

Parsing with Context Free Grammars

CSC 9010 Natural Language
Processing

Paula Matuszek and Mary-Angela
Papalaskari

This slide set was adapted from:

- Jim Martin (after Dan Jurafsky) from U. Colorado
- Rada Mihalcea, University of North Texas
<http://www.cs.unt.edu/~rada/CSCE5290/>
- Robert Berwick, MIT
- Bonnie Dorr, University of Maryland

Parsing

Mapping from strings to structured representation

- Parsing with CFGs refers to the task of assigning correct trees to input strings
- Correct here means a tree that covers **all and only the elements of the input** and **has an S at the top**
- It doesn't actually mean that the system can select the correct tree from among the possible trees

- As with everything of interest, parsing involves a search which involves the making of choices
- We'll start with some basic methods before moving on to more complex ones

Programming languages

```
max = min = grade;
// Read and process the rest of the grades
while (grade >= 0)
{
    count++;
    sum += grade;

    if (grade > max)
        max = grade;
    else
        if (grade < min)
            min = grade;
    System.out.print ("Enter the next grade (-1 to quit): ");
    grade = Keyboard.readInt ();
}
```

- Easy to parse
- Designed that way!