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Krylov and the Silf letters: The question of authorship

Abstract. It is impossible to solve certain linguistic problems without using quantitative statistical methods, and quantitative methods can contribute much to theoretical linguistics. Some specialists in literature (e.g. Z. Chuchmarev, A.I. L'ashchenko, L.N. Majkov, A. Pletnev, A.N. Pypin, V.P. Semennikov, A.N. Veselovskij) have expressed doubts that I.A. Krylov himself wrote the entire collection of the letters of the spirits in his journal «Pochta Duhov» [Correspondence of Spirits]. At the same time others (e.g. Ja.K. Grot, G.A. Gukovskij, P.V. Shchogolev, etc.) have stated that it was Krylov who wrote all the letters in his journal. In this article we resort to the methods of mathematical statistics in order to solve the problem of Krylov's authorship. The goal of the article is to prove or reject the hypothesis that Krylov in fact is the author of all parts of the collection of the letters from «Pochta Duhov». The frequency of occurrence of 25 prepositions are chosen as the features for this quantitative analysis.

The first suspect is A.N. Radishchev; however, the idea that he is the author should be rejected. Based on the Chi-square criterion we must state on the level of 5% significance, that is with the reliability of 95%, that Radishchev did not write any part of the collection of letters of «Pochta Duhov». It has been proven that Krylov wrote the Gnom letters, the letters of the dwarfs. However, the letters of the Silfs do not enter the same general sample, i.e., are statistically the same, as the other Krylov's prose texts. So, it seems that the Silf letters were not written by Krylov.

Key Words: Typology, frequency of occurrence, features, distances, quantitative methods, statistical approach, Chi-square criterion, authorship

Introduction

The goal of the paper is an attempt to state the degree of similarity of some texts on the basis of the frequency of some linguistic units. We try to measure the similarity not only of different texts, but also of parts of the same text. The texts are of the same author and of different authors as well. We shall consider if it is possible that a Russian writer of the 18th century, Radishchev, wrote the text of «Pochta Duhov», or part of it, for another Russian writer of the 18th century, Krylov. Leaving aside all the considerations by the specialists in literature, who have analysed the text semantically, we apply the statistical approach. The analysis of the frequency of the occurrence of some linguistic units in the other texts of Krylov and in the texts of Radishchev, with the help of the Chi-square criterion, can show if Radishchev wrote all the text or part of the text of the «Pochta Duhov».

It is possible to take different linguistic units as the features for typological analysis, such as grammar units. It is advisable to take the frequency of occurrence of some function words as such features. In order to recognize if this or that author wrote this or that text, it is necessary to count such words as are used subconsciously. Actually, a writer uses functional words subconsciously in order to link the nominal words in a sentence. If a person wants to falsify the style of some writer, he will pay the most attention to the words which bear the main meaning of the text, that is, the nouns, verbs, adverbs, participles, etc. The functional words escape falsification because they are at the periphery of the consciousness of the writer. Therefore, the function words reflect the way a writer connects the words in a sentence. Thus they can very well characterize the style of the author, since they serve to express the relations of meaningful items. Since they reflect the structure of the relationships in the text, the function words show the idiosyncratic ways in which an individual writer constructs sentences.

Attributions without using the statistical methods often led to errors. Pushkin's poem "Rusalka" [Mermaid] is not complete. It has no ending. Thus, the stylistic analysis of a great Russian scholar, academician F.E. Korsh, who resorted only to stylistic methods, led to a great error. He attributed Zuev's variant of the ending part of "Rusalka" to Pushkin's authorship. Thus academician V.V. Vinogradov was a great proponent of using statistical methods in determining authorship (Vinogradov, 1961: 192 – 206).

Our investigation is quite apropos, since the authorship of Krylov of «Pochta Duhov», or at least, the part of it, causes some doubts. It is necessary to verify, with the help of the Chi-criterion, if Krylov wrote all parts of the text of «Pochta Duhov» himself. In her very informative article, M.V. Razumovskaja remarks that for some reason, Pletnev, who was the first editor of the Full Collection of the Works by Krylov (1847), and who knew him personally, did not include some letters of some Spirits (for instance, those of Silfs) in the first publication. Razumovskaja is sure that Pletnev had good reasons for not including the Silf letters in the First Full Collection (Razumovskaja, 1978: 103- 104).

Much doubt that Krylov wrote all the text of «Pochta Duhov» himself was caused by the statement of a French traveler, Charles François Philibert Masson (1762-1807), who wrote in his book *Mémoires secrets sur la Russie pendant les règnes de Catharine II et de Paul Ier* (1800-1802) that part of the «Pochta Duhov» was written by Radishchev. He based this claim on rumors that Radishchev wrote the moral and philosophical letters of the Spirits. Pypin suggested that these letters could not have been written by Krylov, who was only 20 years of age at that time, and not very well educated. He was sure that these letters were written by Radishchev, whose prose was quite moral and philosophical (Pypin, 1868: 420 - 436). L'ashchenko supported this opinion (L'ashchenko, 1894: 499). L.N. Majkov also believed Radishchev to have written some of the letters from «Pochta Duhov» (Majkov, 1895: 36). Veselovskij did not think Krylov

to be the author of some letters as their style was quite different from others in the set (Veselovskij, 1881: 168 -170). Chuchmar'ov also thought Radishchev to be the author of some of the letters pointing out some images common to Radishchev which he found in the philosophical letters of «Pochta Duhov» (Chuchmar'ov, 1927: 95 - 123).

Semennikov did not deny the authorship of Krylov completely, but pointed out that the letters of the Silf Spirits differ from the other letters greatly. He was the first to state that these letters bore traces of translation from some foreign texts, presumably French. Razumovskaja supported his opinion (Razumovskaja, 1978: 104 – 105). She followed this clue and later could prove brilliantly that indeed the letters of the Silf Spirits were translations from French. Razumovskaja compared the texts of marquis Jean-Baptiste de Boyer d'Argens (1704-1771) and the Silf letters in Krylov's «Pochta Duhov». It allowed her to state that the text of the Silf letters is a very close translation of the philosophical letters of the marquis d'Argens. Accordingly, she tried to explain why they are so different in style from the Gnom letters (Razumovskaja, 1978: 112-115).

However, there were several scholars who supported the hypothesis that Krylov is the author of all the letters. Grot stressed that all the letters comprise one unit, having the same language and the same outlook. He failed to find the obvious features that part of the letters was written by a different author (Grot, 1901: 270). V. Kallash, who was the editor of four volumes of the Full Collection of Krylov's Works, joined this point of view and included all the letters of «Pochta Duhov» in it (Kallash, 1905: 313). Shchogolev pointed to the style of Krylov in «Pochta Duhov» as being the same in all its parts, which would not be possible when parts are written by different authors. As a specialist who studied Radishev for a long time, Shchogolev correctly remarked that Radishev's style is unique in its vocabulary, epithets, and syntax. It can be easily

distinguished from any other style. The style of «Pochta Duhov» is quite different from that of Radishchev (Shchogolev, 1913: 31).

Gukovskij came to the conclusion that Krylov was the one and the only author of «Pochta Duhov». Actually, Gukovskij was an editor of Radishchev's works, so his opinion should not be thrown away as incompetent. He categorically insisted that Radishchev was not the author of any parts of «Pochta Duhov» (Gukovskij, 1941: 428).

So, one can see that there are two opposing views. The methods using statistical methods can state which of the views is correct. It is attempted here to calculate the similarity of the texts of Krylov alongside with the other writers as well.

The Material of the Investigation.

The text of «Pochta Duhov», on the scientific, moral, and critical correspondence of the Arab philosopher Malikulmulk with the water, air, and underground spirits, was taken from the Full Collection of the Works of Krylov, edited by Dem'jan Bednyj. – Moskva: Gosudarstvennoe izdatel'stvo huduzhestvennoj literatury, 1945.

