

# Dependency Parsing

**Language Technology 1  
WS 2013**

Günter Neumann  
(slides based on Alexander Volokh)

# Exercise

Parse the sentence:

<sub>0</sub> He <sub>1</sub> said<sub>2</sub> he <sub>3</sub> will <sub>4</sub> now <sub>5</sub> consider <sub>6</sub> those <sub>7</sub> offers <sub>8</sub> . <sub>9</sub>

Assume the gold standard:  $\langle i, j \rangle$  means there is a link from word with index  $i$  to  $j$ , and word  $i$  is the modifier and word  $j$  is the head. The link/edge is not labelled.

$\{\langle 1, 2 \rangle, \langle 2, 0 \rangle, \langle 3, 4 \rangle, \langle 4, 2 \rangle, \langle 5, 4 \rangle, \langle 6, 4 \rangle, \langle 7, 8 \rangle, \langle 8, 6 \rangle, \langle 9, 2 \rangle\}$

Choose any algorithm of your choice (might as well be your own)

Specify how different configurations look like in each step

Specify a feature model (i.e. feature templates you would like to use) and

instantiate it with concrete values for each configuration

- assume that you have word forms and POS tags,  
but no morphological information available

Discuss the advantages and disadvantages of your algorithm (runtime complexity, number of configurations, determinism, incrementality etc.)