

CS/ENGRI 172, Fall 2002

11/8/02: Lecture Thirty Handout

Topics: PDA examples; discourse structure.

Announcements: Reminder: the final is scheduled for December 20th, 9-11:30am, Olin 165.

Example PDAs

<i>PDA One</i>	<i>PDA Two (an “optimized” version?)</i>
States: count-a, match-b, matched	States: count-a
Initial state: count-a	Initial state: count-a
Accept state: matched	Accept state: count-a
Input symbols: a, b, \neg	Input symbols: a, b, \neg
Stack symbols: \pm, A, M	Stack symbols: \pm, A
Moves:	Moves:
1. (count-a, a, \pm) \longrightarrow (count-a, AM)	i. (count-a, a, \pm) \longrightarrow (count-a, $A\pm$)
2. (count-a, a, A) \longrightarrow (count-a, AA)	ii. (count-a, a, A) \longrightarrow (count-a, AA)
3. (count-a, b, A) \longrightarrow (match-b, pop)	iii. (count-a, b, A) \longrightarrow (count-a, pop)
4. (match-b, b, A) \longrightarrow (match-b, pop)	
5. (match-b, \neg, M) \longrightarrow (matched, M)	iv. (count-a, \neg, \pm) \longrightarrow (count-a, \pm)

Examples of discourse phenomena

Recency and agreement constraints. Adapted from Sidner (1979).

1. Wilbur is a fine scientist and a thoughtful guy.
2. He sent me a really interesting book by surface mail a while back.
3. It was mostly about “sideways” quarks,
4. which are completely bizarre —
5. they’ve led to the development of a weird new theory of counter-intuitionistic physics.
- 6’. Anyway, I finally got it while I was writing up my thesis.
- 6’’. I finally got it while I was writing up my thesis.
- 7’. They’ve been fundamental to understanding the “new relativity”.

The role of intentions. From Grishman (1986), pg. 157.

- A: Do you know when the train to Boston leaves?
 B: Yes.
 A: I want to know when the train to Boston leaves.
 B: I understand.

Incoherence. Cited in Grosz and Sidner (1986) as appearing in Polanyi and Scha, “forthcoming”.

1. John came by and left the groceries.
2. Stop that you kids.
3. And I put them away after he left.