

## Article

# Comparative Analysis of Reasoning in Russian Classic Poetry

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**Featured Application:** The resulting collection of Russian poetic texts annotated in terms of rhetorical structure theory provide data for investigating the author's styles of poetic reasoning. Potentially the corpus can give additional data for machine learning, particularly in its application to poetic text's generation and simulating the author's styles.

**Abstract:** The paper considers the pragmatic textual level and focuses on peculiarities of reasoning realized in the lyric verses written by the representatives of Russian classic poetry. The investigated material of poetic texts includes the verses written by A.K. Tolstoy, K.K. Sluchevsky, and I.F. Annensky. The purposes of the study involve adapting the rhetorical structure theory (RST) to poetic texts, annotating these texts, searching for regularities of poetic reasoning specific to the considered authors. Applying RST to poetic texts was a novel task; the lack of experience made it necessary to adapt the method, that is, to elaborate the adequate set of rhetorical relations and to specify two sets of criteria: segmenting a text and identifying the relations. The resulting set of relations consists of 34 items. After annotating the texts in terms of the adopted RST, several lines of comparison were the objects of investigation. They include collating the frequency spectrums of relations and the semantical groups of relations for the three authors, as well as comparing two periods of creativity for A.K. Tolstoy and K.K. Sluchevsky. The results of the comparative investigation revealed certain regularities both in the distribution of isolated relations and the distribution of semantically grouped relations.

**Keywords:** rhetorical structure theory; poetic text; the way of reasoning; author's style; comparative analysis; pragmatics; cognition



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## 1. Introduction

The current work develops pragmatic aspects of the research projected in [1,2] and is devoted to complex multilevel analysis of Russian classic poetry.

Studying poetry and an author's poetic style usually considers the metro rhythmic features that are intrinsic to poetry; as well as traditional linguistic levels, including phonetic, morphological, lexical, syntactic, structural characteristics, and interrelations between the listed features. These studies may concern poetry as a whole, certain collections of poetry, or an individual author style. Nevertheless, the investigations capture the somehow limited scope of phenomena from semantic and pragmatic levels. These issues concern interrelations between rhythm, syntax, and sense [3], or focus on stylometry, especially on syntax and lexical semantics of the author's style [4].

In this study, the main research question is the following: are there some regularities in the way of the reasoning presented in poetic text and is it possible to reveal these regularities by tracing an author's style of thinking?

Studying this issue is useful for understanding peculiarities of the deep, cognitive, level of poetic language, the level that remains rather obscure at present.

Poetic reasoning is not purely logical. Impressions, perceptions, emotions, motivations, attitudes, metaphorical analogies play a substantial role, apparently more substantial than rational logical steps of reasoning. Besides, a poet may be less inclined to convince the addressees of some logically expressible thought, the poet's goal may consist only of

transferring some impression, emotion, or attitude. The various constituents of poetic reasoning are more adequate to descriptive capabilities of the rhetorical structure theory (RST) [5] than to the theories of argument analysis [6].

The paper presents the results of comparisons between quantitative characteristics of several groups of texts. These characteristics demonstrate that there are differences in reasoning; these differences depend on the authorship, the period of creativity, and the type of texts (verses, translations or prose). The differences characterize frequency spectrums of individual relations, and frequency spectrums of the semantically grouped relations. The considered semantic groups include: (1) subject matter relations and presentational relations, this division was introduced by the authors of RST in [5], and (2) seven semantic groups of relations that appeared to be significant for the analyzed material; these seven groups were tentatively named as persuasive relations, motivational relations, textual relations, specifying relations, comparative relations, descriptive relations, causal relations.

The subsequent text has the following structure. Section 2 shortly describes the related areas of scientific research; Section 3 characterizes the investigated data and the methods of research; Section 4 presents the results of the work; Section 5 provides an analysis of these results, resumes the results in whole and formulates several perspectives.

## 2. Related Work

For positioning the research within the context of current scientific studies, it is necessary to consider three lines of thought developed in literary investigations and computational linguistics: (1) searching for the specificity of poetry and an author's poetic styles, (2) argument analysis of natural language texts, and (3) applications of rhetorical structure theory.

