

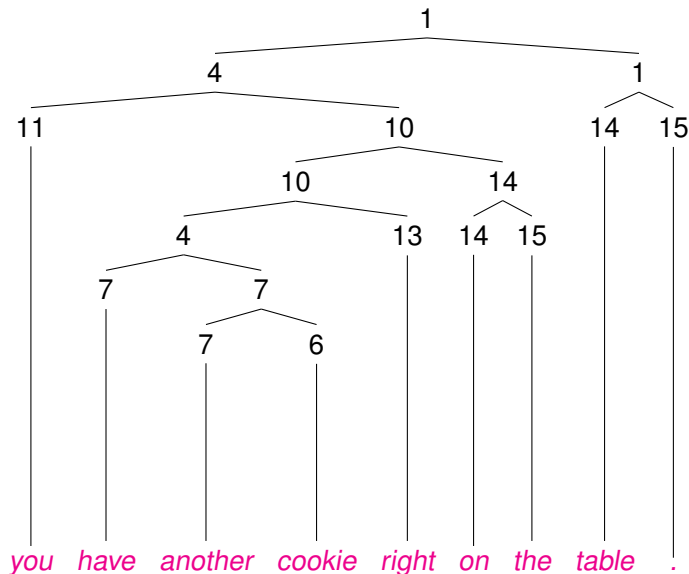
# LING 5702 Lecture Notes 20, Step Through

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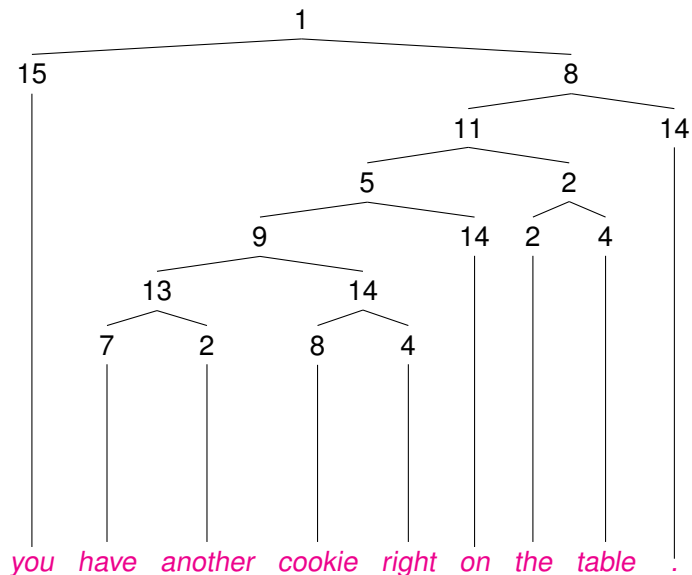
# Structures hypothesized during training

Iteration 5 (first iteration after re-initialization trials) — not much familiar:



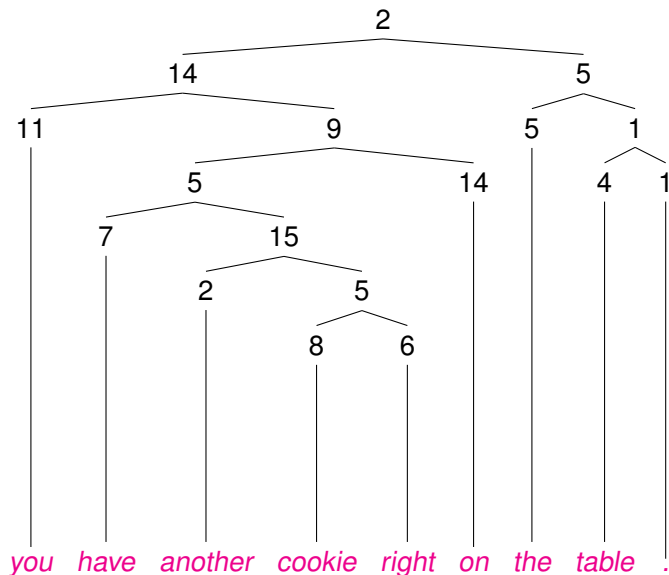
# Structures hypothesized during training

Iteration 6:



