# Comprehensive analysis of semantic structural similarity of idioms in four languages: Russian, English, French, German

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*Abstract*

*This article is devoted to the study of idiomatic expressions for their semantic-structural similarity in English, German, French and Russian. The purpose of the study is to identify the features of the interaction of languages at the level of indivisible phrases, to establish commonalities and differences in the structures of expressions, to analyze the results and their explanation. Using the main, basic methods of comparative and etymological analysis, language pairs were identified that show tendencies towards the greatest and least similarity at the level of idioms; completely matching phrases were found in four languages, and idioms were revealed that did not coincide in the selected languages at the same time. The study also used the Google Books Ngram Viewer program, which made it possible to find out the dates of the appearance of some idioms in the large body of literature of the corresponding languages (from 1600 to 2012) to explain the results of the revealed equivalence of some expressions. The results obtained also demonstrate that the belonging of languages to the same language group is not a guarantee of the greatest number of coincidences of idioms in these languages in terms of structure and semantics of individual elements.*

*Keyword: idiom, semantic structural similarity, comprehensive analysis, semantic integrity*

## I.    Introduction

The word "idiom" comes from Greek and literally translates as „original expression", that is, its value cannot be identified from the value of its components, it is an indivisible, irreducible combination. The literal translation of idioms is not allowed, it destroys their semantic integrity.[1] Idiomatic expressions always are of great interest and at the same time cause difficulties in translation to another language. [2] There is a wide range of issues, examined in idioms by comparing and contrasting two or more languages. [3-9]

The object of this study is the idiomatic expressions in four languages: English, German, French and Russian.

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All languages belong to the Indo-European family of languages, and English and German belong to the Germanic languages, French belongs to the romance group, and Russian language to the Slavic group.

The idea was to test how peculiar to a particular language non-decomposable phrases are correlated with similar phrases in other languages, are there any regularities in their forms, the similarity in content, than to explain why with the help of these and other lexical means have been filling the seam. One would assume that belonging to the same language group is the guarantor of the greatest number of matches in the data languages (English and German). Whether so it actually? Are there full semantic and structural equivalents in the designated languages and the full basicually? If so, what kind and how much?

The aim of the study was to establish the main trends in idioms, manifested simultaneously in the case of four languages and try to find an explanation.

## II.     Materials and methods

The research material was one hundred idioms for each language, selected solid sample in Russian, English, French, and German (collectively analysed, four hundred phrases) [10]

To identify the definition of semantic and structural similarity/dissimilarity of idioms were used the methods of comparative analysis, lexical-semantic analysis, etymological analysis, structural-typological method. In the process of analysis were also used Google Books Ngram Viewer— search online service that allows you to identify the frequency of language units on the basis of a large number of printed sources, published since the 16th century and is represented in the Google books service.

In the first phase of our research were identified six language pairs:

1. Russian (R)-English (E)

2. Russian (R)-French(F);

3. Russian (R) - German (G);

4. English (E)-French (F);

5. English (E)-German (G)

6. French (F)-German (G

The next stage was considered by correlation idioms in pairs. Let's refer to an arbitrary example, how did a complex analysis of the expressions. Consider the expression meaning "to be very angry" with the English version of "to fly off the handle", while in French it sounds like "sortir de ses gonds" (literally: "to fly off the hinges"), in German "aus der Haut fahren" (literally:"to drive out of one's skin") and finally in the Russian language "выйти из себя" ("to

