ACS Syntax and Semantics of Natural Language: Assignment 3

Dr. Stephen Clark

Lent Term 2012

Hand-in of assignment: Hand in to reception by midday on Mon March 5.

Include BRIEF notes on any difficulties or issues you had with specific questions. Be prepared to discuss the difficult cases during the following lecture.

1. Give a CCG derivation for the sentence *John likes beer* which uses backward type-raising.

2. Give the CCG lexical categories for the words in the following sentence, in the style of CCGbank. (No need to give the full derivation, but you should analyse correctly the structure of any noun-noun compounds, rather than assume a right-branching structure as in CCGbank.)

John Raymond , former chairman of Consolidated Gold Fields PLC , was named a Chief of this British industrial conglomerate .

3. Try the above sentence in the C&C parser online demo. To which words does the parser assign the incorrect category? **Briefly** give some possible reasons for the parser's mistakes.

4. The verb *swing* is seen a number of times in the Penn Treebank, but never as a transitive verb. Hence the C&C parser analysis of *He swings the golf club* is incorrect (try it on the online demo). Give some **brief** suggestions for how you might try and improve this aspect of the parser's performance.