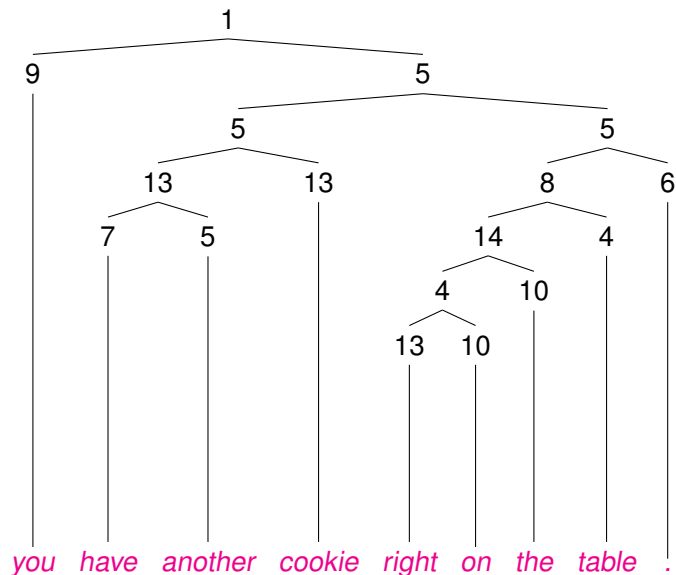
# Structures hypothesized during training

Iteration 7:



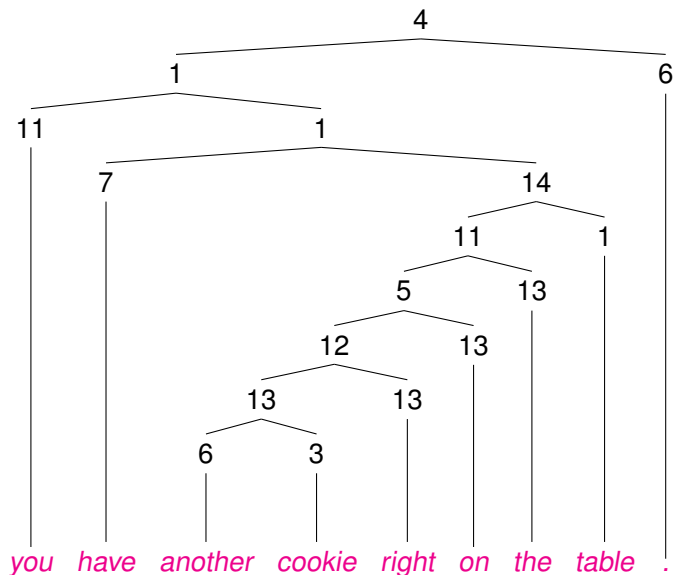
# Structures hypothesized during training

Iteration 8:



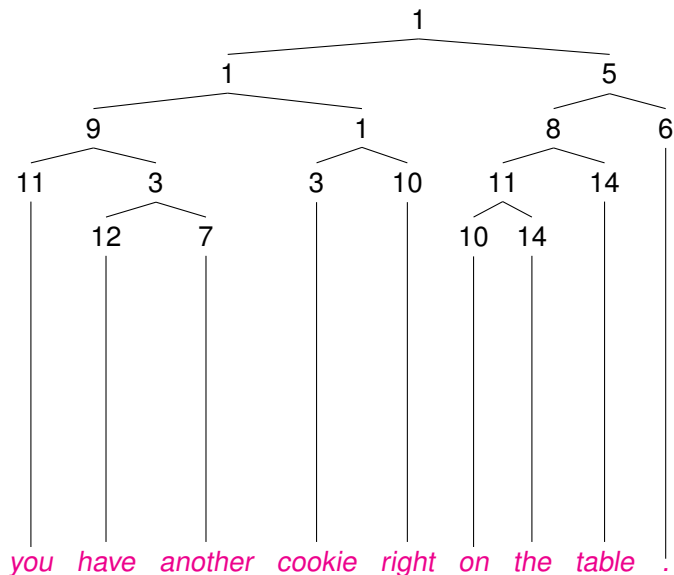
# Structures hypothesized during training

Iteration 9:



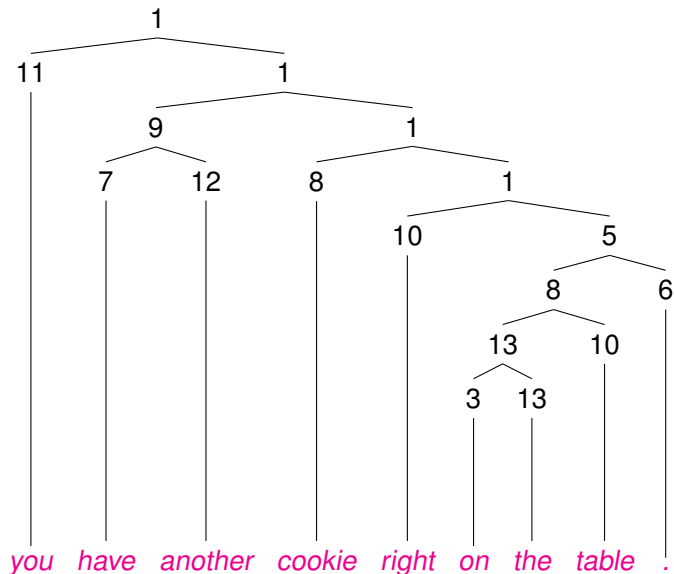
## Structures hypothesized during training

