

Glottometrics

Glottometrics ist eine unregelmäßig erscheinende Zeitschrift (2-3 Ausgaben pro Jahr) für die quantitative Erforschung von Sprache und Text.

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Abstract. Vocabulary learning by children can be characterized by many biases. When encountering a new word, children as well as adults, are biased towards assuming that it means something totally different from the words that they already know. To the best of our knowledge, the 1st mathematical proof of the optimality of this bias is presented here. First, it is shown that this bias is a particular case of the maximization of mutual information between words and meanings. Second, the optimality is proven within a more general information theoretic framework where mutual information maximization competes with other information theoretic principles. The bias is a prediction from modern information theory. The relationship between information theoretic principles and the principles of contrast and mutual exclusivity is also shown.

Sergey Andreev

Verbal vs. Adjectival Styles in *Belkin Tales* by A. S. Pushkin 17 - 21

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Peter Zörnig

On the arc length in quantitative linguistics: a continuous model 22 - 31

Abstract. We present a continuous model for the distribution of the arc length, using exact methods and simulation. For the sequences of word lengths of six texts we calculate the arc lengths and compare them with the expected values of the probability model. The results may be useful for text analysis.

Sergey Andreev, Ioan-Iovitz Popescu, Gabriel Altmann

Skinner's Hypothesis Applied to Russian Adnominals

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Abstract. The aim of the article is to study whether at a very abstract level – here distances between adnominals in Russian – one can test hypotheses holding true for lower, more concrete levels. Besides Skinner's hypothesis concerning the repetition of adnominals in near neighborhood we show the course of distances and compute some indicators like Repeat rate, Entropy, Ord's criteria for the given distribution. Some relationships are expressed by formulas. The distances can be captured by the exponential function.

Thomas Roelcke, Ioan-Iovitz Popescu, Gabriel Altmann

Aspects of text concentration

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Abstract. The text can be concentrated in various ways. Here only the thematic concentration will be taken into account, i.e. it will be scrutinized how the text is related to its topic. Eight aspects of quantification are proposed but here we restrict ourselves to hrebs, a development of Hřebíček's sentence aggregates. Some aspects of hreb processing are shown.

Karl-Heinz Best

Liste von Autoren, die womöglich für eine Geschichte der Quantitativen Linguistik zu berücksichtigen wären

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Vorschlag des Herausgebers: Der folgende Beitrag nennt Autoren, auf die der Autor im Umfeld von Sprachstatistik und Quantitativer Linguistik gestoßen ist. Wir bitten alle interessierten Leser, über einen beliebigen, unten genannten Forscher einen Artikel zu schreiben, in dem sein Beitrag zur Quantitativen Linguistik ausführlicher behandelt wird. Die Resultate werden in *Glottometrics* und später in einem separaten Buch veröffentlicht, das als ein Band in der Reihe *Studies in Quantitative Linguistics* erscheinen wird, analog zu Best, K.-H. (2015). *Studien zur Geschichte der Quantitativen Linguistik. Band 1*. Einschlägige Literatur ist bei jedem Forscher angegeben, muss aber in den meisten Fällen ergänzt werden.