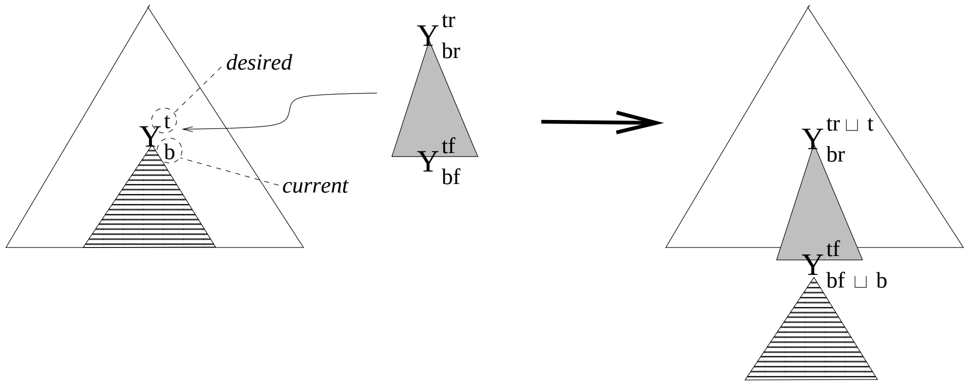
CS674, Spring 2002
Lecture Examples, 2/04/02

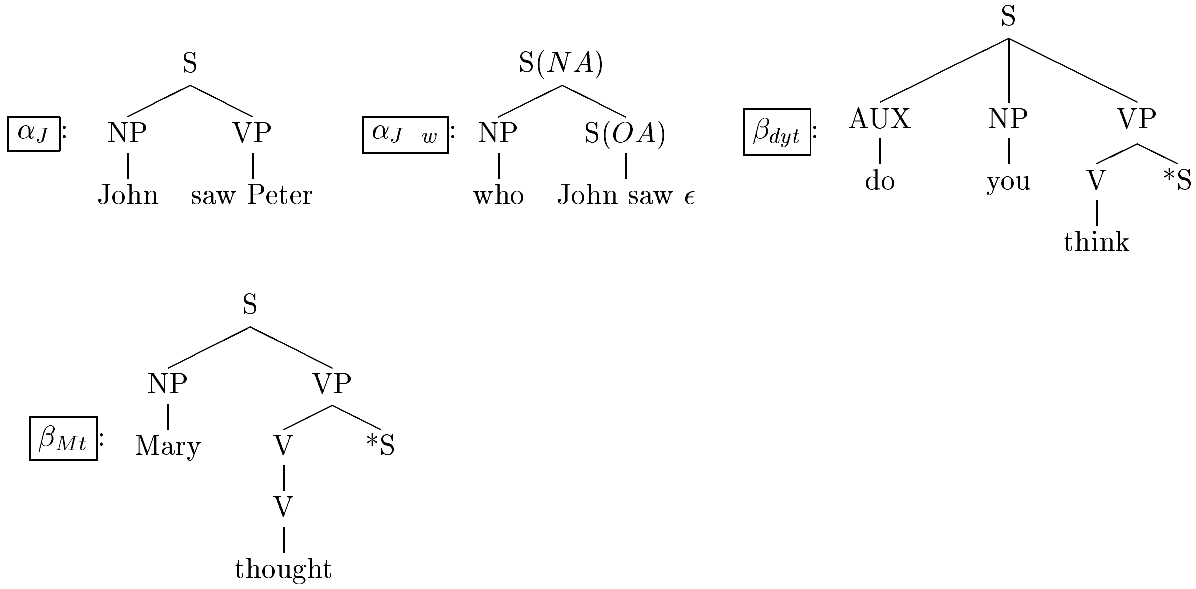
1. Correction to last lecture's handout: the language generated by the TAG in example 4 is $\{w\#w : w \in \{a,b\}^*\}$, not $\{ww : w \in \{a,b\}\}$ (obviously).