Iteration 10 — the model discovers *on* and *the* co-occur a lot, clumps them:



# Structures hypothesized during training

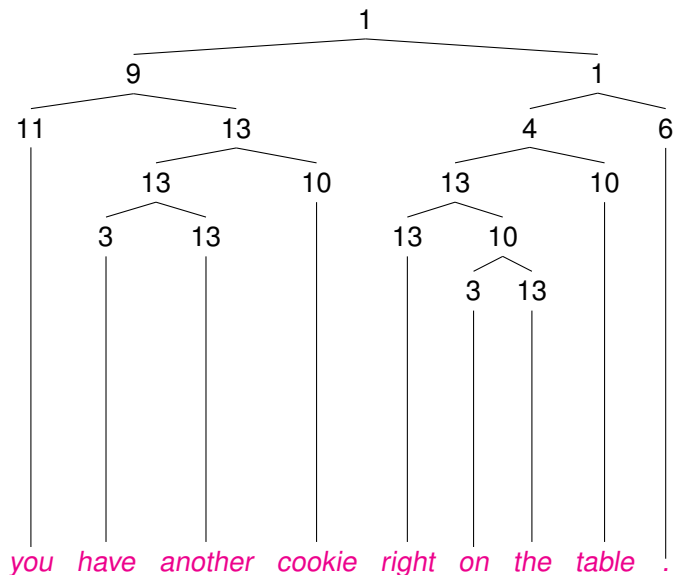
Iteration 25 (now showing every 25th iteration):





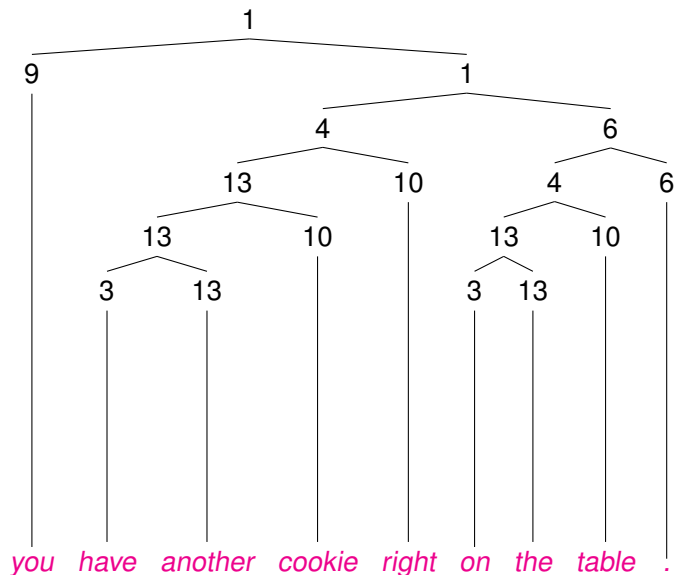
# Structures hypothesized during training

Iteration 50:



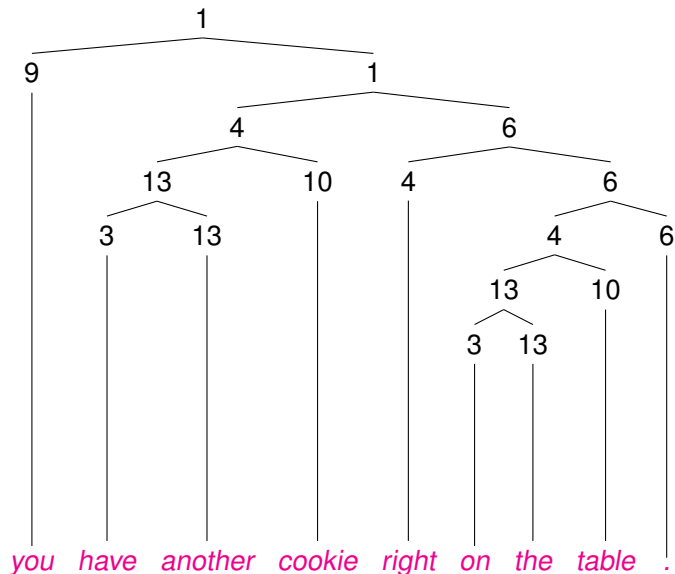
# Structures hypothesized during training

