

## A New System for Analyzing and Modelling Poetic Speech<sup>4</sup>

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The present study proposes new tools for the analysis of poetic speech applicable to different European languages. Basic algorithms were developed that permit us to calculate linguistic models with which certain mechanisms of versification were associated. This approach essentially differs from the previous evaluation of probability models of meter that did not take into account the cognitive aspect in such studies. A cognitive approach to the language and verse models was first proposed by Marina Krasnoperova. Our study continues this direction of research.

Together with Victor Vashchenkov we have elaborated a new multifunctional program system designed to work with the text prosody of different languages: English, Dutch, German, Swedish, Belorussian, and Ukrainian. It allows us to obtain the statistics of rhythmical words in prose and verse texts, to evaluate the distribution of main prosodic structures in verse etc. With its help, one can calculate the probability models of verse on the basis of statistic of rhythmical words in texts.

This program system was used to construct two new types of probability models: a rigid one (with a nonlinear verse line filling) and a looser one (allowing a linear formation of verse lines). An analysis of verse against the background of these models shows a similarity between versification mechanisms of early German and Russian iambs. Newly obtained results allow us to affirm that the German verse of the 17th and 18th centuries and early Russian iambs can be described by the same probability model.

In the course of the study, it was found that cultural and historical conditions can compete with linguistic conditions. The results obtained show that the language does not always predetermine how syllabo-tonic meters are realized. There are grounds to suppose that, although in certain periods English, Dutch, German, Russian and Ukrainian iambs formed a typologically common system of metric versification, the character of its realization in different countries was not the same. Moreover, the differences were caused not only and not so much by language features, but rather by cultural and historical conditions in which versification developed.

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