come out of oneself") As with any idiom assumed of some XYZ elements, the algorithm checks the similarity of the expressions can be represented as: X+Y+Z~X1+Y1+Z1, the composition of element X is approximately the same as the element X1, the composition Y1-Y close and so on through the elements. Under part X of the element is a view of a part of speech, lexical meaning, stylistic colouring and other features. That is, if we consider the illustration of an idiom in a pair of French (F)-German (G), the analysis on structural and semantic similarity as follows: the number of elements in the idiom (F) is four, in the idiom (G) is four; the morphological structure of the idiom (F): verb, preposition, article and noun in the plural. h, the morphological structure of the idiom (G): verb, preposition, article and noun in the singular; the verb "sortir de" (F)="get out of, exit, escape from", the verb "fahren aus" ="drive out"; the meaning of the noun in (F) = "the hinges", the meaning of the noun in (G) = "skin". Having such a membership, come to the conclusion that idioms exhibit in the analyzed pair of languages, the similarity is only in structure.The meaning of the verbs in (F) and (G) is certainly close to this, but the lexical filling of nouns does not give a chance to consider these two idioms as similar, the nouns used in them greatly delay the percentage of similarity. Therefore, in such cases, idioms were not noted as approximately coinciding. In the following and similar examples, in a pair of languages (E) - (G): "to cover up one's traces" ~ "die Spuren verwischen" such idioms were interpreted as very close in structure and semantics.

Thus, in our study and the search for semantic structural correspondences in different languages, each expression was studied by the semantic structure, combining a denotative, grammatical, evaluative, emotive component. Expressions in the indicated pair of languages were analyzed according to all possible components: lexical content, structure, the number of elements filling the structure, element semantics, internal form, etc. In some cases, clarification was required on the etymology and period of expression. Thus, conclusions were drawn for each pair on the subject of semantic-structural proximity. [11-15]

## III.    Results

1. For each language pair, a percentage of similarity of idioms was revealed.
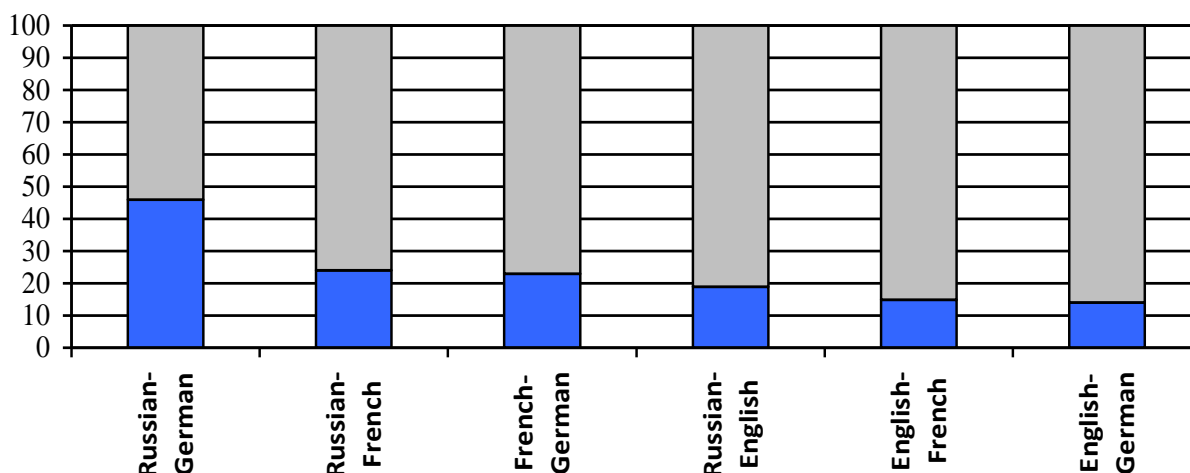


Fig.1. Semantic structural similarity in six pairs of languages

Note:

X axis - language pairs;

Y axis - indicators in percent;

the blue color indicates the percentage of coincidence of idioms in language pairs.

The first place in the number of matches is occupied by Russian and German (46%). In second place are Russian and French (24%). The third place is occupied by a couple - French and German (23%), Fourth place - Russian and English (19%), Fifth place - English and French (15%), Sixth place - English and German (14%).

2. Twenty three idioms were identified that did not coincide simultaneously in four languages.

3. Three idioms are noted, which are almost complete equivalents in four languages.

## IV.    Discussion

It would seem that an unexpected fact of coincidence in the German and Russian languages takes place, it forms a rather high percentage, and with a wide margin from the following pair of languages: Russian-French. English and German, related to the languages of the same group, took the last place in the similarity of idiomatic expressions. Let us illustrate some examples of the semantic structural similarity of idioms.

