

Alexandria, October 7-11

X UNL School Day #3



UNLization

UNLization Steps

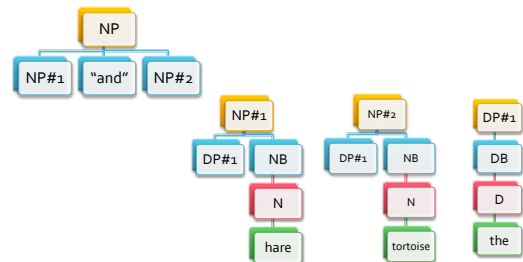


Parsing

Parsing



The Hare and the Tortoise



Exercise #2

- Build the parsing module of English grammar for the corpus

Exercise #3

Exercise #3

- Upload the English version of the corpus to UNLWEB>UNLDEV>IAN>NL FILES
- Upload the English analysis dictionary to UNLWEB>UNLDEV>IAN>Dictionary
- Add the rule (BLK):=; to your grammar
- Upload your grammar to UNLWEB>UNLDEV>IAN>T-rules
- Check the results

UNLization Steps



Transformation

Transformation



Why is this necessary?

- To restore the dependency relations between constituents that are isolated in the surface structure
 - SUBJECT: from the specifier of IP to the specifier of VP
 - ADJUNCTS: from the specifier of CP to the adjunct of VP
 - COORDINATION: filling in the missing branches

How is it done?

- Movement
 - Subject (from IP to VP)

$$IP(IB(_VP(_e)); \%s, \wedge e) := IP(IB(_VP(_s)); \%e, +e);$$
 - Adjunct (de-topicalization)
 - There is an available position

$$CP(CB(_IP(IB(_VP(VB(_e)); \%a, \wedge e) := CP(CB(_IP(IB(_VP(VB(_a)); \%e, +e);$$
 - There is no available position

$$CP(CB(_IP(IB(_VP(VB(_ \wedge e), \%vb; \%a, \wedge e) := CP(CB(_IP(IB(_VP(VB(VB(_vb, \%a)); \%e, +e);$$

Exercise #4

- Introduce the transformation rules into the grammar in order to generate the deep syntactic structure out of the surface syntactic structure
- Check the results

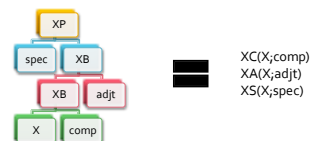
UNLization Steps



Dearborisation

Dearborisation

- Conversion of tree structures into head-driven structures



- $XB(XB(\%x, \%y), \%z) := XB(\%x, \%y)XB(\%x, \%z);$
- $XP(XB(\%x, \%y), \%z) := XB(\%x, \%y)XS(\%x, \%z);$

Steps

- Generalisation
 - $[[ACD]NPV]B(\%x,\%y) \rightarrow XB(\%x,\%y);$
 - $[[ACD]NPV]P(\%x,\%y) \rightarrow XP(\%x,\%y);$
- Feature propagation
 - $(XB(\%x,\%y),\%w,\text{att}) := (XB(\%x,\text{att}=\%w,\%y),\%w,\text{att});$
 - $(XP(\%x,\%y),\%w,\text{att}) := (XP(\%x,\text{att}=\%w,\%y),\%w,\text{att});$
- Dearborisation
 - $XP(XB(\%x,\%y),\%z) \rightarrow XB(\%x,\%y)XS(\%x,\%z);$
 - $XB(XB(\%x,\%y),\%z) \rightarrow XB(\%x,\%y)XB(\%x,\%z);$
 - $XS(XB(\%x,\%y),\%z) \rightarrow XB(\%x,\%y)XS(\%x,\%z);$
 - $XS(\%x,XB(\%y,\%z)) \rightarrow XS(\%x,\%y)XB(\%y,\%z);$
 - $XB(\%z,XB(\%x,\%y)) \rightarrow XB(\%x,\%y)XB(\%x,\%z);$
 - $XP(\%x,\%y) \rightarrow XS(\%x,\%y);$
- Deletion of empty categories
 - $[e] :=$
- Recategorization
 - $(XB(\%x,\%y,\text{adj}),N,\%z) := (NA(\%x,\%y),\%z);$
 - $(XB(\%x,\%y,\text{comp}),N,\%z) := (NC(\%x,\%y),\%z);$
 - $(XS(\%x,\%y,\text{spec}),N,\%z) := (NS(\%x,\%y),\%z);$
 - ...

Exercise #5

- Introduce the dearborisation module of the grammar
- Check the results