Emotions and NLP: Future Directions

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Emotions are not linguistic entities but they are conveniently expressed through the language. Feelings influence actions, thoughts and of course our way of communicate.

It was more than twelve years ago that we developed WordNet-Affect (Strapparava and Valitutti, 2004), and I remember that at that time several people questioned about the utility and even the possibility of studying emotions using computational linguistics techniques. In the recent years, nonetheless there has been a flourishing interest in automatically detecting and generating emotions in texts, with many valuable research contributions by the community. The space here is too short to think to even shortly mention and review them. Anyway I would like to indicate which directions are more promising in my opinion.

Finer grained emotions. It seems that in the modern life only the high intensity of few emotions is addressed and matters. The successful use of traditional sentiment analysis, where the focus is on classifying just along positive/negative dimension, slants people toward this attitude. However it is valuable the acquaintance with fine-grained emotions: nuances here are important, with a completely different effect. People should be well-educated to the nuances of emotions and benefit from them, and NLP should help about this issue.

Event based emotions. Emotions are elicited by significant and specific events, and events are significant when they touch on one or more of the concerns of the people. Even considering the traditional sentiment analysis, it is a good idea to investigate a more holistic approach, combining the detection of implicit polarity with the expression of opinions on events. For example we proposed CLIPEval, a task based on a dataset of events annotated as instantiations of pleasant and unpleasant events (Russo et al., 2015). Research efforts along this direction will be fruitful. This holds even more when we consider emotion classification. I think that psychological research and cognitive science can help substantially.

Cultural differences from corpora. Even an excellent human translator has problems in carrying over the target language all the culture-related aspects that go with words. If the focus is on emotion-related aspects, the matter is even subtler. The relation of a word to emotion concepts may depend on ideology and in general on cultural aspects that can be inferred from extensive word usage rather than from what can be found in dictionaries. Of course it also depends on genres, different periods of text production, sociolinguistic characteristics of the text originators and so on. Thus I think that cross-language computational studies are challenging, compelling, and they can also have an important applicative value, for example when addressing topics such as emotions, negotiation and conflict.

References

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