

Classwork N°7
due to 13th April 2012

Exercise: “Application of combinators to natural language analysis: Reflexivization”

1. To apply successfully the combinators to natural language analysis, we need to handle adequately the introduction and elimination rules by beta-reduction defined for each combinator. Please remind these rules and apply them to the following sentences.

$$Wfx \rightarrow_{\beta} fxx$$

$$Bxyz \rightarrow_{\beta} x(yz)$$

$$C^*xy \rightarrow_{\beta} yx$$

- (a) *John sent himself a letter*
- (b) *The fixed-point theorem proved itself*
- (c) *He found himself qualified*
- (d) *Mary heard herself speaking (in a radio)*

2. Formal semantic analysis of Reflexives using combinators: “Multilingual examples”

- (e) a. *Marie se viděla tančit (v zrcadle) (Mary saw herself dance (in a mirror))*
b. *Marie viděla Petra tančit (Mary saw Peter dance)*
- (f) a. *Soudce se shledal vinným (The judge found himself guilty)*
b. *Soudce shledal Petra vinným. (The judge found Peter guilty)*
- (g) a. *Jean se lave (Jean washes himself)*
b. *Jean lave son assiette (Jean washes his dish)*