Sources of Lexical Inferences

Much of the formal work in semantics has historically concentrated on logical connectives, quantifiers, modals and negation. Lexical semantics, the meaning of ordinary words, words that are not on your search engine's stop list, has always been a less attractive field of study in formal semantics. The distinctions are fuzzy (*cup* vs. *mug*), ambiguity is pervasive (*carry* has 40 verb senses in WordNet). But there are areas of lexical semantics that have receive a lot of attention lately in the context of computing textual inferences and question answering.

In this talk I will first review some of the success stories of lexical semantics in a computational setting and continue with a discussion of unsolved issues and a general problems.

One success story in computational semantics is the treatment of factive (*know*) and implicative (*manage*) verbs. The basic insights in this domain go back to the 1970s but they have only recently been put to use systematically in reasoning systems. Much descriptive work still remains to be done to explicate the meaning of phrasal implicatives such as *have the chance/gall/… to X* and to deal with *invited inferences*, conclusions that a hearer or reader is likely to draw even though they do not actually follow from what is said.

A general problem is that many words can be viewed as having a rather general abstract sense but in particular contexts they get interpreted in a very specific way. In the case of *Kim responded to my email*, it follows that I received a reply from Kim to my previous email to her. In the case of *the illness responded to the treatment* we infer that the patient's medical condition improved. Are these two different senses of *respond* or is there a way to view them as contextual refinements of one basic sense? I will argue for the latter option.