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Glottometrics 20, 2010 (including abstracts)

Emmerich Kelih

The type-token relationship in Slavic parallel texts **1-11**

Abstract: The aim of the paper is to analyse the statistical regulation of the type token relationship in Slavic parallel texts. Furthermore it is shown that this relationship in parallel texts can be explained due to morphological and typological characteristics.

Anja Overbeck, Arjuna Tuzzi, Ioan-Iovitz Popescu, Gabriel Altmann

Analysis of Italian word classes **12-28**

Abstract: In the article, the development and the stabilization of the occurrence of parts of speech in Italian texts are analyzed. The data were won from opera librettos since 1607 and from all end-of-year speeches of Italian presidents (1949-2008). The results display both developmental, text-sort and content-dependent differences. In order to obtain a more complete image, the analysis should be applied to many other Italian texts.

Karl-Heinz Best, Jinyang Zhu

Ein Modell für die Zunahme chinesischer Schriftzeichen **29-33**

Abstract: The purpose of this paper is to present some further evidence for the validity of the Piotrowski law (logistic law) in language change. To this end we test some data concerning the increase of the number of Chinese characters

Karl-Heinz Best

Zur Entwicklung des Wortschatzes der deutschen Umgangssprache **34-37**

Abstract: The purpose of this paper is to present some further evidence for the validity of the Piotrowski law (logistic law) in language change. In this paper the domain of its application is the development of Colloquial German

Haitao Liu, Yiyi Zhao, Wei Huang

How do Local Syntactic Structures Influence Global Properties in Language Networks? **38-58**

Abstract: Language networks, which are built based on different principles, have small-worldness and scale-freeness. This fact has raised the questions of why the different local microscopic constituents produce similar behaviors of global macroscopic networks and how local syntactic structures influence global properties of a linguistic network. To answer the questions, we built up three language (dependency) networks with coordinating structures and investigated their global statistical properties. The results show that all three networks are small-world and scale-free. The experiment demonstrates that, if we want to make an explainable link between local syntactic structures and global behavior of a linguistic network, current global indicators are not sufficient for finding differences between global syntactic dependency trees constructed with different annotation schemes or for finding differences between linguistic and non linguistic networks.

Andrei Beliankou, Reinhard Köhler

The distribution of parts-of-speech in Russian texts

59-69

Abstract: This paper contributes to testing the hypothesis that many linguistic units display a stratified behaviour, which is a reason for data inhomogeneity and makes it difficult to model them using classical probability distributions such as the Zipf-Mandelbrot, the Zipf-Alekseev, or the hypergeometric distributions. Specifically, the distribution of parts-of-speech in a large Russian text corpus is studied. Instead of a probability distribution, the Popescu function is applied, which can be fitted to stratified rank distributions. The results support the hypothesis and the usefulness of the new model.

Fengxiang Fan, Peter Grzybek, Gabriel Altmann

Dynamics of word length in sentence

70-109

Abstract: In the present article the length of words in individual positions in sentence is being scrutinized. The conspicuous increase of word length with increasing position in short sentences very regularly slows down with increasing sentence length.

History of Quantitative Linguistics

Karl-Heinz Best

Laut- und Buchstabenzählung im frühen 19. Jahrhundert

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XLII. François Dujardin aîné (1834)

XLIII. Josef Nowak (1848)

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