We analysed all of the text and then this text by parts. We divided the text into three parts: 1) Letters of Gnoms – 40,533 words; 2) Letters of Silfs – 27,672; 3) Letters of the other spirits – 14,864 words. These three parts are different from the point of view of the doubts of the critics. Nobody doubts that Krylov wrote the Letters of Gnoms, but there have been great doubts concerning the Letters of Silfs. As stated earlier, many people believed that the Letters of Silfs were written by Radishchev. Some doubts have also been expressed about the Letters of other Spirits, though less than towards the Letters of Silfs. Thus, we had two texts which undoubtedly belonged to Krylov: his Stories and the Letters of Gnoms. They both belong to one and the same style, i.e. prose. The Stories of Krylov contains 34,758 words.

The first suspect was Radishchev. Thus, we computed his texts to determine the similarity. It was especially necessary to compare the frequency of the distribution of the prepositions in the Silfs letters and Radishchev's prose. It is necessary to remark that both the Letters of Silfs and Radishchev prose are philosophical.

We computed two texts by Radishchev 1) *Puteshestvie iz Peterburga v Moskvu* (51,111 words); and 2) *O cheloveke, o ego smertnosti* (40,087 words).

These texts are taken from the *Full Collection of Works by A. N. Radishchev*, edited by I. K. Luppola, Gukovskij, and V. A. Desnitskij. – Moskva – Leningrad: Izdatel'stvo Akademii Nauk SSSR, 1938. The texts of many other writers were also computed to compare the trends of the distribution of the 25 chosen prepositions. The list of writers is in alphabetic order in the Appendix.

The Method of Investigation

We shall dwell in detail on why the prepositions were computed and analysed later. Here, we would like to state that we used one of the most popular methods of mathematical statistics, called Chi-square. It is used in linguistics to determine if two texts are the same, according to some chosen features (Tambovtsev, 2003: 14 - 16). It is also used when we do not know the form of the distribution of the features or do not want to bother about it, since the Chi-square criterion is robust enough. It can be applied not only to the normal distribution but the other forms of distribution as well. Chi-square is simple to use and gives a reliable result when we want to know if two texts enter the same general sample. It may be used in the author attribution as well as some other statistical methods (Holmes, 1985: 328 – 336).

We chose the level of significance 0.05 or 5%, which yields 95% reliability.

This means that in 95% of cases our statistical conclusion is correct, but in the 5% of cases it may be wrong. A more detailed description of the use of the Chi-square criterion in linguistics or

industry may be found elsewhere (Brainerd, 1974: 164 – 170; Brownlee, 1949: 50; Butler, 1985: 112 – 114; Herdan, 1966: 36 – 39; Tambovtsev, 2003: 26 - 33).

Nowadays, linguists may be luckier than some time ago, since they may just use some statistical software for computers (Statistica, Mathematica, XL, etc) without knowing the details of how to calculate the Chi-square.

It should be mentioned that we adjusted the values of the Chi-square to obtain the TMB coefficient. The value of this coefficient is the ratio of the division of the obtained value of the Chi-square, divided by its theoretical value. Its theoretical value is found in the Chi-square tables according to the degrees of freedom (Butler, 1985: 176; Herdan, 1966: 407). The number of degrees of freedom is equal to the number of the pairs minus one. Therefore, if we have one pair of values in the first and the second text, then we have only one degree of freedom. The critical value of Chi-square with one degree of freedom is shown in the table as 3.841 (Butler, 1985: 176; Herdan, 1966: 407). For instance, in Tolstoy's «War and Peace», Volume 1, we found 123 prepositions *na* and in the book «Anna Karenina», 133. For both texts the same Sample Volume was 10 thousand words. Now, we would like to clear up whether the variation of the frequencies of the preposition *na* is in the limits of the general Sample. The obtained value of the Chi-square is 0.39 in this case. In order to find the TMB coefficient we must divide 0.39 by 3.841. So, here the TMB coefficient is equal to 0.10. This is much less than a unit. So, we can state that there is no significant statistical difference between the frequencies of the preposition *na* in these two texts by Tolstoy. As a matter of fact, we studied the frequencies of 25 prepositions in these two texts. Therefore, we can calculate the total value of the TMB coefficient. In this case, the number of the degrees is $25 - 1 = 24$. The critical value of Chi-square with the 24 degrees of freedom is 36.415. We calculated the Chi-square and obtained the value of 34.63. If we divide 34.63 by

36.415, we receive the TMB value equal to 0.95, also less than a unit. So, we can devise that two texts by Leo Tolstoy are statistically equal.

The comparison by the TMB coefficient makes it possible to take the different number of prepositions or other features. If in future we want also to take some other grammatical features, e.g., conjunctions, we can compare them directly. In this case, the value of the TMB shows the distance between the texts under comparison. The distance between Tolstoy's «War and Peace» Vol.1, and «Anna Karenina» is 0.95. We can see by the data in Table 2 that the distance between the text of «Pochta Duhov» and the Stories by Krylov is 0.64, which is less than that. Therefore, we can conclude that the text of «Pochta Duhov» belongs to Krylov with 95% reliability. The distance between «Pochta Duhov» and Gorbachov's political prose is even greater – 2.70. The distance between «Pochta Duhov» and Prohanov's prose is much greater - 4.74. The greater the distance, the less the similarity. And on the inverse, the smaller the distance, the greater the similarity.

Literature and Determining Authorship

Literature has a long history of determining authorship in a subdiscipline that can be called “literary criminology.” It studies who wrote this or that anonymous text or piece of plagiarism, i.e., who stole and passed off the text of some writer as his own. However, it is possible to determine the true author because every text is characterised by a ratio of what is common to every speaker or writer of this or that language and what is individual. This relationship is reflected, willingly or unwillingly, in every instance of oral speech and in every text. The frequency of grammar units in every text may be quite distinctive.

Based on the frequency of function words, N. A. Morozov, about one hundred years ago, tried to analyse the prose of N. M. Karamzin, A. S. Pushkin, N. V. Gogol, I. S. Turgenev, L. N. Tolstoy, etc. He correctly noticed that different authors preferred to use different words, making

their texts unique. Morozov believed that plagiarism can be better recognized by function words than by nouns, adjectives, adverbs, or verbs (Morozov, 1915: 93 – 134). After that, function words were widely used as features by other researcher who applied statistical methods, alongside some other features (Ermolenko, 1988; Marusenko, 1990; Marusenko et al., 2001).

Studying the frequency of occurrence of prepositions in the texts of different authors, we also enter the territory of literary criminology. On the basis of some objective properties of one literary text we shall try to find out its similarity to another text. Mathematical linguistics identifies some text by the frequency characteristics of its features with the help of statistical criteria (Piotrovskij et al., 1977: 18 - 21). The common principle of attribution of the anonymous or any other text consists in the comparison of the text in question to the other texts. There are two possibilities: 1) the text under comparison undoubtedly belongs to this author; 2) the text under comparison undoubtedly does not belong to this author. It is better to have several texts which undoubtedly belong to the suspected author (Tambovtsev, 2003: 253 – 260).

We support the view of linguists who consider a text as some unique and unrepeated phenomenon, different from the others. It has a component of the inner structure which is reflected through different features. We agree with G. Ja. Martynenko, who recommends the use of those structural features which reflect the regularities of the textual structure and which have a detecting power to differentiate the texts (Martynenko, 1983: 58). At the same time we pay attention to the fact that this power unites some texts according to style, since the value of the features will be similar. Martynenko successfully constructed the classification of the Russian writers on the basis of their syntax features, devising their typological similarity (Martynenko, 1983: 58 – 72). The frequency of occurrence of prepositions is not determined only by the sense, i.e., the context of the text, but also by the individual style of the author, as it is possible to convey the meaning in different ways. Therefore, W. Fucks is correct (Fucks, 1975: 313).

