, /х/, /м/, /н/, /л/,/р/. and also … / j / [24. 167). The sounds of the other two combinations, possibly form a sequence of reverse order, i.e. they use first sounds more open / back-lingual /, and then less / dental /, These are combinations /гд'/, /кт/ (/г/,/к/ - sounds more open than /д'/, /т/. By the way, the facts of simplification of consonants in combinations of TT in Russian dialects, cited by researchers, indicate that it is the last two combinations гд'/, /кт/ that undergo more changes: the combination гд' in the word, where is simplified as where, гʰде, уде, игде, де; кт - хто, кʰто [11. 67-82].

Combinations бд'/, /пт'/, /пт/, /тк/,however, also undergo changes (тица, ташка, вместо птица, пташка; non-phonemic vocal articulation appears between them), but still they undergo changes not as often as combinations /гд'/, /кт/. Note that the reason for the rarity of combinations of the TT type is the difficulty of consistent pronunciation of their components, which follows from the following points: 1 / since all the sounds of the plosive-plosive group are sounds of the same or almost identical openness, they "do not form a sound chain", those. the articulation of the subsequent sound is not prepared in advance, compare: … пк can be pronounced, but these sounds do not form a chain, i.e. types n and to the same degree of openness " [27. 69]; 2 / the articulation of the plosive sounds itself is difficult, which is formed as a result of an instant explosion, which does not allow directly (without weak vocal overtones) to go to the articulation of another stop [5. 86]. Therefore, the pronunciation of plosive-plosive sounds presents a certain difficulty not only in front of plosive-plosive sounds, but in front of affricates and slotted ones.

According to R.I. Avanesov, a weak non-onematic vocal articulation of the type / ъ / is formed not only when pronouncing пт, пк, but also during pronunciation пц, пч, пс, кс, бз, гз[1. 91-92]**.**   These reasons also explain the rarity of combinations such as Tts, tsT. Tts is represented by a combination of sounds пч - пчела, tsT – чт' - чтение.

The difficulty of pronouncing CC type NN is associated with the fact that in them (as in combinations of TT) sounds of the same or almost the same degree of openness are pronounced, but the pronunciation of NN is much easier than combinations of type NT or TT, because "this position is to a certain extent resembles a position before a vowel "(11, p. 13).

In addition, it is surprising that out of 10 initial combinations of this type, 8 are built according to the law from a lesser degree of openness to a greater one (see the list of sounds according to V.A. Bogoroditsky). So, the sound / m / of the least openness among the sonorants is combined only with the more open sounds л, л', н, н', р (младенец, млеть, много, мне, мрак) And with / j / there is not a single combination at the beginning of words, because / j / is more open than all the other sonorous ones.

It can be assumed that the main reasons for the rarity of initial combinations of consonants such as NT, Nts, NS, NN, TT, tsT (about combinations of consonants such as Sts see below) is that they do not form a speech chain in the position of the beginning of the word, since in some (NT, Nts, NS) there is no transition from less openness to more, but, on the contrary, there is a transition from a greater degree to a lesser degree; in others (NN, TT, tsT), sounds of the same or almost the same degree of openness are consistently used.

Let's dwell on other types of CC: TN, TS, SN, tsN, tsS, SS, ST, Sts.
In combinations such as TN, TS, SN, tsN, tsS, the law from less open to more open is fully observed. Such combinations are more typical for the beginning of words: at the beginning of words 107 combinations out of 195 are formed in accordance with the law from less open to more open sound.

Combinations of the ST, Sts type, i.e. combinations in which this law is violated, constitute a peculiar group. Combinations of the ST type are of particular interest.

In the material studied, this type is represented by 32 combinations of specific sounds. These combinations are considered one of the easy-to-pronounce combinations in the russian language. Wed: "There are convenient groups of st., Bld., Etc., in which insertions occur extremely rarely (they can arise, for example, if this group is included in a more complex consonant complex, compare мз - in the word мзда /" [6. 111].

To explain the prevalence of ST type CC, we had to turn to the morphemic analysis of words, which showed that many of these combinations are formed at the junction of morphemes: /вб/ - вбок, /вб'/ -вбежать, /вг/ - вгонять, /вг'/ - вгибать, /вд/ - вдобавок, /вд'/ - вдернуть, /фп/ - впадать, /фп'/ -вперед, /зб'/ - сбить, /зд/ - сдавать, /фт'/- втечь; others, both at the junction of

morphemes and within the roots, usually in words that have survived the process of simplification, or borrowed, ср. /фк/ – вкапывать, вкус, /фт/ – втайне, вторник, /зг'/ – зги, /зд'/ – сделать – здесь, /зд/ – сдавать – здание, /ск/ – скармливать – сказать, /ск'/ – скидать – скелет. As for CC (sound /ш/ with a plosive-plosive), they are noted either in borrowed words (sword, cabinet), or are the result of sound changes (/ into / from what).