In 1972, Y.M. Lotman [7] entertained the fundamental synthetical research of poetic texts. He focuses on semiotic aspects and principally centers on the material of Russian poetic texts. In fact, Y.M. Lotman discussed the parallel effects that result from the analogies between different situations or states described by a poetic text. The text may include figurative meaning or other means of simulating one cognitive representation by another and indicating some parallels between these representations. Y.M. Lotman also considers the question of poetic plot and concludes that poetic themes have a greater degree of generality than prosaic ones. He treats the internal structure of a poetic text as a unified sign, and analyzes semiotic aspects of its composition, considers correlations and parallelisms between the constituents of different language levels, for instance, lexical or syntactic.

Semantics and pragmatics are the constituent parts of general semiotics; however, these levels rarely or only partly become the objects of scientific consideration on the material of the poetic texts.

Similarly to other natural language texts, poetic texts are also laden with cognitive function, these texts reflect some specific mechanism of their author's cognition. Y.M. Lotman expresses this consideration in the following words: "the poetic text is a powerful and deeply dialectical mechanism of the search for truth, for understanding the surrounding world and our orientation in it" [7] (p. 132). Thus, poetry, by its nature, bears cognitive function, and a poetic text reflects the mechanism of cognition implemented by its author. Nevertheless, Y.M. Lotman and other specialists in poetry leave the studying of poetic cognition outside of their investigations.

Human reflections communicated by natural language texts are inhomogeneous and multifunctional. They may include descriptive representations, argumentative schemas, and motivations, expressions of emotions, intentions, intuitions, impressions, moods, and images. Each communicative act is laden with some of these aspects, although it may be performed in different combinations and proportions. Primarily, it is necessary to comprehend what sorts of reflections are reasonable to search for in poetic texts.

The traditional instrument of exploring the structures of reasoning in prosaic texts is argument analysis by the means of logic. Logical instruments are very effective for analyzing legal or scientific texts, or other types of texts used for business or practically oriented communication, including everyday communication. Nowadays, there is a relatively new computational approach to argument analysis [6], which has been actively evolving since 2014; it deals with systematizing and classifying argumentation schemas used in everyday or professional prosaic communication. The corpuses of argumentation mining are most frequently based on English texts, although several works present the strategies and results of creating corpuses for Russian texts: [8–10]. Computational approaches to argument analysis differ in typologies of arguments relevant to natural language texts [11,12]. Nevertheless, all of these approaches concentrate on logical aspects; for instance, [8] focuses on the pro and contra arguments. RST fits for rendering a richer spectrum of phenomena including implicit rhetorical means of developing trajectories of thought.

RST defines the methodology rather than a strict algorithm; it needs to be adapted for application to such specific materials as poetic texts. This is particularly true because there is lack of experience in analyzing poetry by the means of RST; the reviews [13,14] and more recent thematical proceedings [15] do not mention any applications to lyrics. There seem to be only one research in the area of poetry [16,17] which considers applicability of RST to Chinese classic poetry. Applications of the RST to Russian texts are not numerous and concern only prosaic texts [18–22]. The research initiated in [23] is the first attempt to apply RST to Russian classic poetry; ref. [24] presents preliminary results and the strategy of adapting RST to poetic material. In the current paper, we discuss the results of applying this adapted version of RST to Russian poetic texts.

As opposed to grammar with its irresistible rules, reasoning strategies belong to the variable aspects of a language. A speaker chooses, consciously or not, what way of reasoning is better to express by a text, and seemingly, in any case it is possible to render the same content by some other reasoning strategy. The choice of strategy very heavily depends on the intentions of a speaker. Intentions and their functions in communication are the object of investigation in pragmatics, especially after the work of G.P. Grice [25]. Thus, it is natural to locate the problematics of RST in the area of pragmatics [26].

### 3. Materials and Methods

The analyzed data include the lyrical verses written by A. K. Tolstoy, K. K. Sluchevsky, and I. F. Annensky. The artistic legacy of A.K. Tolstoy was divided into two periods: early (1840–1858) and late (1859–1875). The poetry of K.K. Sluchevsky naturally breaks down into two periods because his poetic creative work includes a decade-long pause; thus, the two periods comprise of early (1856–1883) and late (1895–1901). Besides, the analyzed material includes several A. K. Tolstoy’s non-poetic texts as well as his poetic translations for the verses written by Heinrich Heine and André Chénier. The set of non-poetic texts includes selected units from the epistolary (only the letters originally written by A.K. Tolstoy in Russian) and two fragments from the novel “Prince Serebrenni” (the Preface and Epilogue). All the considered texts are monological.