The outer form of the text reflects its style. It is noticeable that according to its formal characteristics, poetry is different from prose. At the same time different types of prose have different characteristics. So, drama is different from scientific prose (Fucks, 1975: 386 – 387). However, we take the prose of different writers. Thus, it is interesting to see how different are the texts of different writers from the point of distribution of these 25 prepositions. Our investigations reflect the difference of distribution not only in the works (books or stories) of different writers but also in different works of the same author. It means that our tool (the TMB coefficient) is rather subtle. It can verify if the text is homogeneous enough. The texts, in fact, are not completely homogeneous. Nevertheless, they are homogeneous within the limits of the critical values of the Chi-square criterion. Later, we'll show how to verify different texts without going into great statistical details. The simplest way is just to remember that if the TMB value is less than unit, then the texts are statistically the same.

W. Fucks is quite right to remark that the numeric style characteristics are different when it is known that their styles are different. Usually, specialists can feel all right if the styles are different enough. The only problem is, as we saw earlier, that the thresholds of different specialists may be quite different. Thus, some of them felt that the style of the Silf letters in the text of «Pochta Duhov» was different, while the others felt that it was the same. The specialists in literature usually give their feelings and remarks, which help us to understand if their estimation is unanimous.

We believe that strict mathematical methods can be applied in the dubious cases. The discussions are still going on about the authorship of the ancient texts of the laws of Tsar Hammurapi, the poems of Homer, some compositions of Plato, the dramas of Shakespeare, and some texts of the Bible (Kenny, 1986; Ledger, 1989).

As it was said earlier, determining an author has very much in common with detecting a criminal in criminology. First of all, there is a criminal fact, i.e., the result of the criminal action. In our case it is the text. Secondly, we must find the person who committed the crime. In our case, we must find the author, i.e., the person who wrote this text. If there several authors, then the task is more complex. However, we reduce the situation to only one author since usually the text has one author. Thirdly, we must find the suspects. Fourthly, we must also exclude those who are innocent. Fifthly, we must prove that one of the suspects is guilty, i.e., wrote the text in question.

In mathematical statistics the usual procedure is to exclude the innocent people from the number of suspects using some statistical criterion. The iteration goes to the point when we cannot exclude one or more suspects further. If there is more than one suspect, then we must use some additional statistical criteria. We should also pay attention to the threshold. If the threshold is too high, then we can exclude all the suspects since there is not enough evidence. If the threshold is too low, then we have several suspects. We must also prove that our chosen features work all right on any literary text. For this reason we must have as many writers as possible. The great number of writers may also help us to determine if the time of writing or the style does not influence the result of our investigation. Two texts may be similar enough to enter the same general sample only because they were written in the same style or at the same time. We think that the threshold for our studies is the critical value of the Chi-square at the 5% significance level (Tambovtsev, 2003).

The list of the suspects is usually defined by the specialists in literary criticism rather than a specialist in mathematical linguistics, unless he was the first to suspect the plagiarism. We must emphasize again that the methods of mathematical statistics are not a magical stick. All

they can do is to show whether the two chosen texts are statistically similar, in the chosen features.

The crucial difficulty in authorship studies is to find some reliable features which reside in the text. It should be something like a finger print in criminology. The linguists who work in the field of author attribution (Ermolenko, Fucks, Kjetso, Marusenko, etc.) believe that it is hard, or even impossible, to find something like a finger print in the text. We think that the ideal linguistic set of features should satisfy the following four conditions:

- 1) it should be stable throughout all the life of an author, as is the finger print;
- 2) it should be unique, to characterize the specific person;
- 3) it should be easily recognizable;
- 4) it can be expressed numerically.

The latter requirement may be the most important for the statistical attribution of an author. We noticed that all four of these requirements are not fulfilled for all the authors. There are too few investigations concerning the justification of these requirements. It is more common that the researchers tacitly agree on all of these requirements without sufficient proof. One of the most popular ideas among researchers who use statistical methods in author attribution is that the author can be determined by a statistical analysis of the function words because the author uses them subconsciously. However, it is hard to say if these four requirements are completely fulfilled (Morton, 1978). Fucks, for example, considers that the conclusions made by Greystone and Herdan about some of the Bible texts on the basis of the word stock are not convincing (Fucks, 1975: 388 -389).

It is well-known that prepositions belong to the class of function words (Rozenal' et al., 1985: 388-389; Vinogradov, 1972: 520 - 529). We decided to take the frequency of prepositions as the first stage of the investigation. If they fail to differentiate the authors, then some other

function words should be added for the analysis. It is interesting to see that a great Russian scholar, academician V.V. Vinogradov, also studied the frequency of distribution of prepositions in oral speech and in the passages of the texts of different writers (Vinogradov, 1972: 521).

We took as features only the basic and simple prepositions, because they are considered the oldest in origin. We believe that they can characterize the text better. Therefore the following 25 prepositions were taken for the statistical analysis: *bez, cherez, dl'a, do, iz, k, ko, mezhdu, na, nad, o, ob, obo, ot, pered, po, pod, pro, radi, s, so, u, v, vo, za*.

Actually, Vinogradov shows that the most frequent words are the prepositions. In his statistical data on a sample of 54,338 words in oral speech and extracts of texts of different Russian writers, he found the following frequency: *v* – 3.46%; *na* – 1.42%, *s* – 1.06%, *k* – 0.49, *za* – 0.48%, *dl'a* – 0.43, *iz* – 0.37%, *ot* – 0.32%, *do* – 0.20%, *pri* – 0.15%. We have more or less similar results, though we did not take oral speech, which may have some different characteristics (see Tab.1).

In the Russian language, prepositions show special, time, goal, limit, cause, and other relations between the objects or the relationship of these objects to actions, states and qualities (Vinogradov, 1972: 531). Studying the structure of the frequency of occurrence of the prepositions in the text, we study the structure of relationships of phenomena and objects to processes which are reflected in the text. We believe that every writer may have a unique structure of these relationships, though there are some common trends imposed by the system of the Russian language. Vinogradov points out that in the oral speech of every person the frequency of the use of different prepositions is unique. Making a reference to the statistical investigation of V. A. Dobromyslov, Vinogradov remarks that in the speech of the working classes prepositions are used less often (24%) than in the texts by Chekov (47.5%). This verifies the supposition that prepositions are a good clue to differentiate the speech of different writers.

The meaning of the prepositions are described by Vinogradov and other specialists in grammar very well; therefore it is not necessary to go into detail here (Vinogradov, 1972: 537 – 544). Vinogradov marks the trend of developing analytical constructions, so the role of prepositions should grow, therefore should increase their frequency in Russian texts (Vinogradov, 1972: 544 – 550). For every speaker of Russian the meaning of the prepositions is clear. We took the basic meanings as they are fixed in the four volumes of the *Dictionary of the Russian Language* (SRJa, 1988).

Different prepositions show different positions in space and time, different relationships or different directions. For instance, the preposition *в* [in] shows the position or direction in an object, space or time. The preposition *pro* shows the indications to the person or subject to which the idea, speech or action is directed. The meaning of *pro* is very close to the preposition *о* and its variant *об*; therefore, it is especially interesting to see their statistical distribution. The preposition *через* denotes the movement through some space, media, object or place. This preposition means some sort of overcoming during this movement.

We must indicate that I.V. Fomenko has a similar approach to the function words, especially prepositions. He thinks it possible to study the feeling of the outlook of the author through the frequency of the use of prepositions and other function words (Fomenko, 1994: 76). It is possible to state that the frequency of the prepositions is a both informative and universal feature. If we want to distinguish one author from another, then we must study the following:

- 1) The degree of similarity in the frequency of occurrence of certain prepositions in different parts of the text of the same book of one and the same author;
- 2) The degree of similarity in the frequency of occurrence of certain prepositions in the texts in different books of one and the same author;
- 3) The degree of similarity in the frequency of occurrence of certain prepositions in the texts in different books of different authors. The degree of similarity is greater if the distance

between them is smaller, and on the inverse, the greater the distance, the lesser the degree of similarity.

The set of prepositions itself represents a sort of net whose knots reflect the values of the frequencies of the prepositions. The thinking of an author constructs this or that net structure, which is unique. Every person has an individual system of creating a text. The features which we chose will reflect this individual system.