- Висеть в воздухе ~In der Luft hängen (R-G)

- Быть не на своем месте~Ne pas être à sa place (R-F)

- Connaître comme sa poche~Etwas wie seine Westentasche (F-G)

- Пройти сквозь огонь и воду~To go through fire and water (R-E)

- To live a cat and dog~S'entendre comme  chien et chat (E-F)

- To sit on a powder keg~Wie auf einem Pulverfaß sitzen (E-G)

Accordingly, we assume that such a result can be explained by the historical features of the development of cultures and peoples, when, as a result of certain communicative interactions and the exchange of information, idiomatic expressions that have already developed in one language, fell and copied by another. Some expressions came, for example, from the times of the ancient period. But there was such a way when each language in its own way sought to convey some phenomenon, using completely unpredictable structure and vocabulary, which proves our second result (23 idioms) on mismatches in four languages simultaneously. Some examples and reasoning below:

**Table 1.** Idioms with different elements.

| Russian | English | French | German |
|---|---|---|---|
| (1)Ждать у моря погоды | To let the grass grow under one' s feet | Attendre que les alouettes vous tombent toutes rôties | Hoffen und Harren macht manchen zum Narren |
|  |  |  |  |
| (2) Кататься как сыр в масле. | To live in clover. | Vivre comme un coq en pâte. | Wie die Made im Speck leben |

From these examples it is evident that every language sought to express meaning of indivisible unity in its own way:

1. In the first example, the meaning of the values is the expectation and inaction. For the Russian language is connected with the sea — wait for the sea weather, you have to hope that the circumstances will be solved by themselves, without outside interference. For the English language is due to the fact that even grass can grow under your feet, if you long to do nothing. For the French it's food-related, that is, to wait to roast larks fell in the mouth (a hint that this will never happen if you just stand there with your mouth open). For the Germans it is due to the fact that such a persistent expectation of inaction can drive you crazy.

2. In the second example, the meaning is - to live well. For the Russian — like cheese in butter (in this case, cheese is synonymous with the cream cheese obtained from milk, cream was also removed from milk and butter was made). Cheese, cheese and butter – the symbols of the peasant well-being, satiety, and contentment. Their combination in this idiom has an expressive coloring and enhances the comparison. In the English version the concept – live well — is connected with clover. Clover, on the one hand, represents protection from evil. On the other hand, cattle grazing on the clover meadow, recovering well, and feels good, therefore, to live in clover means to live well and happily. The French, speaking about the good life, appealed to this expression to a cock and a dough. First, the expression is sounded, „coq de bagage" that means „as the cock in the basket". It is connected with the history of shipping roosters for sale to the market: they were carefully carried in baskets, and as the rooster in the basket meant for comfort, then the word „basket" replaced on the word "dough", that is, if it's „a basket" not „a basket", but "a little basket", and is made from the dough, and the cock, like the filling in the pie, is basking in it. That was the history of this idiom in French. The Germans, talk about a good life, remembering the larva. In their opinion, the larva feels good, eating dead meat, that content of decomposition products, and if she has an opportunity to eat good fat and lives in it, how she must be indescribably happy about it.

3. As follows from this analysis of examples, it is impossible to predict, what was the story that preceded the creation of a particular idiom and when it was.The components of an idiom can not help to understand is. One can only assume that.

On the basis of the complex analysis of semantic structural similarity of the idioms in 4 languages only three idioms out of a hundred possible were found to be very similar.