Iteration 75:



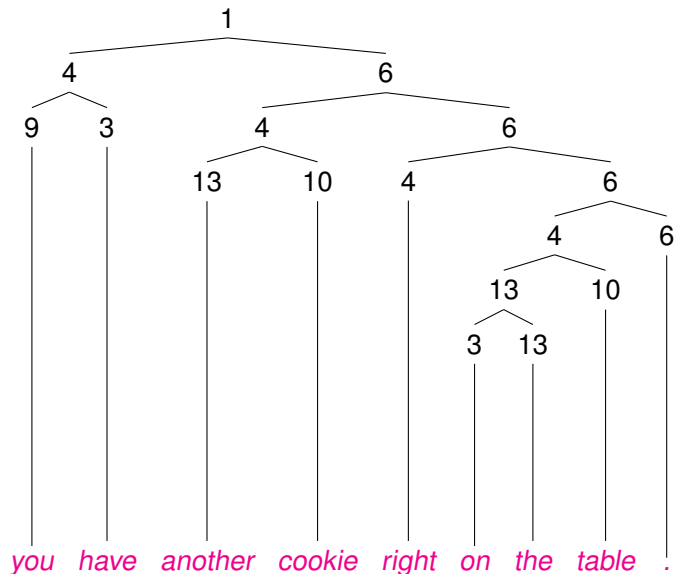
# Structures hypothesized during training

Iteration 100:



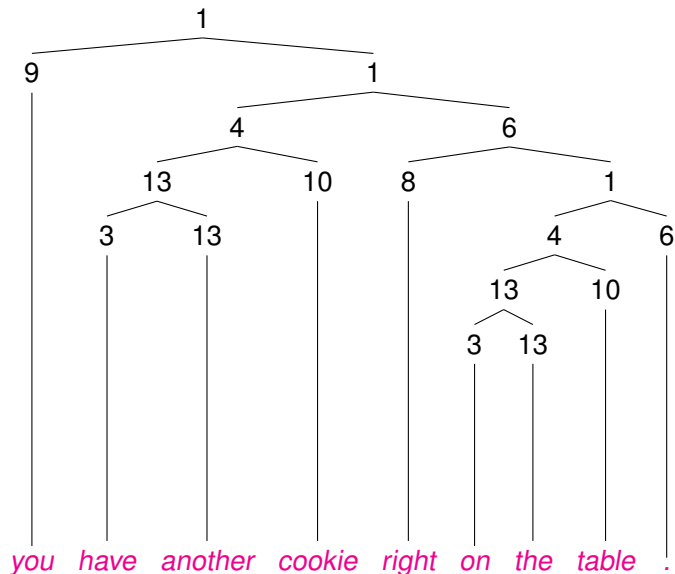
# Structures hypothesized during training

Iteration 125:



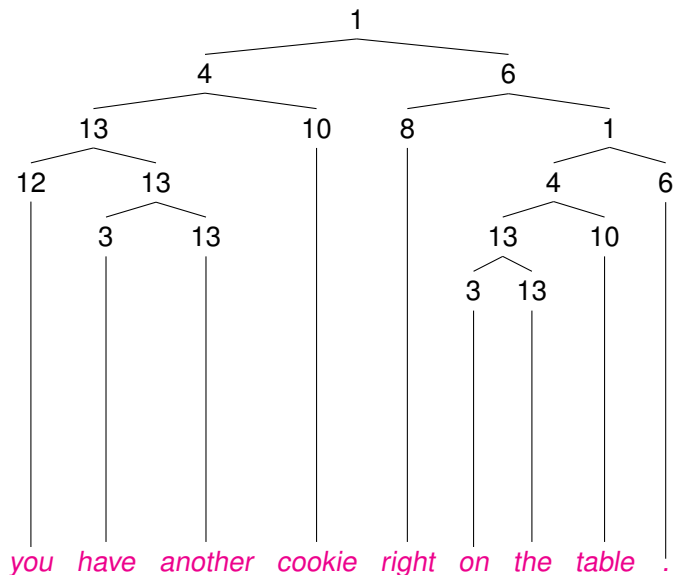
# Structures hypothesized during training

Iteration 150:



