

Title: In Pursuit of Human-Friendly Interaction with a Computational System: Computational Humor

Abstract: With AI celebrating its 60th anniversary, questions arise of when (not even if) a computational system will be able to understand humor. These questions open up interesting opportunities, but point out areas of research that, yet, are insufficient for informal human computer communication. This paper looks at computational humor as a way of verifying computational understanding of text (written or verbal). In particular, we treat an ontology as a knowledge representation mechanism and natural language as a vehicle delivering this knowledge. A true ontology should provide a world model for the described domain, identifying its main concepts and tying them together with all relevant contentful properties. The question is how to get this model from text accurately? Assuming, as we do, that there is an accurate and unambiguous way of getting explicitly stated information from text, a lot of information is, in fact, implicit and yet crucial to the world model that we are creating. This implicit information has to be made explicit at the reasoning stage if we hope to come up with the results similar to human reasoning or understanding. In this paper, we will look at various ways, requiring optimal human-computer hybrid collaboration, in which ontology helps text understanding for humor processing, and text helps with dynamic ontology development. Moreover, the processing has to be optimized for a particular individual that is communicating with the system at a given time. We hypothesize that such communication will be helpful for interaction with any computational system in a human-friendly way in general, and for robots in particular.