The sources of texts include literary internet collections of Russian classics from the poetry libraries ([http://az.lib.ru/t/tolstoj\\_a\\_k/](http://az.lib.ru/t/tolstoj_a_k/) for A.K. Tolstoy, <http://poetrylibrary.ru/stixiya/menu-date-143.html> for K.K. Sluchevsky, and [http://az.lib.ru/a/annenskij\\_i\\_f/](http://az.lib.ru/a/annenskij_i_f/) for I.F. Annensky. Accessed on 13 September 2021) and the printed collections of works written by these authors [27–29]. The majority of the analyzed texts come from the former digital collection. The latter printed collections served for checking the details (especially information concerning dating) and searching for additional texts if it was necessary.

Table 1 presents the quantitative characteristics of the analyzed material. The columns show the total numbers of word tokens, relation tokens, elementary segments, lines, and texts in the analyzed material.

**Table 1.** Quantitative characteristics of the analyzed data.

Types of Texts	Word Tokens	Relation Tokens	Elementary Segments	Lines <sup>1</sup>	Texts
A.K. Tolstoy, the early period	1743	346	365	365	18
A.K. Tolstoy, the late period	1712	336	348	327	15
K.K. Sluchevsky, the early period	1271	282	296	284	16
K.K. Sluchevsky, the late period	2140	437	460	439	25
A.K. Tolstoy, both periods	3455	682	713	692	33
K.K. Sluchevsky, both periods	3411	719	756	723	41
I.F. Annensky	2284	455	520	515	33
A.K. Tolstoy, translations	660	108	121	121	12
A.K. Tolstoy, prose	3820	594	610		15
In total	13,630	2558	2720	2051	134

<sup>1</sup> Only for poetic texts.

For the sake of stylistic homogeneity, the poetic language material contains only lyrical verses. The considered poetic texts are small or medium in size. The median number of lines in the analyzed poetry of A.K. Tolstoy, K.K. Sluchevsky, and I.F. Annensky amounts to 18, 16, and 14, correspondingly. Therefore, the set of considered poetic texts does not include the A.K. Tolstoy's ballades and dramatical pieces, as well as the large poetic texts written by K. K. Sluchevsky and I.F. Annensky. The analyzed material does not contain any incomplete fragments of verses; each verse is present in its entirety. This holistic approach is valuable because it makes the reasoning reflected in a text integral and complete.

The artistic legacy of A.K. Tolstoy is not very large, and almost all his verses became the objects of analysis in the work. On the contrary, the poetic writings of K.K. Sluchevsky are rather numerous. Besides, his verses often lack date-marks, and this caused difficulties in searching for the samples for the abovementioned two periods, especially for the early one. Nevertheless, the total set of selected verses is approximately equal for both authors.

The process of adapting RST for the specificity of poetic texts includes two steps: (1) defining the criteria for dividing an analyzed text into the sequence of elementary segments, (2) elaborating the appropriate set of rhetorical relations and the criteria for their textual identification. Since both lines were in focus of consideration in [24], it would be superfluous to discuss them here again. It is sufficient to characterize the main results of the adaptation.

For the first issue, the following rationales are basic. Y.M Lotman considers rhymes as the signals of the boundaries; thus, a line from his point of view forms the unity on several levels, particularly the semantic level. The line is “akin to the word and the pause at the end of the line to the space between words” [7] (p. 91). This principle of segmentation corresponds to the methodology used in [16,17] for Chinese poetry. Poetic lines usually are marked prosodically, and prosodic borderlines are significant for segmenting Russian oral prosaic narration [18]. The significant role of intonational constructions in detecting rhetorical relations is the object of consideration in [22].

In the current work, segmentation of a poetic text into elementary segments corresponds to its segmentation into lines. Deviations from this rule of segmentation were made only for the cases when a line contains several sentences divided by the period (periods), question or exclamation mark. As one can notice by comparing the fourth and the fifth columns in the Table 1, these cases were not numerous: a summarized number of lines does not substantially differ from the corresponding summarized number of elementary segments, and in some cases, these two numbers are equal.

The set of rhetorical relations in the adapted version of RST contains 27 classic types of RST relations and 7 types that were added because of their conveniency in rendering poetic reasoning. The set of classic relations used in the project consists of the following types: background, conjunction, elaboration, circumstance, preparation, evaluation, contrast, sequence, restatement, summary, non-volitional result, non-volitional cause, volitional result,

volitional cause, comparison, evidence, purpose, solutionhood, concession, motivation, justify, joint, disjunction, antithesis, otherwise, condition, interpretation. The additional seven relations are the following: appeal, warning, negation, content, attitude, promise, and directive. In sum, there are 34 types of relations. The analyzed texts form the corpus, annotated in terms of the adapted rhetorical structure theory.