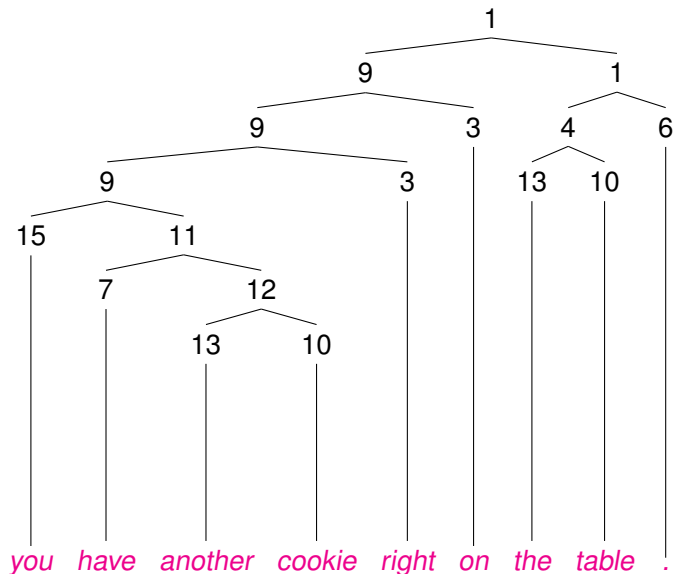
# Structures hypothesized during training

Iteration 200 (now showing every 50th iteration):



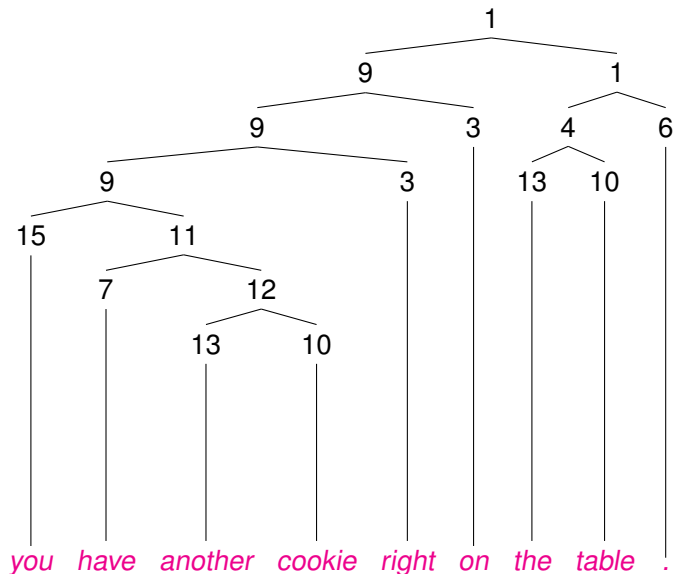
# Structures hypothesized during training

Iteration 250 – determiners (*the/another*), nouns (*table/cookie*) clumped:



# Structures hypothesized during training

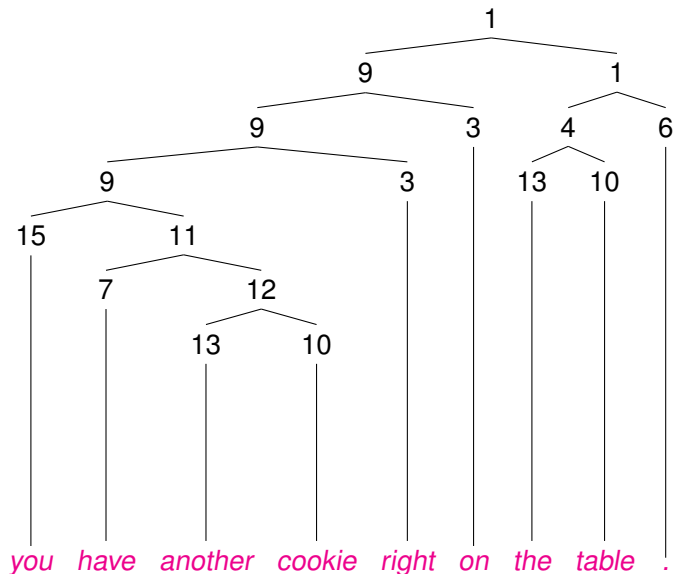
Iteration 250 – learner can re-use Det+Noun rule more than Prep+Det:





