IDENTIFYING STRUCTURE IN GRADED ADJECTIVES

Gradable adjectives are adjectives that can be modified by an adverb to vary the adjectives grade or intensity. For example, a person can be “very cool” or “extremely cool”, but they can’t be “very freezing” or “extremely freezing.” Kennedy and McNally (2005) suggest that there are several classes of gradable adjectives depending on the scale type associated with the adjective. Some adjectives don’t seem to have absolute degrees and instead of context-dependent degrees, such as “cool”, whereas other words have minimum or maximum degrees, such as “open” or “closed.”

The goal of this project (proposed and being led by Dan Lassiter of the CoCo Lab) is to test this hypothesis in existing corpora. Since I’m inclined to believe that linguists are poor at empirically testing their hypotheses, we first need to determine whether such classes exist, and further, what adjectives fall into various classes. The general approach of this project is to perform dependency parsing and extract adjectives along with their modifiers and determine the characteristics of these adjectives.

RELATED WORK

The primary work motivating this project is from Kennedy and McNally (2005) who propose this classification of graded adjectives by scale structures. So far, I haven’t found any specific corpus studies to consider the qualities of graded adjectives specifically, though I would be interested to find out what has been done to confirm other linguistic theories. From the analysis side, much more work has been done in dependency parsing, with the Stanford Parser (and associated papers on the website) being a good resource.

METHOD

In his initial work, Dan found that bigram counts alone were insufficient for the task since not all adverbs that appear to be degree modifiers necessarily are. To resolve this ambiguity, I suggest that we may be able to apply similar techniques to dependency parsing. The first step will be to test off-the-shelf algorithms for dependency parsing to see if they demonstrate the sort of behavior we want (in only finding dependencies when the grading adverbs apply to the graded adjectives). If not, we’ll need to implement and train our own parser to extract these pairs. The difficulty with this is that there are many ambiguities in the use of degree modifiers, which we will need to enumerate or otherwise build into our parser.

If we can successfully extract these pairs, we can then look at the frequency of different usages, apply some simples rules or classification algorithm, and come to some conclusions on this task.

The final deliverable of this project will be a write-up, which will describe the final method of parsing, any difficulties we encountered, analysis of our results, and a discussion of the consequences for our discovery on the nature of structure in graded adjectives.

REFERENCES

Kennedy C., McNally L. (2005). Scale structure and the semantic typology of gradable predicates. Language 81(2): 345-381