The Discussion of the Results of the Research

First of all, it is necessary to compare different texts of Krylov with the text of «Pochta Duhov». Later, we will divide the text of «Pochta Duhov» into three parts. It is important to see the behaviour of the value of the TMB coefficient which here shows the distance. Let us consider the data of Tab.2. The distance between the text of «Pochta Duhov» and Krylov's prose (his Stories) measured by the TMB coefficient is less than one unit. This means that they enter one and the same general sample, according to the Ch-square criterion (in this case, $TMB = 0.64$, which is much less than unit). In other words, they are so similar that the Chi-square regards them as one and the same text. Chernyshevskij is the next to follow, but his TMB coefficient is much greater. It is also much greater than one unit, which means that the text of «Pochta Duhov» and Chernyshevskij belong to different general samples. To speak simply, this shows that the texts are too different and do not belong to one and the same author.

The text of Radishchev's "Puteshchestvie iz Peterburga v Moskvu" has even less similarity to the text of «Pochta Duhov», thus greater distance, $TMB = 1.72$. The other Radishchev text, "O cheloveke," is farther away yet, $TMB = 2.77$. The values of the TMB coefficient tell us that Radishchev did not write the text of «Pochta Duhov». This is proven with 95% reliability.

As it was mentioned before, many doubts have been expressed concerning part of the text of «Pochta Duhov», namely the letters of the Silf Spirits. It is quite necessary to verify, i.e., to prove, if these letters are similar to the other Krylov texts from the point of view of the distribution of the 25 prepositions according to the Chi-square criterion. We computed the distances and put the data in Tab.4. The close analysis of the data reveals why there were doubts about the Silf letters. In fact, they are too different from the other texts of Krylov. Thus, either Krylov didn't write them, or they were severely edited by some strict editor, or perhaps he rewrote or edited somebody else's text. As was revealed later, Krylov translated the text written by somebody else.

Razumovskaja discovered that the Silf letters were originally written by a Frenchman, the marquis Jean-Baptiste de Boyer d'Argens. Razumovskaja compared the texts of marquis D'Argens with the Silf letters and discovered that the text of the Silf letters is just the translation from French into Russian. She was not sure that Krylov translated these letters himself but she claims that Krylov could translate from French (Razumovskaja, 1978: 11 – 114). At the same time, it is probably the translator's text, edited by Krylov. We believe that if Krylov translated himself, the text of the Silf letters would have been closer to his style. However, our statistical analysis claims that the text of the Silf letters is too different statistically, as if written by some other person.

As a matter of fact, at the time of Krylov it was all right if the translator put his name in the title of the book instead of the author. It was not considered plagiarism. In Russia as well as in other countries the name of the translator stood in the place of the real author (Osipov, 1987: 180).

In order to crush the doubts that our method works, we computed and then compared several books of one and the same author. In fact, the results verified the method, that is, the

texts in different books by one and the same author were closer to each other than to the texts of other authors. Thus, we can state that it is not just a coincidence that the texts of Krylov are closer to each other than to the texts of other writers.

We analysed old classical writers like Pushkin, Goncharov, Dostoevskij, Tolstoy, Turgenyev, etc. They all indicated this tendency. However, this tendency is stronger in the texts of the modern writers like Akunin, Emets, Kataev, Fadeev, etc. One can see the distances in Tab. 5 – 21. The distances between the texts of some of the writers are so small that it looks that it is one and the same text, from one and the same book.

Some specialists in literature may say that the texts of the writers who lived in the same span of time are close because it was the accepted manner of style at that time, and this manner of style influenced the writer's personal style more than his individual way of thinking. To test this, we took the texts of Karamzin and Krylov, Karamzin and other writers. The distances between Karamzin's texts are 0.79 and 0.99 while between Karamzin and Krylov 1.78, Karamzin and Pushkin – 3.94, Karamzin and Lermontov – 5.53 (Tab. 7).

The distance between Pushkin's texts is minimal – 0.53, while the similarity by the TMB coefficient to other writers is greater, from 1.02 to 5.18 (Tab.8). The distance between “Captain's daughter” and “Belkin's Stories” (0.53) may speak for itself: Pushkin's style is very stable. The style of Tolstoy shows a greater degree of similarity, i.e. stability (0.26). The values of the TMB coefficient verify that all the works of Tolstoy enter the same general sample, since they are less than 1. The political text by M.S. Gorbachev is the farthest (Tab.9).

The data of Tab. 11 show that the distances may be even smaller: Turgenyev's “Nakanune” and “Nov” – 0.09. Texts of Dostoevskij *Idiot* and *Besy* have a greater similarity – 0.08 (Tab. 11). This means that the style of Dostoevskij is also very stable. No doubt that the texts of Dostoevskij were written by one and the same author.

Some modern writers also show a great similarity, e.g., the various books by D. Emets. His *Tan'a Grotter I molot Peruna* and *Tan'a Grotter I posoh volhvov* are placed very closely – 0.09 (Tab. 19 – 20). The distances between the other books of D. Emets are also close enough: *Tretij vsadnik mraka* and *Bilet na lysuju goru* – 0.16; *Lokon Afrodity I Mest' val'kirij* – 0.25; *Mag polunochi* and *Magicheskij kontrabas* – 0.33. These distances show closeness of the texts in style. It is not possible to suspect that these books are written by different writers. The so-called “Yellow” newspapers often publish articles concerning modern writers who publish two or more books a year claiming that these books are not written by one writer but by several “slaves” under the same name of the famous author. Our method may help to detect that.

It is vivid on the example of the two writers: Kataev-son and Kataev-father. The latter is a famous Soviet writer. His numerous books were widely read. On the contrary, the prose of Kataev-son is quite unknown. We wanted to learn how the style of the father influenced the style of the son.

One of the two books of Kataev-son «Dve skazki» is very similar to that of Kataev-father «Beleet parus» (TMB=0.59). This value tells us that these two texts are from the same general sample. It appears that either Kataev-son tried to copy his father's style or that Kataev-father wrote it for his son. The other possibility is that Kataev-father totally edited his son's story. The other book by Kataev-son «Doktor velel maderu pit» is quite different from his father's style (TMB=2.83). We should take into account that the similarity between two other books of Kataev-father «Syn polka» and «Rastratchiki» is 0.84. In fact, these two texts of Kataev-father are more different than his text and the text of his son's first book (0.59).

Different books of A.I. Solzhenitsyn are also very close (Tab.22). Looking through the tables make us believe that books of one and the same author are closer to each other than to the

books of different authors. It makes us believe that this method works all right both on the texts of the classical writers and modern writers.

Conclusions:

1. It possible to state that Radishchev never wrote any parts of the text of «Pochta Duhov» published by Krylov.
2. Karamzin and other writers chosen for this study did not write «Pochta Duhov» either.
3. Gnom Letters of ««Pochta Duhov»» and the prose of Krylov were written by one and the same author, i.e., by Krylov himself (40,533 words). Our statistical research also proved that the Letters of the Other Spirits (14,864 words) were written by Krylov. The complete text of «Pochta Duhov» has 86,092 words. Thus, 64% of all the text of «Pochta Duhov» was surely written by Krylov.
4. The doubts about the text of the Silf letters were justified. The Silf letters are statistically different from Krylov texts, since the distance is greater than one unit. The distance between the Silf letters and the Gnom letters is 1.29. The distance between the Silf letters and the Stories is even greater – 1.69.
5. The data of the tables show that the texts of one and the same author are similar, and thus, have small distances, less than a unit. It may be explained by the thinking of one and the same person. On the contrary, the spatial characteristics in the texts of different writers are different and greater than a unit.

Now we can see that the doubts of some specialists about the authorship of Krylov were correct. Taking into account Razumovskaja's research, it is possible to state that Krylov translated the text of marquis D'Argens into Russian from French. We think that the spatial orientation of different authors is distinctive. It is strongly reflected by the use of different prepositions. We can say that the spatial orientation of the Gnom letters and the text of «Pochta

Duhov» is the same, while this orientation in the Silf letters is different. The Russian translation of the text by marquis D'Argens may preserve this difference, or maybe Krylov did not translate this text himself. In this case, the style of the author added to the style of the translator.