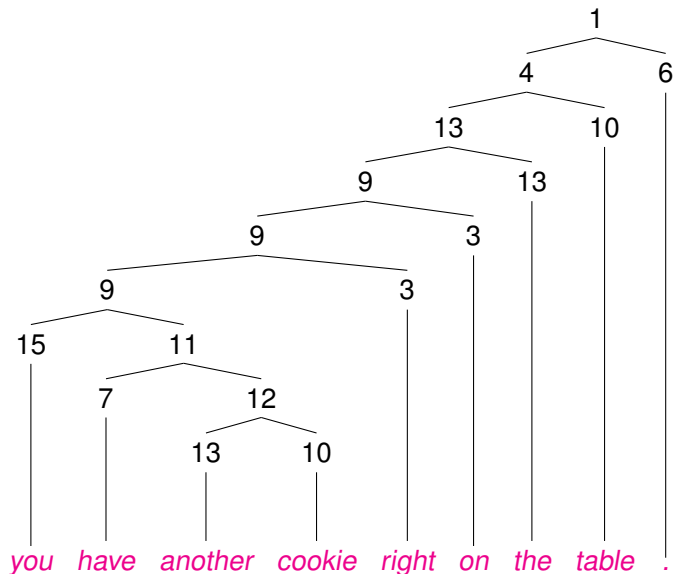
# Structures hypothesized during training

Iteration 250 – also, verb *have* clumped with noun phrase *another cookie*:



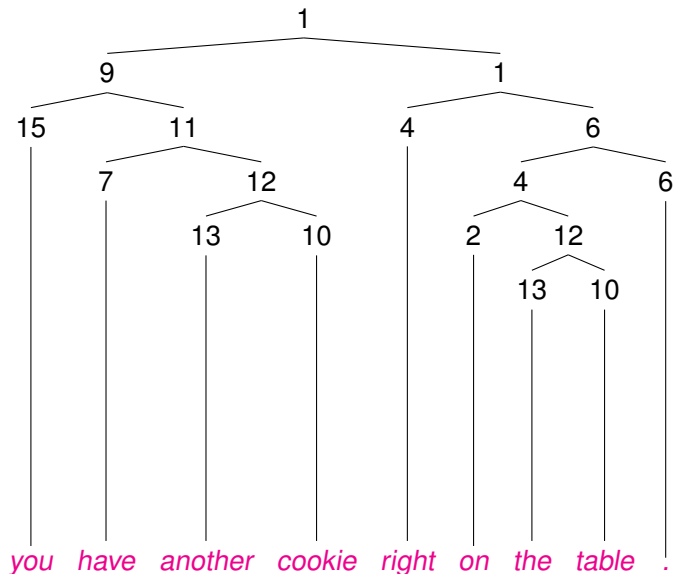
# Structures hypothesized during training

Iteration 300:



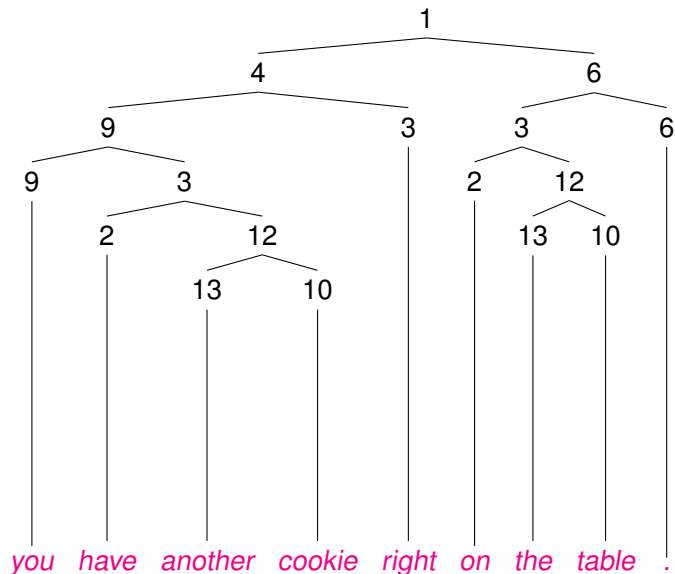
# Structures hypothesized during training

Iteration 350 – preposition *on* and noun phrase *the table* now clumped:



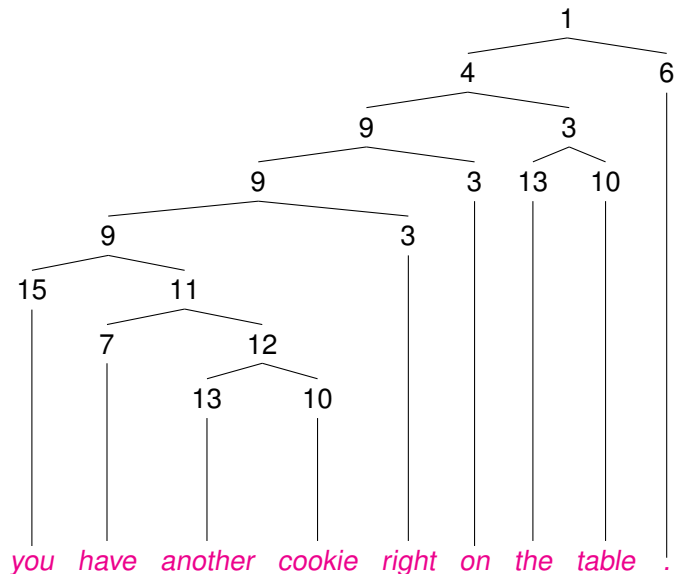
# Structures hypothesized during training