So, we note that the ST combinations were formed primarily due to word formation, which was facilitated by their very easy articulation, i.e. uniformity and duration of articulation of fricatives allows them to blend more smoothly with other sounds. As L.R. Zinder notes, the articulation of each subsequent sound is prepared in advance [13. 229]. "As for the articulation of the fricative," writes V.M. Beldiyai, "it can be extended up to the articulation of the next consonant. If this is a stop consonant, then its articulation becomes, as it were, a continuation and completion of the articulation of the fricative "[5, p. 86]. Therefore, they (slotted) are quite easily combined with other slotted / SS-type combinations are represented by 19 combinations of different sounds. Hence, their special role in the organization of CS in russian is understandable: they appear at the beginning of 103 initial two-term combinations.

CONCLUSION

In short, the study of the phonetic structure of about 57,000 thousand words of the dictionary "Dictionary of the russian language" by S. I. Ozhegov showed that at the beginning of the words of the russian language two-term consonant clusters are used, in which the consonants involved are combined with each other as a whole in accordance with the syntagmatic laws of the modern Russian literary language. Consonant CLUSTERS are classified into specific types. An analysis of the types of CC showed that some types (TN - 37, ST - 32, SS - 19, TS -16) are typical, because they are represented by many specific combinations, others (TT - 6, Tts - 1, Sts - 3, NT - 7, Nts - 1, NS - 8, NN - 10) are rare - they involve sounds of the same or almost the same degree of openness.

REFERENCES

1. Avanesov R.I. On syllable division and structure of a syllable in Russian // Voprosy lazykoznaniya, 1954, № 6..
2. Avanesov R.I. phonetics of the modern Russian literary language. Moscow State University, 1956.
3. Baranovskaya S.A. About two / in / in the Russian language // Development of phonetics of the modern Russian language.- Moscow: Nauka, 1971.
4. Beldiyan V.M. On some phonological features of consonant combinations in the Russian literary language // Russian language and literature in the Uzbek school, 1968, № I.
5. Bogomazov G.M. Two-phonemic intervocal combinations of consonants in Russian speech // Russian language abroad, 1969, № 3.
6. Bogomazov G.M. Paufoshima R.F. On some ways of implementing consonant combinations in speech // Problem of theoretical and applied phonetics and teaching pronunciation. Moscow: 1973.

7. Bogoroditskiy V.A. General course of Russian grammar. M.-L: Sotsegiz, 1935.
8. Bogoroditsky V.A. Experience of the physiology of all-Russian pronunciation. Kazan University Publishing House, 1909.
9. Bogoroditsky. V.A. Essays on linguistics and Russian language. Moscow: Uchpedgiz, 1939.
10. Gasanov A.A. On one case of word formations in the modern Russian language // Problems of theoretical and applied phonetics and teaching pronunciation. Moscow: 1973.
10. Zhivov V.M. Typology of consonant combinations in Russian dialects // Questions of linguistics. 1971,. no
11. Zinder L.R. The influence of the rate of speech on the formation of individual sounds // Questions of phonetics. L. 1964.
12. Zinder L.R. General phonetics. L.: LSU, 1960.
13. Ivanov V.V. Historical grammar of the Russian language. Moscow: Enlightenment, 1964.
14. Ivanov VV. About the functional load of consonants in the Old Russian language of the end of the X-X1 centuries. // Bulletin of Moscow University, 1966, №4.
15. Kodukhov V.I. General linguistics. Moscow: Higher school, 1974.
16. Kuznetsova A., V. Murat. The basic principles of phonemic analysis in descriptive linguistics and their application to the material of the Russian language // Russian language in the national school, 1961, No. 5.
17. Lyubimova N.L. Acoustic characteristics of Russian sonants / group and individual characteristics // Abstract of Candidate's Dissertation. L.1966.
18. Matusevich M.I. Modern Russian language. Phonetics. Moscow; Education, 1976.
19. Miloslavsky L. History of the rules for the compatibility of consonants in the Russian language. Candidate diss. Moscow: 1966.
20. Ozhegov S.I. Dictionary of the Russian language. The tenth edition, stereotyped. Moscow: Soviet Encyclopedia, 1973.
21. Panov M.V. Russian phonetics. Moscow: Enlightenment, 1967.
22. Reformatsky A.A. Introduction to linguistics. Moscow: Education, 1967.
23. Reformatsky A.A. Consonants and their variation in the Russian literary language // Reports and messages of the Institute of Linguistics of the Academy of Sciences of the USSR, 1958, No. 8,
24. Modern Russian language / Edited by V.A. Beloshapkova. Moscow: Azbukovnik, 2020.
25. Trubetskoy N.S. Fundamentals of Phonology, Moscow: Foreign Literature Publishing House, 1960.
26. F. de Saussure Course in General Linguistics. Kiev: Sotsekgiz, 1933.