Tab.1

The frequency of occurrence of the prepositions in the texts of different authors, %.

- 1 - KrPo – Krylov «Pochta Duhov»
- 2 - KrSt – Krylov «Prose. Stories»
- 3 - Chern – Chernyshevskij. «Chto delat'?»
- 4 - RadPu – Radishchev «Puteshesvie iz Peterburga v Moskvu»
- 5 - PuKap – Pushkin «Kapitanskaja dochka»
- 6 - RadO - Radishchev «O cheloveke, o ego smertnosti»
- 7 - CheOs – Chehov «Ostrov Sahalin»
- 8 - LeG – Lermontov «Geroj nashego vremeni»
- 9 - GoKa – Gorbachov «Kak eto bylo»

Writer Preposit.	1 KrPo	2 KrSt	3 Chern	4 RadPu	5 PuKap	6 RadO	7 CheOs	8 LeG	9 GoKa
Na	0.90	1.17	0.96	1.52	1.24	0.96	1.97	1.44	1.53
Do	0.19	0.22	0.17	0.25	0.11	0.22	0.24	0.10	0.12
V	2.39	2.09	1.79	3.20	2.01	2.84	2.88	1.75	4.27
K	0.59	0.51	0.38	0.51	0.64	0.47	0.46	0.48	0.64
S	0.88	0.91	0.92	0.68	1.17	0.43	0.94	0.87	1.27
Za	0.39	0.35	0.27	0.36	0.52	0.10	0.31	0.53	0.28
Iz	0.43	0.35	0.30	0.37	0.35	0.52	0.52	0.34	0.29
Po	0.42	0.42	0.32	0.44	0.35	0.35	0.65	0.42	0.64
Vo	0.21	0.14	0.05	0.42	0.13	0.30	0.16	0.07	0.14
O	0.47	0.25	0.21	0.49	0.30	0.55	0.28	0.17	0.65
Ot	0.47	0.39	0.33	0.53	0.32	0.73	0.10	0.23	0.24
Pered	0.06	0.06	0.03	0.01	0.07	0.00	0.03	0.05	0.05
Nad	0.07	0.08	0.04	0.13	0.03	0.12	0.01	0.03	0.03
Pod	0.08	0.10	0.07	0.07	0.12	0.03	0.13	0.02	0.09
Dl'a	0.49	0.43	0.29	0.34	0.07	0.27	0.26	0.13	0.45
Mezhdu	0.14	0.09	0.06	0.08	0.10	0.08	0.10	0.10	0.37
U	0.34	0.35	0.47	0.24	0.35	0.06	0.40	0.50	0.19
Pro	0.00	0.01	0.02	0.00	0.05	0.00	0.02	0.03	0.00
Bez	0.17	0.15	0.16	0.10	0.07	0.14	0.12	0.06	0.08
Cherez	0.02	0.03	0.08	0.00	0.10	0.00	0.07	0.10	0.05
So	0.15	0.12	0.09	0.10	0.17	0.03	0.10	0.04	0.14
Ko	0.05	0.08	0.04	0.08	0.10	0.01	0.02	0.05	0.01
Ob	0.03	0.01	0.03	0.01	0.05	0.01	0.04	0.08	0.18
Obo	0.01	0.01	0.01	0.01	0.02	0.00	0.00	0.02	0.00
Radi	0.00	0.01	0.00	0.04	0.01	0.01	0.00	0.00	0.00

Tab. 2

The distance between the authors. The similarity in the use of the prepositions in «Pochta Duhov» by Krylov in comparison to the other texts by Krylova and other authors by the values of the TMB coefficient. All the text «Pochta Duhov» = 86,092 words

№	Krylov «Pochta Duhov». The text of all the letters.	TMB value
1.	Krylov. Prose (Stories)	0.64
2.	Chernyshevskij. «Chto delat'?»	1.68
3.	Radishchev «Puteshestvie iz Peterburga v Moskvu»	1.72
4.	Karamzin «Pis'ma russkogo puteshestvennika» T.1	1.76
5.	Karamzin «Istorija gosudarstva Rossijskogo» T.2	1.98
6.	Dotsenko «Komanda Beshennogo»	2.05
7.	Pushkin «Kapitanskaja dochka»	2.15
8.	Turgenev «Nov'»	2.23
9.	Tolstoy L.N. «Vojna i mir» T.1	2.23
10.	Fadeev «Razgrom.»	2.23
11.	Vajnery «Ja - sledovatel'»	2.37
12.	Gorkij «Mat'»	2.56
13.	Emets «Bilet na lysuju goru»	2.65
14.	Kr'ukov №1	2.68
15.	Radishchev «O cheloveke, o ego smertnosti»	2.77
16.	Chehov «Ostrov Sahalin»	2.94
17.	Lermontov «Geroj nashego vremeni»	2.98
18.	Kataev V. «Beleet parus»	3.05
19.	Bulgakov «Master i Margarita»	3.19
20.	Gorbachov «Kak eto bylo»	3.70
21.	Sholohov «Tihij Don» Book 1. № 1-14	4.73
22.	Prohavov «Idushchie v nochi»	4.74

Tab. 3

The distances between the authors. The similarity in the use of prepositions in the Gnom Letters of «Pochta Duhov» by Krylov in comparison with the other texts of Krylov and other authors according to the values of the TMB coefficient. Sample of the Gnom letters = 40,533 words.

№	Krylov. The Gnom letters of «Pochta Duhov»	TMB value
1.	Krylov. Prose (Stories)	0.60
2.	Krylov. Letters of Other Spirits in «Pochta Duhov»	0.98
3.	Silf letters of «Pochta Duhov»	1.29
4.	Karamzin. Pis'ma russkogo puteshestvennika. T.1.	1.48
5.	Kassil' - Pol'anovskij. Ulitsa mladshogo syna.	2.02
6.	Radishchev. Puteshestvie iz Peterburga v Moskvu	2.08
7.	Lermontov. Geroj nashego vremeni.	2.09

Tab. 4

The distance between the authors. The similarity in the use of the prepositions in the Silf Letters from «Pochta Duhov» by Krylov in comparison with the other texts of Krylov and other authors by the values of the TMB coefficient. The Silf Letters sample – 27,672 words, or 32.14% of all the text of «Pochta Duhov».

№	Krylov: Text of the Silf letters of «Pochta Duhov»	TMB value
1.	Krylov. The Gnom letters of «Pochta Duhov»	1.29
2.	Krylov. Prose (Stories)	1.69
3.	Radishchev. Puteshestvie iz Peterburga v Moskvu	1.94
4.	Radishchev. O cheloveke, o ego smertnosti.	1.97
5.	Karamzin. Pis'ma russkogo puteshestvennika. T. 2.	2.12
6.	Karamzin. Istorija gosudarstva Rossijskogo. T.2	2.44
7.	Dotsenko. Komanda Beshennogo.	3.24
8.	Turgenev. Nov'.	3.38
9.	Fadeev. Razgrom.	3.56
10.	Pushkin. Kapitanskaja dochka.	3.65
11.	Gorkij. Mat'.	3.77
12.	Akunin. Pelagija i chornyj monah.	3.95
13.	Vajnery. Ja - sledovatel'.	3.98
14.	Dovlatov. Zona.	4.04
15.	Limonov. Eto ja - Edichka.	4.10
16.	Gorbachov. Kak eto bylo.	4.38
17.	Emets. Bilet na lysuju goru.	4.50
18.	Lermontov. Geroj nashego vremeni	4.70
19.	Bulgakov. Master i Margarita.	4.73
20.	Kataev. Beleet parus.	4.74
21.	Chehov. Ostrov Sahalin.	5.96

Tab. 5

The distance between the authors. The similarity in the use of the prepositions in Letters of the Other Spirits of «Pochta Duhov» by Krylov in comparison with the other texts of Krylova and other authors by the values of the TMB coefficient. The Sample of the Letters of the Other Spirits = 14,864 words.

