EveryWord You Set: Simulating the Cognitive Process of Linguistic Creativity with the PUNdit System

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ABSTRACT

This paper presents a computational creativity system (PUNdit) for generating creative headlines from written text. The system employs a number of statistical natural language processing libraries to simulate the cognitive process of linguistic creativity. 29% of 99 generated titles were rated above average on four five-point scales of creativity, grammaticality, relevance and appropriateness by majority consensus of seven non-expert evaluators.

1. INTRODUCTION AND MOTIVATION

The field of computational creativity concerns itself "with the philosophy, science and engineering of computational systems which, by taking on particular responsibilities, exhibit behaviours that unbiased observers would deem to be creative" (Colton, Goodwin & Veale 2012).

In this paper, a data-driven linguistic creativity system is defined which utilises conceptual information concerning the distinct topics within a text and creates a "mashup" of a select two of these, resulting in a title which fulfils the property of being both creative and relevant to the article content. This process models the cognitive process of "creative titling" which incorporates a "conceptual blend" of relevant topics.

The motivation for this work is twofold, to both model the cognitive processes behind linguistic creativity and also to