In general, the criteria of identifying rhetorical relations are complicated and often provide ambiguous results [30]. Besides, these criteria are language-specific because textual markers of relations use the lexical, syntactical, pragmatical, and prosodical means of a language. The elaborated criteria for analyzing poetic texts [24] is substantially based on the parallels between RST schemas and formulae of propositional logic proposed in [31]. These formulae use the notion of relational proposition introduced by the authors of RST [32]. Each rhetoric relation appears in discourse due to the corresponding implicit relational proposition; these propositions are the alter ego of RST relations. Thus, for identifying the relations, it is possible to rely on the logic of relational propositions, especially in the situations when textual indicators of relations are absent or ambiguous.

After annotating a text under consideration in terms of the adopted RST, the number of occurrences of every relation in the text is calculated. For each set of texts involved in comparisons, the relative frequencies of rhetorical relations are integrated in the frequency spectrum; this spectrum characterizes the distribution of relations in the set of texts. The procedure of revealing regularities in poetic reasoning consists of comparing and analyzing the frequency spectrums that correspond to different sets of texts.

#### 4. Results

The obtained results show that an author's style of reasoning is cognitively different and uses a diverse range of reasoning tools. The differences display themselves both in frequencies of isolated RST relations and in frequencies of semantically grouped relations. Besides, the results show that an author's style of thinking in poetic texts does not coincide with that in prosaic texts written by the same author. There is also reason to suggest that styles of thinking are not the same for the proper poetic texts of an author and translated verses made by the same author.

It is worth noting that for each author, the revealed regularities characterize the reasoning style in whole, they scarcely give the reliable information for identifying the author of a poetic text, although it is possible to use these results as the auxiliary additional information.

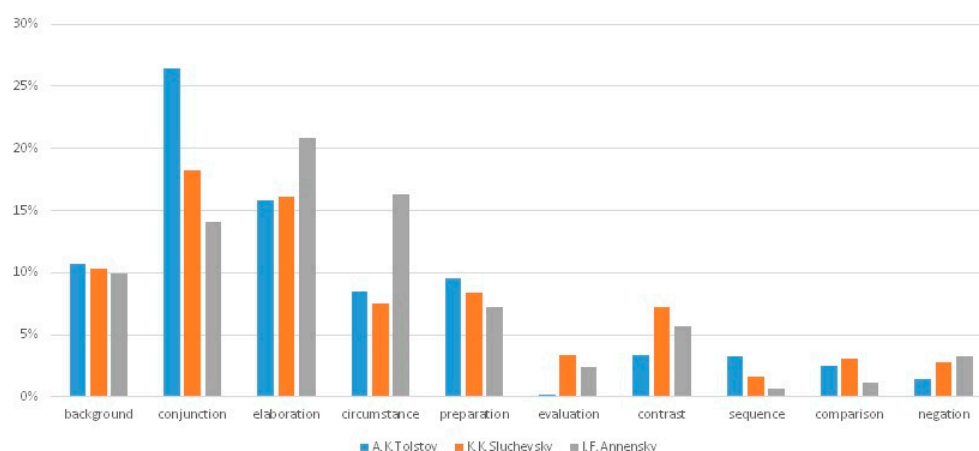
##### 4.1. Comparing Individual Relations

The most direct way of comparing frequency specters for different sets of texts consists of juxtaposing occurrences of isolated relations. Figure 1 presents this information for the most frequent relations. For a relation R, the ordinate axis shows the percentage of its occurrences among the total number of relation's occurrences in the corresponding set of texts. For instance, the set of poetic texts written by A.K. Tolstoy consists of 33 texts (Table 1), the total number of relation's occurrences for these texts is equal to 682, and the percent of conjunctions among these occurrences is equal to 26.39%. The diagram only includes relations with a percentage higher than 3% at least for one of the three authors. The considered sets of texts are the following: the verses written by A.K. Tolstoy (the first, blue, lines), by K.K. Sluchevsky (the second, red, lines), and by I.F. Annensky (the third, grey, lines). For the first two authors, the sets include both periods of creativity, early and late. The diagram shows relative frequencies for ten types of relations: background, conjunction, elaboration, circumstance, preparation, evaluation, contrast, sequence, comparison, negation.

