Making a More Clever Cleverbot: A Centering Analysis of Cleverbot

Cleverbot is a web-based artificial intelligence that is meant to simulate human conversation. However, many of the responses Cleverbot gives do not make sense in terms of the conversation. The issue seems to be that Cleverbot has difficulty determining what the conversation is about. In this paper, I will use dialogue provided from my own conversations with Cleverbot and use Cleverbot’s function to generate responses to its own dialogue to perform a centering analysis on the dialogues. With a centering analysis, it is simple to track the aboutness topic of a dialogue as it shifts from sentence to sentence. Using the data collected, each analysis provides insight into whether or not Cleverbot is using centers to determine the aboutness topic for a given sentence. If Cleverbot does in fact use centering to determine what a sentence is about, this provides evidence that there is some other source of error in the way Cleverbot is implemented. If there is evidence that Cleverbot does not use centering, this provides a way for Cleverbot’s designers potentially to improve it by using pragmatic theory.

The following dialogue demonstrates a situation in which Cleverbot generates an infelicitous response:

User: Do you like cooking?
Cleverbot: I sometimes like cooking.
User: What do you cook?
Cleverbot: What I’m told to cook.
User: How do you cook it?
Cleverbot: I do not like carrots.

Cleverbot’s last sentence does not provide an answer to the question, nor does its aboutness topic relate to that of the previous sentence.
Citations


Brennan, Susan E. et al, “A Centering Approach to Pronouns”, Hewlett-Packard Laboratories
