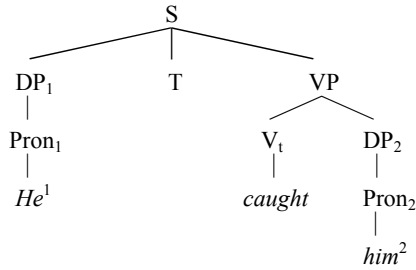


Ling 320. Assignment 10. Solution.

Part 1. Pronouns.

(1)



$[[S]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} = 1$ iff

$[[VP]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \in [[DP_1]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}]$

$[[VP]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \in \{A \mid [[Pron_1]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \in A]\}$

$[[Pron_1]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \in [[VP]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}]$

$[[He^1]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \in [[VP]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}]$

$Tro \in [[VP]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}$

$Tro \in \{x \mid \langle x, [[Pron_2]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \rangle \in [[V_t]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}\}$

$Tro \in \{x \mid \langle x, [[him^2]^{s_0, [1 \rightarrow T, 2 \rightarrow L]} \rangle \in [[V_t]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}\}$

$Tro \in \{x \mid \langle x, Leo \rangle \in [[V_t]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}\}$

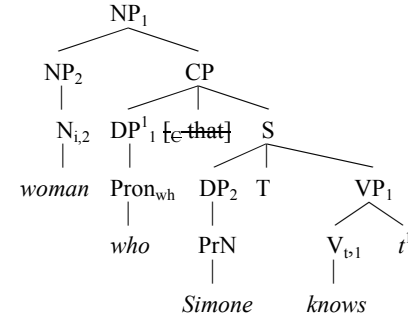
$\langle Tro, Leo \rangle \in [[V_t]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}$

$\langle Tro, Leo \rangle \in [[caught]^{s_0, [1 \rightarrow T, 2 \rightarrow L]}$

Tro caught Leo in s_0

Part 2. Relative clauses.

(2)

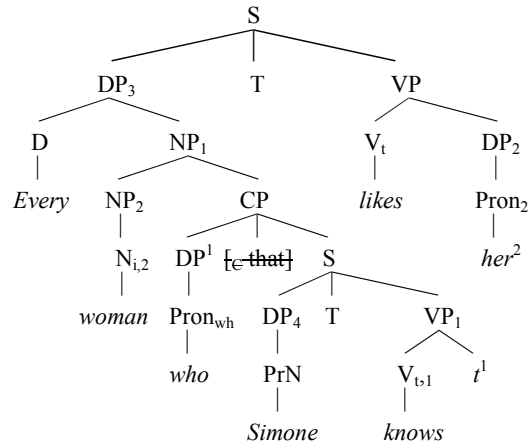


$[[NP_1]^{s_0, [2 \rightarrow S]} =$

- (a) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap [[CP]^{s_0, [2 \rightarrow S]}$ (i)
- (h) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid [[S]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} = 1\}$ (j)
- $\in [[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid [[VP_1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \in [[DP_2]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ (a)
- (b) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid [[VP_1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \in \{A \mid [[PrN]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \in A\}\}$ (h)
- (c) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid [[PrN]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \in [[VP_1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ \in
- (f), (b) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid S \in [[VP_1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ (b), (c)
- (b) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid S \in \{y \mid \langle y, [t^1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \rangle \in [[V_{t^1}]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}\}$ (f)
- (c) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid \langle S, [t^1]^{s_0, [1 \rightarrow x, 2 \rightarrow S]} \rangle \in [[V_{t^1}]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ \in
- $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid \langle S, x \rangle \in [[V_{t^1}]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ (k)
- (b) $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid \langle S, x \rangle \in [[knows]^{s_0, [1 \rightarrow x, 2 \rightarrow S]}\}$ (b)
- (c), \in $[[NP_2]^{s_0, [2 \rightarrow S]} \cap \{x \mid S \text{ knows } x \text{ in } s\}$ (c), \in
- (b)x2 $[[woman]^{s_0, [2 \rightarrow S]} \cap \{x \mid S \text{ knows } x \text{ in } s\}$ (b)x2
- (c) $\{x \mid x \text{ is a woman in } s\} \cap \{x \mid S \text{ knows } x \text{ in } s\}$ (c)
- \cap $\{x \mid x \text{ is a woman in } s \text{ and } S \text{ knows } x \text{ in } s\}$ \cap

Optional Extra Credit.

(3)



$[[S]^{s_0, [2 \rightarrow S]} = 1$ iff

- $[[VP]^{s_0, [2 \rightarrow S]} \in [[DP_3]^{s_0, [2 \rightarrow S]}]$ (a)
- $[[VP]^{s_0, [2 \rightarrow S]} \in \{A \mid \langle [NP_1]^{s_0, [2 \rightarrow S]}, A \rangle \in [[D]^{s_0, [2 \rightarrow S]}]\}$ (g)
- $\langle [NP_1]^{s_0, [2 \rightarrow S]}, [VP]^{s_0, [2 \rightarrow S]} \rangle \in [[D]^{s_0, [2 \rightarrow S]}]$ \in
- $\langle [NP_1]^{s_0, [2 \rightarrow S]}, [VP]^{s_0, [2 \rightarrow S]} \rangle \in [every]^{s_0, [2 \rightarrow S]}$ (b)
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq [VP]^{s_0, [2 \rightarrow S]}$ (c), \in
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq \{x \mid \langle x, [DP_2]^{s_0, [2 \rightarrow S]} \rangle \in [V_{t,1}]^{s_0, [2 \rightarrow S]}\}$ (f)
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq \{x \mid \langle x, [her_2]^{s_0, [2 \rightarrow S]} \rangle \in [V_{t,1}]^{s_0, [2 \rightarrow S]}\}$ (b)x2
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq \{x \mid \langle x, S \rangle \in [V_{t,1}]^{s_0, [2 \rightarrow S]}\}$ (c)
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq \{x \mid \langle x, S \rangle \in [likes]^{s_0, [2 \rightarrow S]}\}$ (b)
- $[NP_1]^{s_0, [2 \rightarrow S]} \subseteq \{x \mid x \text{ likes } S \text{ in } s_0\}$ (c), \in
- $\{x \mid x \text{ is a woman in } s \text{ and } S \text{ knows } x \text{ in } s_0\} \subseteq \{x \mid x \text{ likes } S \text{ in } s_0\}$ (2) above