Glottometrics

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Contents of Glottometrics 34, 2016

Reinhard Köhler, Sven Naumann

Syntactic Text Characterisation Using Linguistic S-Motifs

Abstract. R-motifs, formed from categorical instead of quantitative sequences, are used to characterise texts with respect to parts of speech as a syntactic feature. The attempt to classify the end-of-year speeches of the Italian presidents by means of not more than some parameters of the of the thus formed motifs fails. Instead, it could be shown that Ord's criteria and two other characteristics of the empirical frequency distributions of the motifs reveal a continuous development over time which follows the Piotrowski-Altmann Law.

Hanna Gnatchuk

The Relationship between English Synonyms and Compounds

Abstract: The present study is concerned with the detection of a relationship between the number of a word’s synonyms and the number of compounds a word can have. In such a way, we deal with two variables in the research – the number of synonyms and the number of compounds. The links have been captured by means of a very simple exponential equation. As a result, the connection between the analyzed variables has been positively confirmed.

Miroslav Kubát, Radek Čech

Quantitative Analysis of US Presidential Inaugural Addresses

Abstract. The research aims to investigate several features of inaugural addresses of the presidents of the United States. The goal of the paper is to observe the presidential speeches from a viewpoint of stylometry indices and to discover whether political and historical circumstances (wars, financial crisis, ideology, etc.) influence the style of inaugural addresses, analogically to findings presented by Čech (2014). Specifically, vocabulary richness, thematic concentration and text activity are computed. These three indices were chosen especially due to (a) their high efficiency of automatic text classification (genre analysis, authorship attribution, etc.), (b) their independence on text
length and (c) simple linguistic interpretation. The combination of the three methods allows both to investigate the style of the particular presidential speeches in powerful linguistically comprehensive view and to observe the development trends of the specific genre of inaugural addresses during the more than 200 years long history. The corpus comprises inaugural addresses of all US presidents from George Washington to Barack Obama (57 texts in total).

Claudia Bortolato

Intertextual Distance of Function Words as a Tool to Detect an Author’s Gender: A Corpus-Based Study on Contemporary Italian Literature

Abstract. The aim of this research is to explore the predictive capacity of function words in gender identification. In particular, from the different methods available the intertextual distance approach, as proposed by Labbé, was employed. The corpus analysed consists of 30 extracts from Italian novels, by the same number of authors, written between 1946 and 1967. Overall the corpus comprises over one million word tokens and more than 58,000 word types. The outcomes are in line with previous research that recognises function words as good indicators for the categorisation of writers according to their gender. However, the results of this study seem to be relatively weaker: the level of accuracy for women reached 63.33%, that of men 59.05%. In addition, the analysis of the category of function words as a whole turned out to have more predictive capacity than the two sub-categories considered, namely conjunctions and pronouns.

Gabriel Altmann

Types of Hierarchies in Language

Abstract. The article describes the necessity of modeling in terms of hierarchies which are parts of systems and shows some domains in which they can be found.
Jacqueline Léon, Sylvain Loiseau

Interview with Jean Petitot

Abstract. From the 1960s onwards, the mathematician René Thom (1923-2002) carried out important contributions to the mathematical modelling of morphogenesis (analysis of forms). The proposed concepts (singularity, structural stability, catastrophe, bifurcation) were re-used in several social sciences, particularly in linguistics. They allowed a Gestalt-like approach, in opposition to the then dominant logico-combinatorial ones, and met some cognitivist trends and connectionist models. Jean Petitot was the first to show interest in the application of Thom’s work to linguistics and he developed many studies accordingly.

This article is based on an interview between J. Petitot, J. Léon and S. Loiseau held on the 27 of September, 2014. While preserving the oral style of free conversation, it also includes references, developments and mathematical statements added by the authors.

Book Reviews

Bibliography of Word Length Studies