The comparison reveals several peculiarities of the considered texts; the discrepancies provide data for distinguishing the author's styles of reasoning. For instance, conjunction is the most characteristic relation for A.K. Tolstoy's style, elaboration and circumstance are mostly characteristic for I.F. Annensky. Evaluation, contrast and comparison have the highest values for K.K. Sluchevsky, yet these values are comparatively low for all sets of texts represented by the diagram. The latter suggested an idea of comparing not



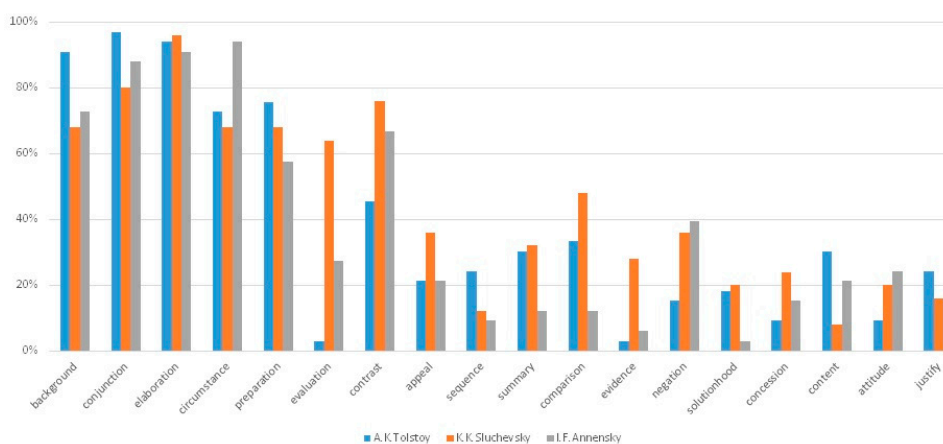
only isolated relations but also some groups of semantically congenial relations. The next subsection provides the results of such comparisons.



**Figure 1.** The frequencies of relations in three sets of texts.

Figure 1 renders the statistical information about usability of relations in the total amount of poetic texts written by a definite author. However, it does not provide information concerning the probability of a relation appearing in a reasoning.

Figure 2 presents this information for the most frequent relations. The ordinate axis indicates the percent of verses that use the corresponding relation among the total number of verses in the considered set of texts. It does not matter how many occurrences of a relation are in the same verse. For instance, conjunction is the most frequent relation for the texts written by A.K. Tolstoy, probability of appearing this relation in a verse is about 0.97; this fact correlates with the previous diagram, where conjunction also proved to be the most characteristic for the A.K. Tolstoy's texts.



**Figure 2.** Probability of appearing a relation in a poetic text.

The diagram (Figure 2) shows that probability of solutionhood appearing in the I.F. Annensky's lyrics is the lowest. Evaluation, contrast, appeal, comparison, evidence, and concession often participate in reasoning expressed by the lyrics written by K.K. Sluchevsky; however, these relations have a substantially lower possibility of occurrence in the verses of the two other poets. For A.K. Tolstoy, evaluation and evidence are extremely rare. K.K. Sluchevsky is particularly inclined to use the relation of evaluation, the probability of this relation appearing in his text is about 0.64; while for A.K. Tolstoy it is about 0.03 and for K.K. Sluchevsky about 0.27.

#### 4.2. Measuring Textual Subjectivity

The authors of RST defined two main general groups of relations [5]: subject matter relations and presentational relations. The latter are subjective relations; they serve for making some subjective influence from the side of an author, for instance, the author may express an opinion, belief, attitude, prejudice, motive, or emotion. The subject matter relations reflect the objective states of affairs, such as the observable facts.

In the current work, the set of presentational relations include classic relations from [5] (background, preparation, sequence, restatement, comparison, evidence, concession, motivation, justify, antithesis), and moreover, five additional relations introduced for poetic texts (appeal, warning, attitude, promise, directive). All of the other considered relations are subject matter. It seems to be reasonable to treat the frequency of presentational relations as the indicator of subjectivity intrinsic to a text or a collection of the texts.

Figure 3 shows the relative frequencies for these two groups of relations.