**Table 2.** Idioms with similar elements.

|  | Russian | English | French | German |
|---|---|---|---|---|
|  | Искать иголку в стоге сена | To look for a needle in a haystack | Chercher une aiguille dans une botte de foin | Eine Stecknadel im Heuhaufen suchen |
|  | Красивый жест | A fine gesture | Un beau geste | Eine schöne Geste |
|  | Ловить рыбу в мутной воде | To fish in troubled waters | Pêcher en eau trouble | Im Trüben fischen |

The next stage of the study of the timing of the appearance of these idioms in languages was interesting. Using the Google Books Ngram Viewer program [16], it was possible to establish the year of appearance of these idioms in the literature of the corresponding languages:

1. R 1930, E 1801, F 1801, G 1935

2. R 1919, E 1923, F 1813, G 1929

3. R 1921, E 1923, F 1813, G 1929

This diachronic study marks the earlier appearance of the idioms (in all three examples) in the French language: 1801, 1813, 1813. The graphs can also show, how after mentioning the idiom in the literature, it was used further in the literature and with what frequency. We illustrate the graphs generated by the program using the idioms: "красивый жест"(R)/"a fine gesture"(E)/"un beau geste"(F) /"eine schöne Geste"(G).
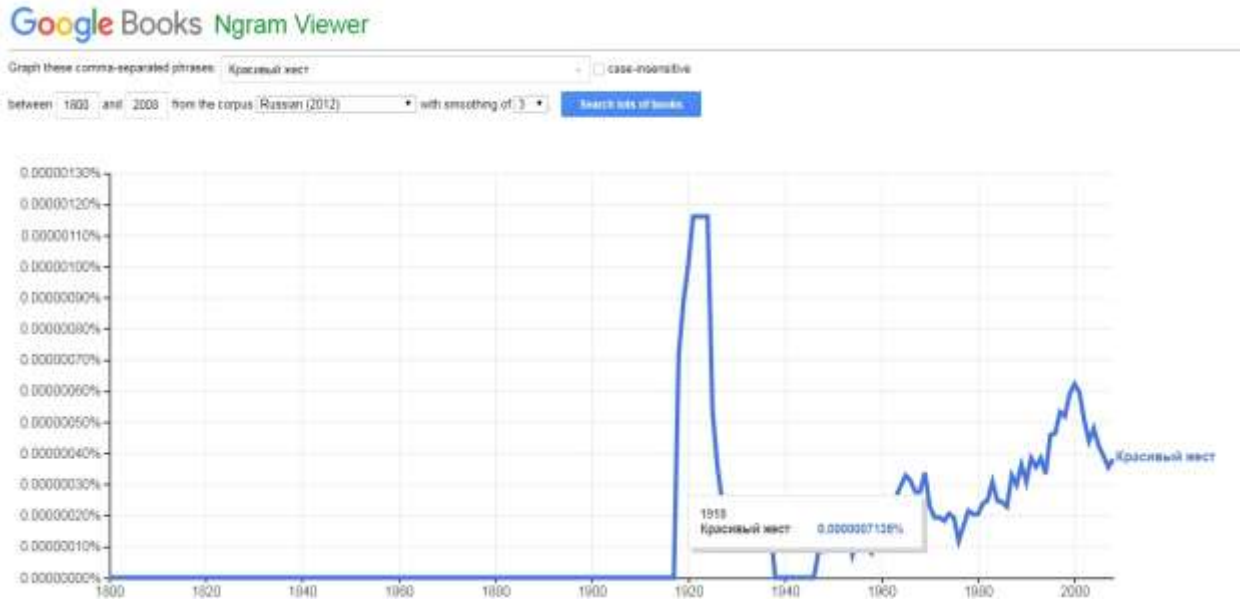
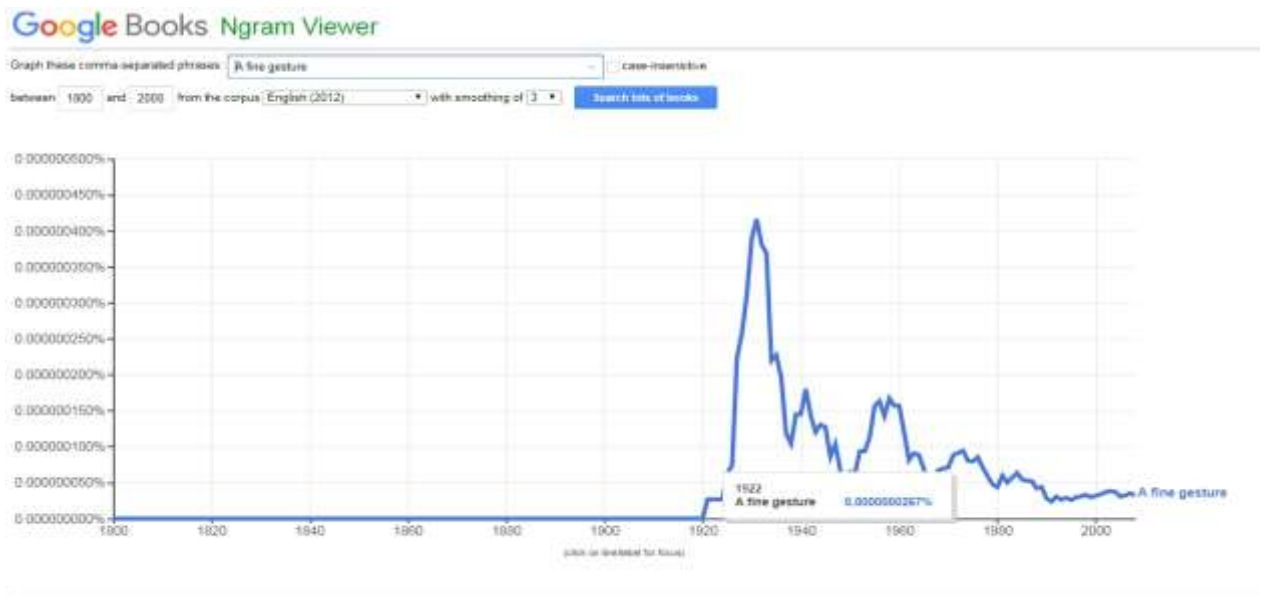Fig. 2. Russian version of the idiom
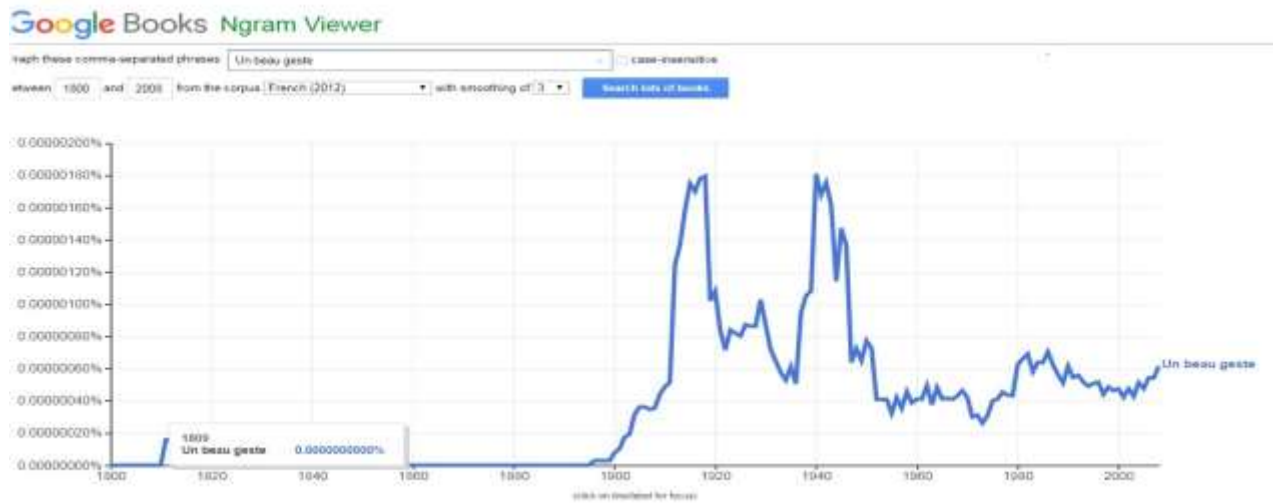


