6.863J Natural Language Processing Lecture 22: Language Learning, Part 2

Robert C. Berwick berwick@ai.mit.edu

























- Remember: $d(A(l \bullet s_l, g) \ge \varepsilon$
- Easy to be evil: construct $r=s_1, s_2, ..., s_n ...$ for L_g
- Let $q_1 = s_1$. If $d(A(q_i,g) < \varepsilon$, then pick a σ_{qi} and tack it onto the text sequence,

$$q_{i+1} = q_i \, \sigma_{qi} \, s_{i+1}$$

o.w. , *d* is already too large (> ϵ) , so can leave q_{i+1} sequence as q_i followed by s_{i+1}

$$q_{i+1} = q_i s_{i+1}$$

6.863J/9.611J Lecture 22 Sp03





Evenue of identification (learning) in the







If a parent were to provide true negative evidence of the type specified by Gold, interactions would look like the Osbournes:

Child:	me want more.
Father:	ungrammatical.
Child:	want more milk.
Father:	ungrammatical.
Child:	more milk !
Father:	ungrammatical.
Child:	cries
Father:	ungrammatical

6.863J/9.611J Lecture 22 Sp03













6.863J/9.611J Lecture 22 Sp03























































Actual (prolog) code for this diff

% parametersEng.pl %% X-Bar Parameters specInitial. specFinal :- \+ specInitial

headInitial(_). headFinal(X) :- \+ headInitial(X).

agr(weak).

%% V2 Parameters % Q is available as adjunction site boundingNode(i2). boundingNode(np).

%% Case Adjacency Parameter CaseAdjacency. % holds

%% Wh In Syntax Parameter whInSyntax.

%% Pro-Drop Parameter no proDrop.

%% X-Bar Parameters specInitial. specFinal :- \+ specInitial

headFinal headInitial :- \+ headFinal. headInitial(X) :- \+ headFinal(X). headFinal(_) :- headFinal

agr(strong). %% V2 Parameters %% Subjacency Bounding Nodes boundingNode(i2). boundingNode(np).

%% Case Adjacency Parameter no caseAdjacency.

%% Wh In Syntax Parameter no whInSyntax.

%% Pro-Drop 6.863J/9.611J Lecture 22 \$550.