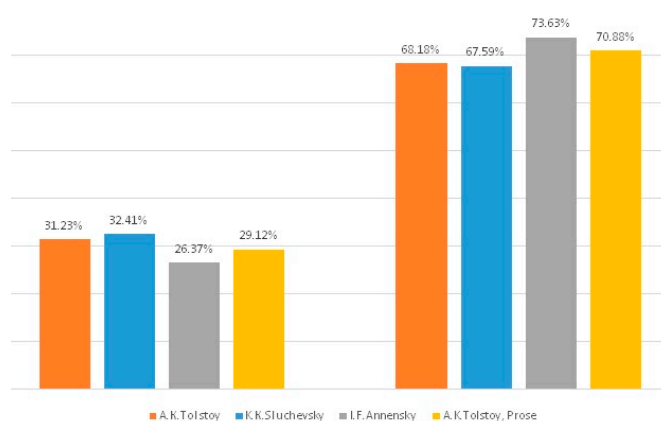


Figure 3. Subject matter relations (left) and presentational relations (right).

The quantitative information in the diagram shows the percent of subject matter relation's occurrences and presentational relation's occurrences among the total number of occurrences in the corresponding set of texts. For instance, among 682 relation's occurrences in the set of A.K. Tolstoy's texts, 31.23% of occurrences correspond to the subject matter relations.

The diagram presents these characteristics for the same three sets of texts, as in Figure 1; furthermore, the additional (fourth and eighth, yellow) columns show the percentage of subjective matter and presentational relation's occurrences for the prosaic texts written by A.K. Tolstoy.

As Figure 3 demonstrates, the proportions between these two classes of relations are rather similar for all of the texts under consideration. It is possible to suppose that this ratio reflects a stable (invariant) characteristic of reasoning in Russian classic style; however, it is necessary to test this hypothesis on more representative language material, especially on the texts written by other authors.

I.F. Annensky's texts are a little more subjective than the others are; and the difference between A.K. Tolstoy's verses and his prose is a little bit less than between other pairs of texts. The former may result from the fact that I.F. Annensky belongs to the school of poetic symbolism in Russian poetry, and their verses are more metaphorical and thus more subjective. The latter may reflect the peculiarity of A.K. Tolstoy's thinking style on the whole, both in poetry and in prose. These suppositions also need additional investigation on the widened language material

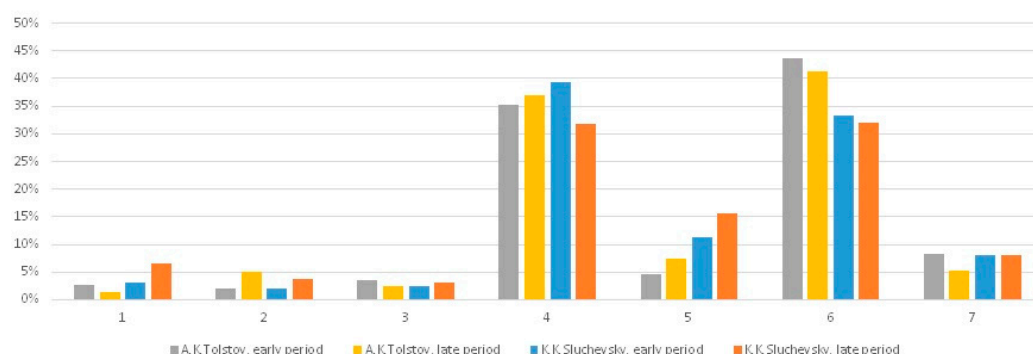
#### 4.3. Semantically Grouped Relations

The third line of comparison uses semantically grouped relations. These groups and their conventional names are the following:

1. Persuasive relations: Evidence, concession, justify, antithesis;
2. Motivational relations: Appeal, warning, attitude, motivation, promise, directive;
3. Textual relations: Restatement, summary;
4. Detailing relations: Background, elaboration, preparation;
5. Comparative relations: Evaluation, contrast, comparison, interpretation;
6. Descriptive relations: Conjunction, circumstance, sequence, negation, solutionhood, content, joint, disjunction, otherwise;
7. Causal relations: volitional cause, non-volitional cause, volitional result, non-volitional result, purpose, condition.

Persuasive relations serve for convincing an addressee by the means of logic; motivational relations serve for convincing by subjective influence, inter alia, emphatically. Textual relations reformulate some part of the same text; and detailing relations add some detalization to already rendered or subsequent information in the same text. Comparative relations juxtapose some situations or their features, including comparisons with certain scales. Descriptive relations correlate with the objective state of affairs and are somehow isomorphic to them. Causal relations form the separate group.