Iteration 400:



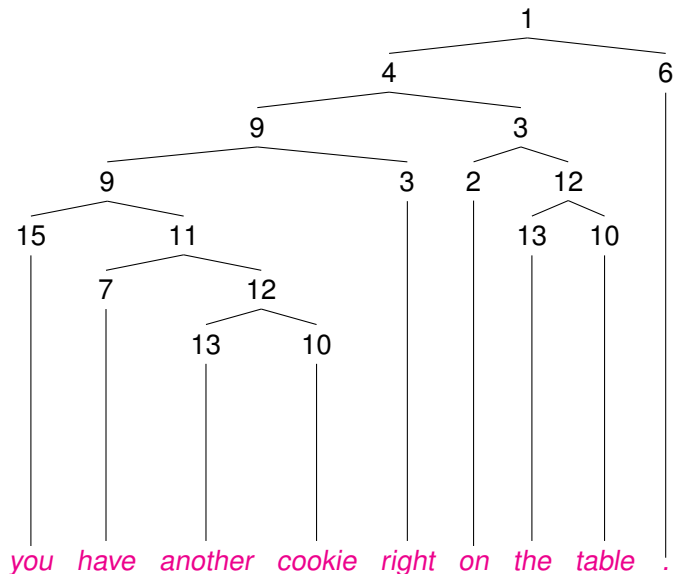
# Structures hypothesized during training

Iteration 450:



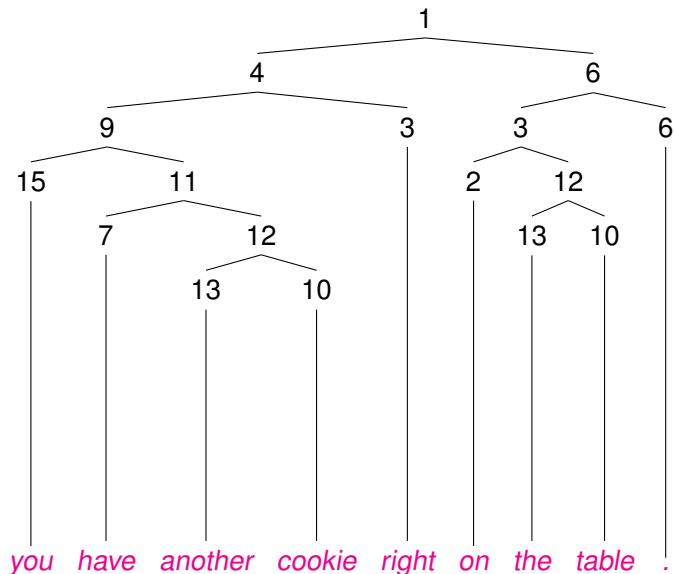
# Structures hypothesized during training

Iteration 500 — category labels for Prep/Det/Noun/NP/PP mostly stable:



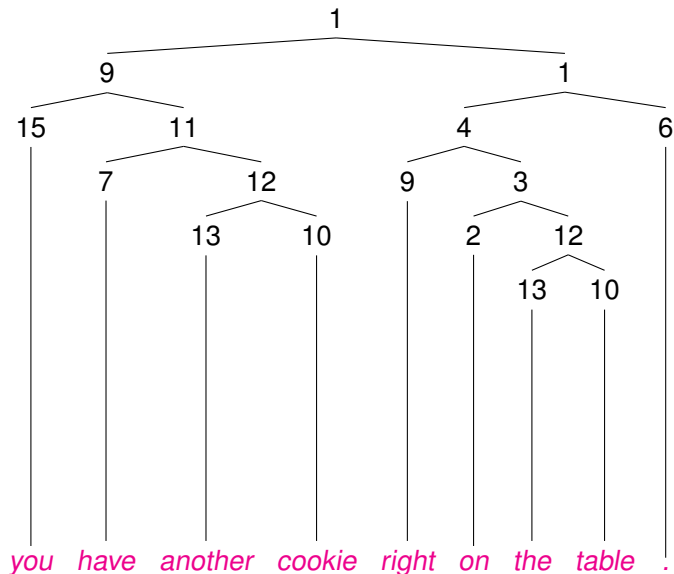
# Structures hypothesized during training