№	Krylov. Letters of the Other Spirits of «Pochta Duhov»	TMB value
1.	Krylov. Prose (Stories)	0.83
2.	Krylov. The Gnom letters of «Pochta Duhov»	0.98
3.	Radishchev. Puteshestvie iz Peterburga v Moskvu	1.53
4.	Radishchev. Daybook, Letters.	1.87
5.	Radishchev. O cheloveke, o ego smertnosti.	2.52

Tab. 6

The distance between the authors. The similarity in the use of the prepositions in prose (Stories) Krylov in comparison with the other texts of Krylov and other authors by the values of the TMB coefficient.

№	Krylov. Prose (Stories).	TMB value
1.	Krylov. The Gnom letters of «Pochta Duhov»	0.60
2.	Krylov. All the text of "Pochta Duhov"	0.64
3.	Krylov. Letters of the Other Spirits.	0.83
4.	Kassil'. Bud'te gotovy, Vashe vysochestvo	1.47
5.	Kassil'-Pol'anovskij. Ulitsa mladshogo syna.	1.56
6.	Krylov. Silf Letters.	1.69

Tab. 7

The distance between the authors. The similarity in the use of the prepositions in tekste Karamzina "Istorija gosudarstva Rossijskogo" T. 2 in comparison with the other texts of Karamzina and other authors by the values of the TMB coefficient.

№	Karamzin. Istorija gosudarstva Rossijskogo. T. 2.	TMB value
1.	Karamzin. Istorija gosudarstva Rossijskogo. T.1. SAMPLE 1.	0.79
2.	Karamzin. Istorija gosudarstva Rossijskogo. T. 1. SAMPLE 2.	0.99
3.	Krylov. All the text «Pochta Duhov»	1.98
4.	Pushkin. Kapitanskaja dochka.	3.94
5.	Vajnery. Ja - sledovatel'.	3.95
6.	Dostoevskij. Idiot.	4.17
7.	Turgenev. Nov'.	4.28
8.	Emets. Bilet na lysuju goru.	4.34
9.	Kataev. Beleet parus odinokij.	4.45
10.	Gorkij. Mat'.	5.06
11.	Lermontov. Geroj nashego vremeni.	5.53

Tab. 8.

The distance between the authors. The use of the prepositions in «Kapitanskaja dochka» by Pushkin and other texts by Pushkin and other authors by the values of the TMB coefficient.

Sample = 34,471 words.

№	A. S. Pushkin «Kapitanskaja dochka»	TMB value
1.	Pushkin «Povesti Belkina »	0.53
2.	Pushkin «Dubrovskij»	0.63
3.	Solzhenitsyn «V krugu pervom »	1.02
4.	Turgenev. Nov'.	1.09
5.	Dostoevskij «Idiot»	1.14
6.	Emets «Bilet na lysuju goru»	1.26
7.	Gorkij. Mat'.	1.39
8.	Bulgakov Master i Margarita	1.39
9.	Chernyshevskij. «Chto delat' »	1.68
10.	Veller «Velikij poslednij shans »	1.79
11.	Sholohov «Tihij Don» Book 1. Samples № 1 - 14	2.20
12.	Bazhov «Skazy»	2.40
13.	Prohavov «Idushchie v nochi»	3.46
14.	Gorbachov M.S. «Kak eto bylo»	5.18

Tab. 9.

The distance between the authors. The similarity in the use of the prepositions in the novel by L.N. Tolstoy «Vojna i mir» T. 1 and the other texts by Tolstoy and other authors by the TMB value

№	L.N. Tolstoy «Vojna i mir» T. 1.	TMB value
1.	Tolstoy «Vojna i mir» T. 2.	0.26
2.	Tolstoy «Voskresen'e»	0.29
3.	Tolstoy «Vojna i mir» T. 3.	0.43
4.	Tolstoy «Junost'»	0.50
5.	Tolstoy «Otrochestvo»	0.54
6.	Tolstoy «Kazaki»	0.63
7.	Tolstoy «Polikushka »	0.69
8.	Tolstoy «Krejtserova sonata»	0.73
9.	Tolstoy «Vojna i mir» T. 4.	0.74
10.	Tolstoy «Smert' Ivana Il'icha»	0.88
11.	Tolstoy «Anna Karenina»	0.95
12.	Kr'ukov F. «Stories » Sample 3.	1.11
13.	Kr'ukov F. «Stories » Sample 1.	1.15
14.	Emets «Bilet na lysuju goru»	1.32
15.	Bulgakov Master i Margarita	1.92
16.	Limonov E. «Eto ja - Edichka»	2.10
17.	Gorbachov M.S. «Kak eto bylo»	5.40

Tab. 10.

The distance between the authors. The similarity in the use of the prepositions in the novel by I. S. Turgenev «Dvor'anskoe Gnezdo» and the other texts by Turgenev and other authors by the values of the TMB coefficient. Sample = 95,750 words.

№	I. S. Turgenev «Dvor'anskoe Gnezdo»	TMB
1.	Turgenev «Nakanune »	0.65
2.	Turgenev «Nov'»	0.69
3.	Turgenev «Dym »	0.75
4.	Veller «Velikij poslednij shans »	1.14
5.	Dostoevskij «Unizhennye i oskorbl'onnye »	1.25
6.	L.N. Tolstoy «Anna Karenina»	1.47
7.	Sholohov «Podn'ataja tselina» №1-12	1.70
8.	Sholohov «Donskie Stories »	3.81
9.	Sholohov «Tihij Don» Book 1. №1-14	3.88

Tab.11.

The distance between the authors. The similarity in the use of the prepositions in the novel by I. S. Turgenev «Nov'» and the other texts by Turgenev and other authors by the values of the TMB coefficient. Sample

№	I. S. Turgenev «Nov'»	TMB value
1.	Turgenev «Nakanune »	0.09
2.	Turgenev «Otsy i deti»	0.18
3.	Turgenev «Rudin»	0.19
4.	Turgenev «Dym »	0.22
5.	Turgenev «Dvor'anskoe Gnezdol »	0.69
6.	Turgenev «Zapiski ohotnika»	0.84
7.	Pushkin. Kapitanskaja dochka.	1.09
8.	Gorkij. Mat'.	1.16
9.	Kr'ukov. SAMPLE 3.	1.34
10.	Kr'ukov. SAMPLE 1.	1.41
11.	Veller . Velikij poslednij shans .	1.46
12.	Vajnery. Ja - sledovatel'.	1.59
13.	Sholohov. Tihij Don. Book 3.	1.90
14.	Sholohov. Tihij Don. Book 2.	1.95
15.	Bulgakov. Master i Margarita.	2.21
16.	Chehov. Ostrov Sahalin.	2.79
18.	Prohanov. Idushchie v nochi.	4.66
19.	Gorbachov. Kak eto bylo.	5.60

Tab. 12.

The distance between the authors. The similarity in the use of the prepositions in the novel by F. M. Dostoevskij «Idiot» and the other texts by Dostoevskij and other authors by the TMB value

№	F. M. Dostoevskij «Idiot»	TMB value
1.	Dostoevskij «Besy»	0.08
2.	Dostoevskij «Prestuplenie i nakazanie »	0.28
3.	Dostoevskij «Igrok»	0.29
4.	Dostoevskij «Podrostok»	0.38
5.	Dostoevskij «Vechnyj muzh»	0.58
6.	Dostoevskij «Unizhennye i oskorbl'onnye »	0.65
7.	Dostoevskij «Skvernyj anegdod»	0.71
8.	Dostoevskij «Dvojniki»	0.73
9.	Dostoevskij «Zapiski iz podpol'ja»	0.77
10.	Veller «Velikij poslednij shans »	1.10
11.	Dovlatov «Chmodan»	1.13
12.	Pushkin «Kapitanskaja dochka»	1.14
13.	Lermontov «Geroj nashego vremeni»	1.27
14.	Emets «Bilet na lysuju goru»	1.39
15.	Kr'ukov F. «Stories » Sample 1.	1.54
16.	Akunin «Pelagija i chornyj monah»	1.66
17.	Sholohov «Tihij Don» Book2.	1.82
18.	Goncharov «Fregat PALLADA» T. 2.	1.89
19.	Bulgakov Master i Margarita	2.28
20.	Prohavov «Idushchie v nochi»	4.84
21.	Gorbachov M.S. «Kak eto bylo»	5.75

Tab. 13.

