Ontology-Supported Automated Mark Up of Affective Information in Texts

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ABSTRACT

This paper presents the application of an ontology of emotions to an existing approach for the automated mark up of affective information in texts. The emotional ontology has three main applications in this system: to select the most specific emotion which represents the affective information of the sentences from the probability that each word in the sentence has of indicating different emotions, to establish what emotion should be assigned to a sentence given the set of emotional assignments suggested by a group of evaluators, and to determine if the emotion assigned to the sentence during automated mark up is correct. The enhanced markup system has been tested and the results show improvements with respect to the previous version.

1. INTRODUCTION

Human languages have produced extremely powerful labels for emotional states, for example, English provides at least 107 emotion-denoting adjectives and German at least 235. To consider each of these categories as individual labels, not related with any other category, produces an uncontrolled proliferation of labels which multiplies the complexity of tasks which involve the use of these labels. If the emotional categories were not individual isolated units but units related with each other this might simplify tasks such as comparing two different emotional labels or deciding which is the emotion that better represents the generalization of two different emotions. A taxonomy of emotional categories where emotional labels are structured and organized in levels, from the most general to the most specific might provide a very useful tool in the treatment of emotional categories.

If we have two different emotional labels and we want to compare them, the different granularity of the labels could be an important aspect