Fig. 3. English version of the idiom
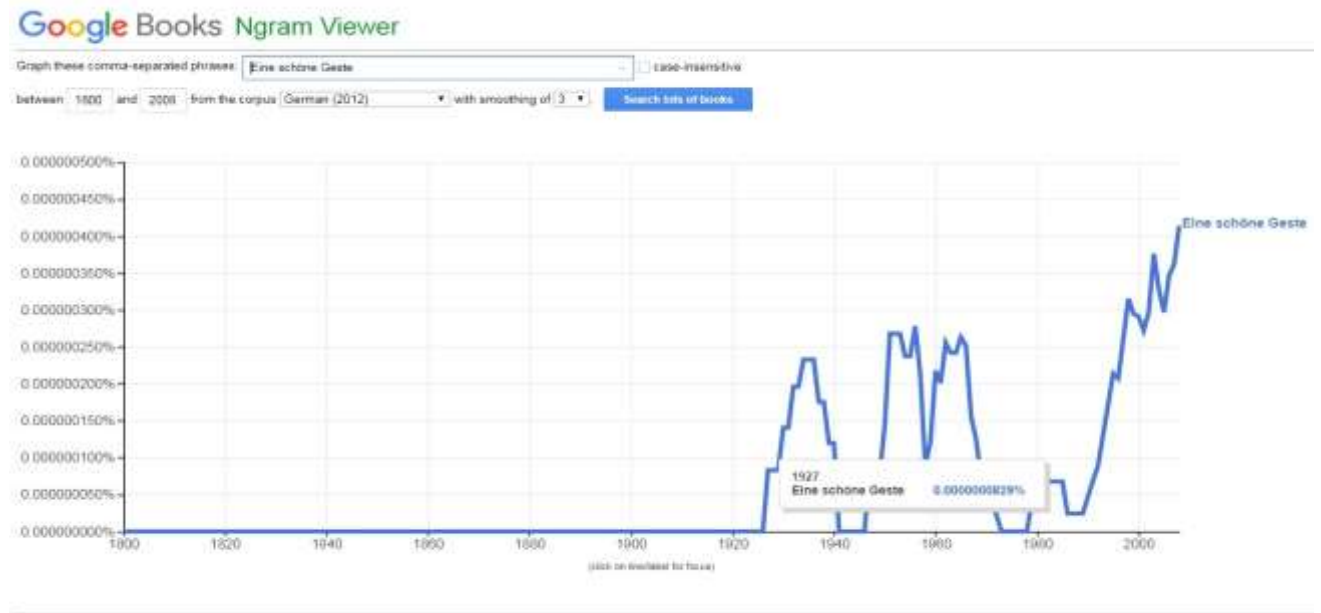
Fig. 4. French version of the idiom



Fig. 5. German version of the idiom

Given all of the above, we assume the direction of future research related to a thorough analysis of the history of the emergence of language accretions, as well as the coverage of a larger corpus of idioms in the corresponding languages and, possibly, the addition of analysis of other languages to the study.

## V.     Conclusions

Thus, on the basis of a continuous sample of one hundred idioms in four languages, we draw the following conclusions:

1. There is practically no complete semantic structural coincidence in the idioms of 4 languages from the Indo-European language family.

2. The German and Russian languages belonging to different language groups took first place in terms of the number of semantic structural similarities identified in idioms, which can be explained by historical facts of the interaction of languages.

3. Words that fill an indivisible unity cannot clarify the history of the creation of this unity or testify to the time of their occurrence, exceptions will be archaisms in this case, if we assume that the recipient owns some information by the date of the appearance of this archaism, or, at least, can suggest the century to which archaism belongs.

4. There are idioms that do not coincide at the same time in any of the considered pairs of languages: Russian-English; 2) Russian - French; 3) Russian - German; 4) English-French; 5) English-German; 6) French - German.

5. This study is not exhaustive and may be continued.

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