The distance between the authors. The similarity in the use of the prepositions in the novel by Goncharov «Obyknovennaja istorija » and the other texts by Goncharov and other authors by the values of the TMB coefficient. Sample = 27,000

№	Goncharov «Obyknovennaja istorija »	TMB
1.	Goncharov . Oblomov.	0.35
2.	Goncharov . Obryv.	0.54
3.	Kr'ukov. SAMPLE 1.	1.32
4.	Sholohov. Podn'ataja tselina. Book 1. Sample № 13 – 24	1.47
5.	Sholohov. Tihij Don. Book 3.	2.30

Tab. 14.

The distance between the authors. The similarity in the use of the prepositions in the novel by M. Gorkij «Mat'» and the other texts by M. Gorkij and other authors by the values of the TMB coefficient. Sample = 92,760 words.

№	M. Gorkij «Mat'»	TMB
1.	Gorkij «Delo Artamonovyh»	0.45
2.	Gorkij «Foma Gordeev»	0.66
3.	Гръкий «Chelkash»	0.88
4.	Dovlatov. Zona.	1.10
5.	Dostoevskij. Idiot.	1.15
6.	Turgenev. Nov'.	1.16
7.	Veller. Velikij poslednij shans .	1.22
8.	Pushkin. Kapitanskaja dochka.	1.39
9.	Sholohov. Oni srazhalis' za Rodinu .	1.72
10.	Emets. Bilet na lysuju goru.	1.40
11.	Kr'ukov. SAMPLE 1.	1.90
12.	Kataev. Beleet parus odinokij.	2.02
13.	Vajnery. Ja - sledovatel'.	2.17
14.	Bulgakov. Master i Margarita.	2.32
15.	Goncharov . Fregat «Pallada». T. 2.	2.41
16.	Serafimovich. Sample Zheleznyj potok.	2.41
17.	Chehov. Ostrov Sahalin.	3.01
18.	Gorbachov. Kak eto bylo.	6.29

Tab. 15.

The distance between the authors. The similarity in the use of the prepositions in B. Akunin «Pelagija i chornyj monah» and other texts by Akunin, and other authors by the TMB value

№	B. Akunin «Pelagija i chornyj monah»	TMB value
1.	Akunin «Pelagija i belyj bul'dog»	0.23
2.	Akunin «Dekorator»	0.28
3.	Akunin «Turetskij gambit»	0.29
4.	Akunin «Kladbishchenskie istorii»	0.49
5.	Akunin «L'ubovnik smerti»	0.77
6.	Kr'ukov F. «Stories » Sample 1.	1.16
7.	Vajnery «Ja - sledovatel'»	1.27
8.	Goncharov «Fregat PALLADA» T. 2.	1.30
9.	Veller «Velikij poslednij shans »	1.44
10.	Sholohov «Podn'ataja tselina» Samples № 1- 12	1.48
11.	Sholohov «Tihij Don» Book 1. Samples № 1 – 14.	1.64
12.	Lermontov «Geroj nashego vremeni»	1.77
13.	Limonov «Eto ja - Edichka»	2.37
14.	Turgenev «Nov'»	3.41
15.	Gorbachov M. S. «Kak eto bylo»	5.23

Tab. 16.

The distance between the authors. The similarity in the use of the prepositions in the book by M. Bulgakov "Master i Margarita" and the other texts by Bulgakov and other authors by the values of the TMB coefficient. Sample = 47,127 words.

№	M. Bulgakov. "Master i Margarita"	TMB
1.	Bulgakov. Teatral'nyj roman.	0.86
2.	Bulgakov. Zapiski junogo vracha.	0.90
3.	Bulgakov. Belaja gvardija.	0.92
4.	Fadeev. Razgrom.	1.20
5.	Chehov. Ostrov Sahalin.	1.68
6.	Sholohov. Tihij Don. Book 1. Samples № 1 -14.	1.77
7.	Serafimovich. Zheleznyj potok.	2.09
8.	Turgenev. Nov'.	2.21
9.	Dostoevskij. Idiot.	2.28

Tab. 17.

The distance between the authors. The similarity in the use of the prepositions in the book by the brothers Vajner «Ja - sledovatel'» and the other texts by brothers Vajner and other authors by the values of the TMB coefficient. Sample = 45,551 words.

№	Vajnery «Ja - sledovatel'»	TMB
1.	Vajnery. Petl'a i kamen' na zel'onoj trave .	0.50
2.	Vajnery. Evangelie ot palacha.	0.64
3.	Chehov. Ostrov Sahalin.	1.15
4.	Akunin. Pelagija i chornyj monah.	1.27
5.	Dotsenko. Komanda Beshennogo.	1.31
6.	Fadeev. Razgrom.	1.35
7.	Turgenev. Nov'.	1.59
8.	Dostoevskij. Idiot.	1.65
9.	Sholohov. Oni srazhalis' za Rodinu .	1.85
10.	Gorkij. Mat'.	2.17

Tab. 18.

The distance between the authors. The similarity in the use of the prepositions in the book by S. Dovlatov «Zona» and the other texts by Dovlatov and other authors by the values of the TMB coefficient. Sample = 47,127 words.

№	S. Dovlatov «Zona»	TMB
1.	Dovlatov. Chmodan.	0.74
2.	Dovlatov. Заповедник.	0.76
3.	Dovlatov. Иностранка.	0.87
4.	Fadeev. Razgrom.	1.01
5.	Gorkij. Mat'.	1.10
6.	Dotsenko. Komanda Beshennogo.	1.11
7.	Kataev. Beleet parus odinokij.	1.27
8.	Tolstoy L.N. Vojna i mir. T. 1.	1.29
9.	Turgenev. Nov'.	1.33
10.	Pushkin. Kapitanskaja dochka.	1.44
11.	Dostoevskij. Idiot.	1.53
12.	Bulgakov. Master i Margarita.	1.66
13.	Sholohov. Podn'ataja tselina. Sample № 1- 12.	1.83
14.	Goncharov . Fregat PALLADA. T. 2.	2.04
15.	Limonov. Eto ja - Edichka.	2.24
16.	Gorbachov. Kak eto bylo.	6.56

Tab. 19.

The distance between the authors. The similarity in the use of the prepositions in the book by D. Emets «Tretij vsadnik mraka» the other texts by Emets and other authors by the TMB value

№	D. Emets «Tretij vsadnik mraka»	TMB
1.	Emets. Bilet na lysuju goru	0.16
2.	Emets. Mag polunochi.	0.22
3.	Emets. Magicheskij kontrabas.	0.26
4.	Emets. Lokon Afrodity.	0.27
5.	Kr'ukov. SAMPLE 2.	1.07
6.	Sholohov. Tihij Don. Book 1. Samples № 1 – 14.	1.53

Tab. 20.

The distance between the authors. The similarity in the use of the prepositions in the book by D. Emets «Bilet na lysuju goru» and the other texts by Emets and other authors by the TMB value

№	D. Emets «Bilet na lysuju goru»	TMB
1.	Emets. Tretij vsadnik mraka.	0.16
2.	Kr'ukov. SAMPLE 2.	1.06
3.	Dovlatov. Zona.	1.28
4.	Dostoevskij. Idiot.	1.39
5.	Serafimovich Sample Zheleznyj potok .	1.70
6.	Sholohov. Tihij Don. Book 1.	1.76

7.	Karamzin. Istorija gosudarstva Rossijskogo. T. 2.	4.34
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Tab. 21.

The distance between the authors. The similarity in the use of the prepositions in the book by V. P. Kataeva «Beleet parus» the other texts by Kataev and other authors by the TMB value

№	V. P. Kataev «Beleet parus»	TMB
1.	Kataev «Растратчики»	0.36
2.	Kataev «Syn polka»	0.55
3.	Kataev (son) «Dve skazki»	0.59
4.	Kataev «Almaznyj moj venets»	0.65
5.	Pushkin. Kapitanskaja dochka.	1.24
6.	Tolstoy L.N. Vojna i mir. T. 1.	1.32
7.	Dostoevskij. Idiot.	1.63
8.	Turgenev. Nov'.	1.74
9.	Kataev (son). Doktor veled maderu pit'.	2.83

Tab. 22.