Figure 4 visualizes the distribution of occurrences for early and late period of creative activity. In each group of four columns, the first and second, grey and yellow, columns show, correspondingly, the early and the late periods for A.K. Tolstoy, the third and fourth, blue and red, columns—the information is similar for K.K. Sluchevsky. The numbers below correspond to the abovementioned semantic groups of relations. The principles of calculating percentages are the same as they were for the previous diagrams. We can see certain differences that are specific in the early periods, the late periods, or both periods.



**Figure 4.** Comparing two periods of creativity.

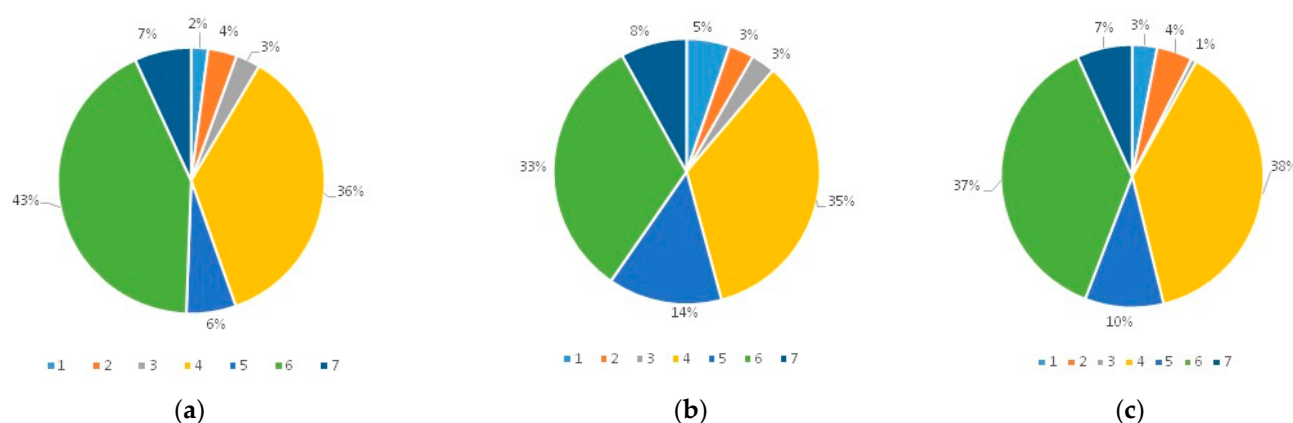
For the early period of K.K. Sluchevsky's creativity, the most salient discrepancy concerns detailing relations, in the late period they are less frequent than in the early period. The frequencies of descriptive relations also regress, although only slightly.

In the early period of A.K. Tolstoy's creativity, descriptive relations and causal relations are more frequent than in the late period. Detailing relations and motivational relations, vice versa, are more characteristic for the late period.

Comparative relations grow with time for both authors; besides, the lowest frequency of these relations in the poetry written by K.K. Sluchevsky is higher than the highest frequency of these relations in the lyrics written by A.K. Tolstoy. On the contrary, descriptive relations regress with time for both authors. In both periods, descriptive relation is more frequent for A.K. Tolstoy than for K.K. Sluchevsky.

Figure 5 illustrates the results of comparison between the poetry of three authors.

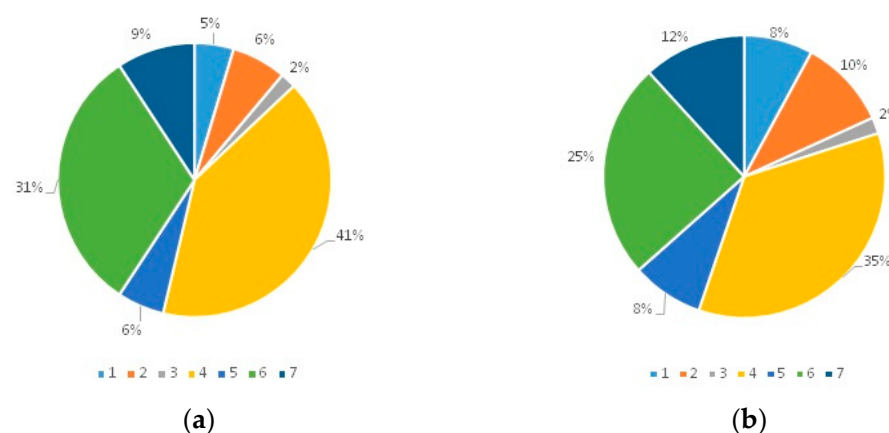




**Figure 5.** The distribution of relation's occurrences in three sets of texts: (a) A.K. Tolstoy (both periods); (b) K.K. Sluchevsky (both periods), (c) I.F. Annensky.

