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## Glottometrics 26, 2013

**Karl-Heinz Best**

*Iranismen im Deutschen*

1-8

**Abstract.** Many authors examined the influence of loanwords in German (cf. Best 2001; Körner 2004, Ternes 2011). The present paper presents the development of Iranian borrowings and demonstrates that this process abides by the logistic law which in linguistics is known as Piotrowski Law.

**Zhu Yujia**

*Sentence length and syntactic complexity in spoken and written English*

9-16

**Abstract:** This study examines the sentence length and syntactic complexity in spoken and written English using the ICE corpus as the data source. The mean sentence length and the mean sentential syntactic complexity were computed and compared. The relationship between sentence length and the frequency of corresponding sentences, and that between the sentential syntactic complexity and the frequency of corresponding sentences can be described with the Wimmer-Altman model.

**Thorsten Roelcke, Gabriel Altmann**

*Kant's Terminology of Cognitive Capacities. A Quantitative Study on Lexicographic Polysemy in the "Critique of Pure Reason"*

17-26

**Abstract.** A relation between frequency and polysemy of terms for cognitive capacities in Kant's "Critique of Pure Reason" is tested. The observed relation follows the Zipf-Alekseev function and is important in respect to the discussion of polysemy of terminology.

**Reinhard Köhler, Sven Naumann**

*Syntactic Complexity and Position in Hungarian*

27-37

**Abstract.** Two properties of syntactic constructions are studied with respect to their frequency distributions in individual texts and in sub-corpora of the Hungarian "Szeged Treebank 2.0". Mathematical models of these distributions as presented in (Köhler/Altmann 2000) are tested on these data. It is found that the tests confirm the hypotheses in principle although some differences between Hungarian and previously tested languages were found. They might be explainable by differences in discourse organisation. Furthermore, differences in the distributions between corpus parts and between individual texts from different genres may indicate text type sensitivity.

**L. C. Araujo, T. Cristófaró-Silva, H. C. Yehia**

*Entropy of a Zipfian Distributed Lexicon*

38-49

**Abstract.** This article presents the calculation of the entropy of a system with Zipfian distribution. It shows that a communication system tends to present an exponent value close to, but greater than one. This choice both maximizes entropy and, at the same time, enables the retention of a feasible and growing lexicon. This result is in accordance with what is observed in natural languages and with the balance between the speaker and listener communication efforts. On the other hand, the entropy of the communicating source is very sensitive to the exponent value as well as the length of the observable data. Slight deviations on these parameters might lead to very different entropy measurements. A comparison of the estimation proposed with the entropy measure of written texts yields errors in the order of 0.3 bits and 0.05 bits for non-smoothed and smoothed distributions, respectively.

**Ioan-Iovitz Popescu, Peter Zörnig, Peter Grzybek, Sven Naumann,**

**Gabriel Altmann**

*Some statistics for sequential text properties*

50-95

**Abstract.** The aim of the article is the measurement and the modelling of some sequential properties of word length, sentence length and word frequency by means of arc length, Hurst exponent and the distances between equal entities. Some of them were computed for various languages and their preliminary form has been shown.

## **History of Quantitative Linguistics**

**Peter Grzybek**

*Historical Remarks on the Consonant-Vowel Proportion –*

*From Cryptoanalysis to Linguistic Typology.*

*The Concept of Phonological Stoichiometry (Francis Lieber, 1800-1872)*

96-103

## **Review**

**Barry P. Scherr, James Bailey, Evgeny V. Kazartsev (eds.).**

*Formal Methods in Poetics: A Collection of Scholarly Works*

*Dedicated to the Memory of Professor M.A. Krasnoperova.*

RAM-Verlag, Lüdenscheid (Germany), 2011. 315 pp.

Reviewed by **Michael Wachtel**, Princeton University (USA)

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