The distance between the authors. The similarity in the use of the prepositions in in the book by A.I. Solzhenitsyn «Bodals'a tel'onok s dubom » and the other texts by Solzhenitsyn and other authors by the TMB value

№	A. I. Solzhenitsyn. Bodals'a tel'onok s dubom	TMB
1.	Solzhenitsyn. Rakovyj korpus .	0.39
2.	Solzhenitsyn . V krugu pervom	0.49

Tab. 23.

The distance between several authors. The similarity in the use of the prepositions in in the book A. A. Fadeeva «Razgrom.», the other texts by Fadeeva and other authors by the values of the TMB coefficient. Sample 47,127 words.

№	A. A. Fadeev «Razgrom.»	TMB
1.	Fadeev «Poslednij iz udege»	0.33
2.	Fadeev «Molodaja gvardija»	0.44
3.	Fadeev «Razliv»	0.65
4.	Fadeev «Chornaja metallurgija»	0.76
5.	Veller . Velikij poslednij shans .	1.09
6.	Serafimovich. Zheleznyj potok .	1.16
7.	Bulgakov. Master i Margarita.	1.20
8.	Sholohov. Podn'ataja tselina. Sample № 1 – 12.	1.27
9.	Vajnery. Ja - sledovatel'.	1.35
10.	Gorbachov. Kak eto bylo.	5.26

Appendix.**The list of the authors chosen for the research in alphabetic order and sample size in words**

- Akunin B. «Pelagija i chornyj monah» 86,246 words.
 Anthropology (several books and deskbooks by different authors) 105,095 words.
 Bazhov P.P. Skasy. T.1-2. 19,250 words.
 Bulgakov M. Master i Margarita. 45,468 words.
 Chehov A. P. «Chehov» 29,723 words.
 Chernyshevskij. «Chto delat' ?» 20,257 words.
 Dovlatov S. «Zona»
 Dostoevskij F. M. «Bednye l'udi». First Sample = 20,967 words. Second Sample = 207,96 words
 Dostoevskij F. M. «Dvojniki». Small sample = 8,237 words. Big sample = 49,717 words
 Dostoevskij F. M. «Idiot» Small sample = 118,53 words. Big sample = 213,658 words.
 Dostoevskij F. M. «Igrok». Small sample = 15,803 words. Big sample = 47,210 words.
 Dostoevskij F. M. «Podrostok». Small sample = 8,608 words. Big sample = 194,951 words.
 Dostoevskij F. M. «Prestuplenie i nakazanie ». Small sample = 7,935 words. Big sample = 176,042 words.
 Dostoevskij F. M. «Unizhennye i oskorbl'onnye ». Small sample = 17,374 words. Big sample = 122,443 words.
 Dotsenko B. «Komanda Beshennogo» 141,405 words.
 Emets D. «Bilet na lysuju goru» 66,510 words.
 Emets D. «Tretij vsadnik mraka» 66,915 words.
 Fadeev A.A. «Razgrom» 47,127 words.
 Goncharov I. A. «Obryv». Small sample = 11,142 words. Big sample = 231,034 words
 Goncharov I. A. «Obyknovennaja istorija » Small sample = 17,835 words. Big sample = 97,998 words.
 Goncharov I. A. «Fregat PALLADA » T. 1. Small sample = 14,823 words. Big sample = 104,295 words
 Goncharov I. A. «Fregat PALLADA » T. 2. Small sample = 22,105 words. Big sample = 22,105 words.
 Gorbachov M.S. «Kak eto bylo». 42,864 words.
 Gorkij M. «Mat'» 92,760 words.
 Karamzin . «Istorija gosudarstva Rossijskogo». T.2. 62,539 words.
 Kassil' L. «Будьте готовы, Ваше высочество» 30,732 words.
 Kassil' L., Pol'anovskij «Ulitsa mladshego syna» 155,484 words.
 Kataev V. P. (father) «Beleet parus odinokij»
 Kr'ukov F. D. Stories .
 Krylov I. A. Pochta Duhov. All the text 86,092 words.
 Gnom Letters – 40,533 words.
 Silf Letters – 27672 words.
 Letters of the Other Spirits – 14,864 words.
 Krylov I. A. Prose. Stories . 34,758 words.
 Lermontov M. Yu. Poems. PSS. T.1.» 15,192 words.
 Lermontov M. Yu. Poems. PSS. T.2.» 18,895 words.
 Lermontov M. Yu. «Geroj nashego vremeni» 17,266 words.
 Prohanov A. «Idushchie v nochi» 77,342 words.
 Pushkin A. S. Poems 1823-1836. 5,380 words.

- Pushkin A. S. Evgenij Onegin. 8,395 words.
- Pushkin A.S. «Kapitanskaja dochka» 34,771 words.
- Radishchev A. N. «Puteshestvie iz Peterburga v Moskvu» 51,111 words.
- Radishchev A.N. «O cheloveke, o ego smertnosti, o ego smertnosti». 40,087 words.
- Serafimovich A. «Zheleznyj potok» 43,002 words.
- Sholohov M.A. «Tihij Don» Book 1.
- Sholohov M. A. «Podn'ataja tselina»
- Sholohov M.A. «Oni srazhalis' za Rodinu» 48,997 words.
- Solzhenitsyn A.I. «V krugе pervom» 117,567 words.
- Solzhenitsyn A.I. «Bodals'a tel'onok s dubom». Sample = 164,318 words.
- Tolstoy L.N. «Vojna i mir» T.1. 270,139 words.
- Tolstoy L.N. «Vojna i mir» T.2. Small sample = 16,657 words. Big sample = 123,305 words.
- Tolstoy L.N. «Vojna i mir» T.3. Small sample = 13,257 words. Big sample = 130,347 words.
- Tolstoy L.N. «Vojna i mir» T.4. Small sample = 19,067 words. Big sample = 109,412 words.
- Tolstoy L.N. «Kazaki » Small sample = 7,446 words. Big sample = 47,302 words.
- Tolstoy L.N. «Detstvo» Small sample = 6,546 words. Big sample = 31,119 words.
- Tolstoy L.N. «Otrochestvo » Small sample = 6,144 words. Big sample = 24,104 words.
- Tolstoy L.N. «Junost'» Small sample = 27,639 words. Big sample = 50,916 words.
- Tolstoy L.N. «Krejtserova sonata » Small sample = 7,899 words. Big sample = 25,757 words.
- Tolstoy L.N. «Polikushka » Small sample = 107,91 words. Big sample = 17,258 words.
- Turgenev I. S. «Dvor'anskoe Gnezdol » Small sample = 17,459 words. Big sample = 95,750 words.
- Turgenev I. S. «Dym » Small sample = 15,011 words. Big sample = 50,548 words.
- Turgenev I. S. «Zapiski ohotnika». Small sample = 19,164 words. Big sample = 105,898 words.
- Turgenev I. S. «Nakanune » Small sample = 15,943 words. Big sample = 46,098 words.
- Turgenev I. S. «Nov'» 80,649 words.
- Turgenev I. S. «Otsy i deti» Small sample = 11,381 words. Big sample = 57,965 words.
- Turgenev I. S. «Rudin» Small sample = 113708 words. Big sample = 37,786 words.
- Vajnerij «Ja - sledovatel'». 45,551 words.
- Veller M. I. «Velikij poslednij shans ». 108,318 words.
- Old Russian Texts. 15,140 words.
- Philosophy (Several books). 113,327 words.

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