The most salient differences are in frequencies of comparative relations: the lowest for A.K. Tolstoy, the highest for K.K. Sluchevsky, and medium for I.F. Annensky. The frequencies of causal relations, as well as the frequencies of detailing relations, are almost equal for all of the considered poets. It is worth noting that the descriptive relations are most frequent in A.K. Tolstoy's verses; and this fact correlates with general impression concerning his poetry, it seems to be the closest to the real human life, including spiritual, than the rather metaphorical symbolic imagination intrinsic to the other two authors.

It is informative to compare Figures 5 and 6. The latter represents the relation's occurrences in the poetry translated in Russian by A.K. Tolstoy and his own prose.



**Figure 6.** The distribution of relation's occurrences in two sets of texts: (a) A.K. Tolstoy, translations; (b) A.K. Tolstoy, prose.

In translations, the distribution of frequencies differs from A.K. Tolstoy's own verses; only the frequency of detailing relations is almost the same. It supports the intuitive consideration that a translation of poetic text retains the features of reasoning style that are intrinsic to the original text and to the original author's style of thinking.

Thus far, it would be premature to make the following two conclusions; however, the distribution provides basis to suppose that (1) style of prosaic reasoning differs from that of poetic reasoning even for one author and (2) at the same time, both styles of an author's reasoning have some rather invariant characteristics, for instance, concerning detailing relations.

## 5. Discussion

There are three types of results in this study. Firstly, the revealed concrete regularities that are specific for the analyzed sets of texts. Secondly, the hypotheses that follow from these regularities. Thirdly, the obtained annotated corpus of poetic texts.

The results of comparisons show that there are certain features that characterize an author's specificity of poetic reasoning. Particularly, conjunction is mostly congenial to A.K. Tolstoy, contrast to K.K. Sluchevsky and elaboration and circumstance to I.F. Annensky. Among the semantically grouped relations, the most differential relations are comparative; they allow one to distinguish the authors under consideration. Some tendencies appeared characteristic for early and late periods of poetic creativity; for instance, frequencies in comparative relations grow with time and, on the contrary, frequencies in descriptive relations diminish with time both for A.K. Tolstoy and for K.K. Sluchevsky. Analysis of A.K. Tolstoy's prose and translation showed the substantial differences in frequency specters; however, it can only serve as the basis for suggesting the hypothesis and need for additional investigations on the material written by other poets. The previously indicated regularities will also benefit from studying the history of other authors.

Alongside differential characteristics of the author's poetic texts, the work revealed some rather stable parameters. Among them, semantic groups of causal relations and the distribution between presentational and subject matter relations in poetic texts. These regularities permit the supposition that there are certain features of reasoning common to poetry. This hypothesis needs to be tested on the poetic material of other authors.

There are certain limitations in the application of the presented method. It is more appropriate for analyzing the representative sets of verses than it is for isolated verses. Therefore, it is scarcely applicable for identifying the authorship of an isolated text, except perhaps as an additional secondary support to the more reliable tools of identification.

The revealed regularities provide new material and a new methodology for literary studies. In traditional investigations of poetry, research did not pay adequate attention to styles of reasoning. Although the current study revealed such regularities, they need to be interpreted by literal investigations. It is worth noting that some of these regularities already correlate with earlier literal observations. For instance, V. Bryusov called K.K. Sluchevsky "the poet of contradiction" [33]. Bryusov, first of all, meant the contradictory poetic style of the author; however, the RST analysis demonstrates that K.K. Sluchevsky often refers to contradiction in his reasoning: the relation of contrast is rather specific for K.K. Sluchevsky, substantially more specific than for other two authors.

The collection of verses annotated in terms of RST has no analogues; there are no similar collections on Russian material. It is possible to use the corpus in stylistic, cognitive, literary, logical investigations with variable purposes. The RST schemes are transferable to propositional formula thus opening the possibility of converting the collection of schemas to the formulae of propositional logic and using it for the logically oriented analysis of poetry.

The annotation does not contravene the traditional version of RST presented in [5], the former only elaborates on some specific principles of applying the latter to poetic material. This elaboration concerns the principles of segmentation, detailed criteria for identifying the classic relations of RST, and the criteria for identifying the added relations. Therefore, it is possible to use the collection (perhaps after simple and automatically realizable correction of annotation) for supplementing other corpuses of texts annotated in terms of RST and to use the resulting enriched corpus for machine learning.

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