2. Schema for feature-based TAG adjunction:



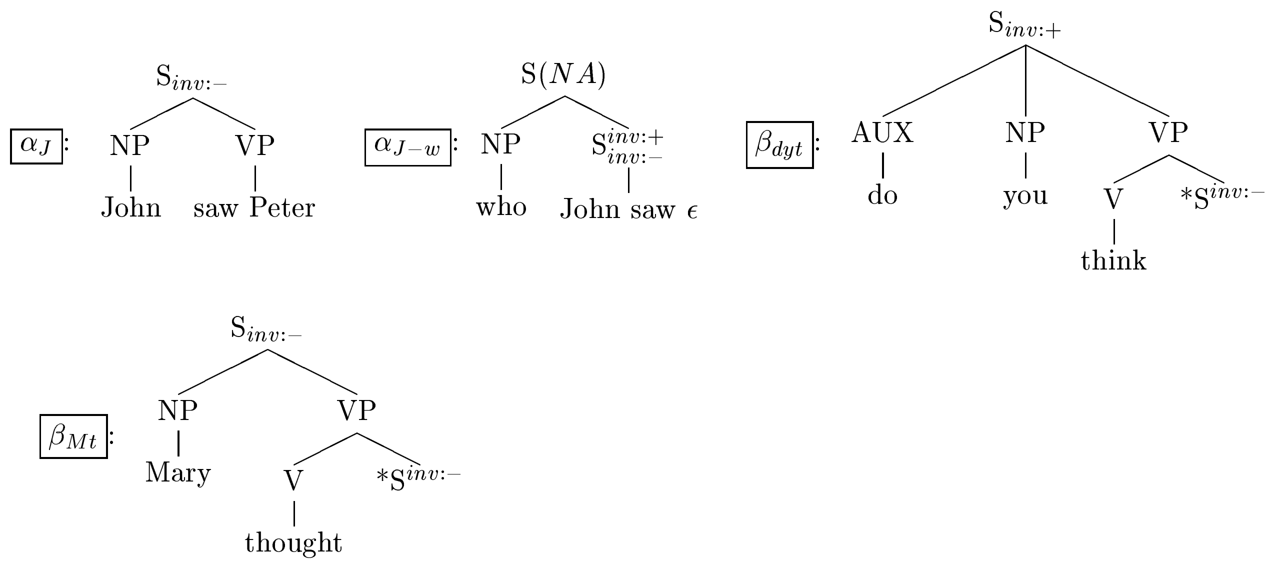
3. From last lecture's handout: feature-based TAGs implement "redundancy elimination via dynamic instantiation of constraints". Examples are from Vijay-Shankar and Joshi (1988).

3**(a)** Another TAG with adjunction constraints (slight modifications from last time). Perhaps there should be an NA constraint on β_{dyt} at address 0, but this doesn't affect our main argument.

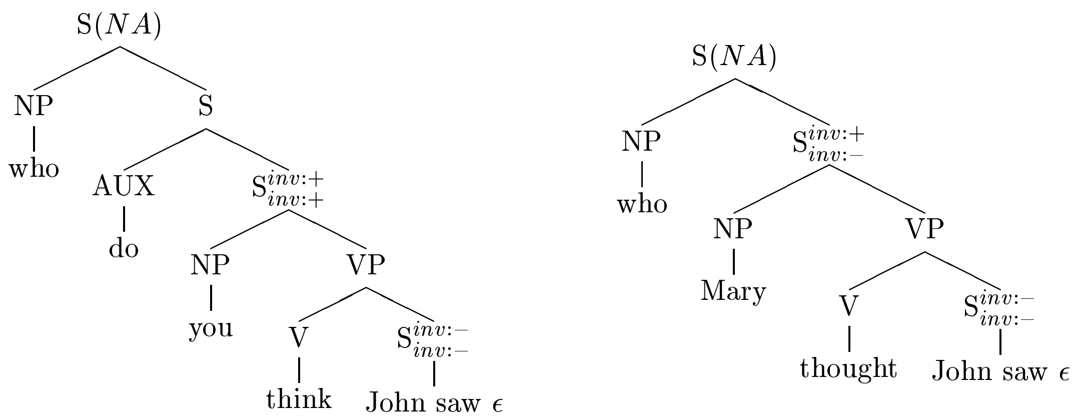


3**(b)** John saw Peter.
3**(c)** Who do you think John saw?
3**(d)** Who do you think Mary thought John saw?
3**(e)** Mary thought John saw Peter.
3**(f)** Who Mary thought John saw.

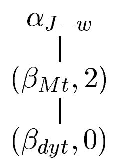
3(g) Feature-based TAG.



3(h) Adjoining β_{dyt} into α_{J-w} at address 2 vs. adjoining β_{Mt} into α_{J-w} at address 2.



3(i) Derivation tree for "Who do you think Mary thought John saw".



4. Steve Abney, "Statistical Methods and Linguistics", in *The Balancing Act*, Judith Klavans and Philip Resnik, eds., 1996:

> ...no one can profess to be a computational linguist without a passing knowledge of statistical methods. HMM's are as de rigeur as LR tables, and anyone who cannot at least use the terminology persuasively risks being mistaken for kitchen help at the ACL banquet.