Iteration 550:



# Structures hypothesized during training

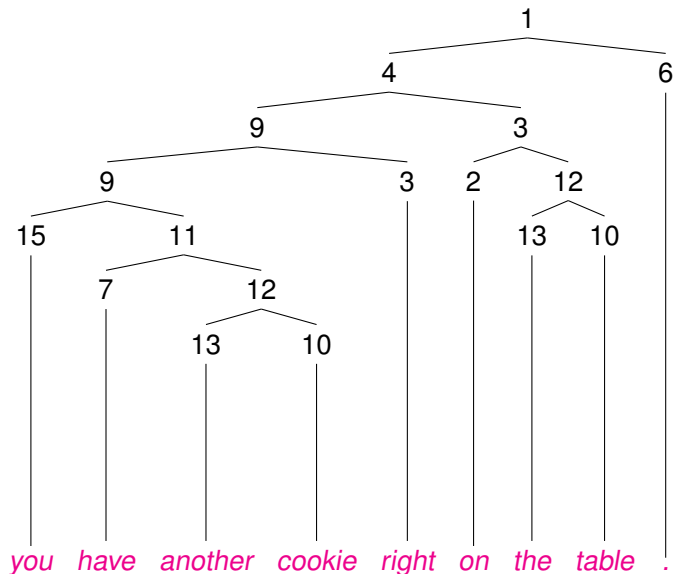
Iteration 600 — adverb *right* clumped with prepositional phrase *on the table*:





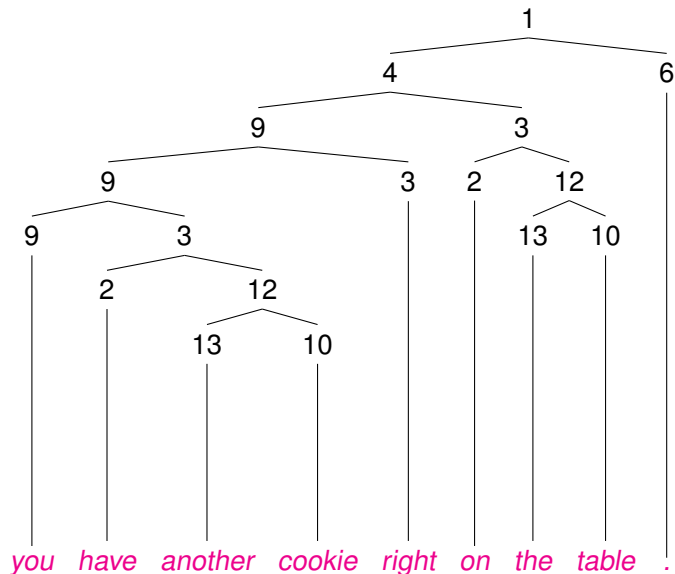
# Structures hypothesized during training

Iteration 650 — adverb *right* now clumped with sentence *you ... cookie*:



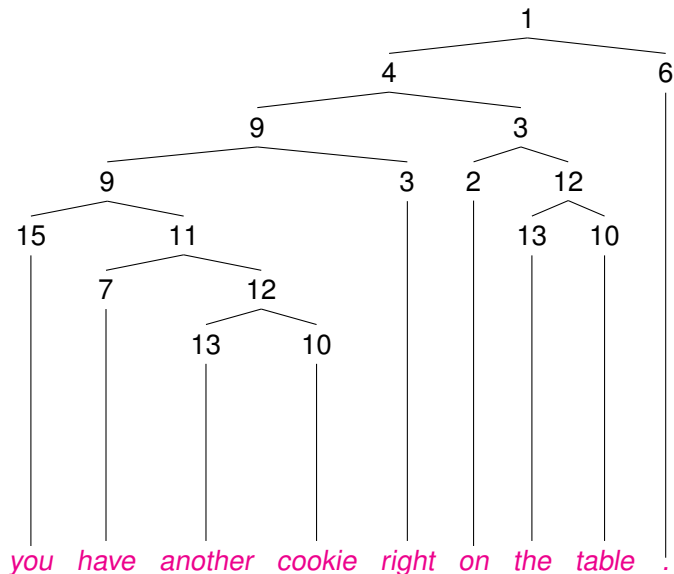
# Structures hypothesized during training

Iteration 700 — re-type noun phrase *you* and verb phrase *have ... cookie*:



# Structures hypothesized during training

Iteration 750 – change back noun phrase and verb phrase:



# Structures hypothesized during training

Final constituent types consistent with linguistic theory:

