Topics: The Grosz and Sidner theory of discourse structure.

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

The Grosz and Sidner theory

This theory, proposed by Barbara Grosz and Candace Sidner in “Attention, Intentions, and the Structure of Discourse” (Computational Linguistics 1986), posits three components of discourse structure:

1. **Linguistic**: groupings of the utterances into *discourse segments*. Each discourse segment corresponds to a *discourse segment purpose* (DSP), the intention that the speaker *wants the other conversational participant(s) to recognize*.

2. **Intentional**: relations between DSPs:
   - *domination*: satisfaction of one DSP furthers another DSP;
   - *sat-precedence*: satisfaction of one DSP must precede the satisfaction of another DSP.

   The intentional structure defined by these two relations can be represented by a partially-ordered tree. *Cue phrases* aid the recognition of this structure.

3. **Attentional**: groupings of discourse entities into *focus spaces*, indicating a *salience ordering*. The focus spaces for active discourse segments are maintained on the *focus stack*.

(OVER)
MR. ASHLEY: Welcome to the ACM chess challenge. I’m Maurice Ashley. My partner is Yasser Seirwan. Garry Kasparov is playing against IBM’s Deep Blue, and as most everybody here knows, he is down 1 nothing already. So Kasparov needing to play well in order to come back. A big question for him is whether or not he can handle the psychological pressure of being down against the computer that, first of all, everybody thought he was going to beat, including himself and, second of all, he simply has no idea how strong it is because this version that they’re using has never been tested and is clearly playing some excellent chess.

Yasser, yesterday’s game was a model of computer cold-bloodedness.

MR. SEIRAWAN: Precision.

MR. ASHLEY: It just did not care about Kasparov’s attack and just ripped him off the board. It was unbelievable.

MR. SEIRAWAN: It’s terrible. I’m still recovering.

(Laughter.)

MR. SEIRAWAN: Actually, prior to the match I had said, okay, it’s great. This is wonderful. There’s a lot of hype, the best computer the world versus the best human player in the world. Well, it’s no contest. Garry is going to just win. And I would be shocked, shocked if the computer won any game. So naturally --

MR. ASHLEY: So you’re in shock.

MR. SEIRAWAN: I’m in shock.

So naturally Deep Blue won the first, and just as you were saying, Maurice, I can’t fault any single move that the computer made.

We had dinner last night together with a group of ourselves, and we just kept going through the game at various stages, and we said, this is a very, very serious opponent for Garry. This is a very legitimate match, and of course now that Garry is down a point, he’s got to prove himself. Yesterday I had spoken about the fact that in tennis -- and again I’ve probably misattributing the quote. It was of Rod Laver, when he was going to sum up his opposition, he said, I only need to see 3 shots. I need to see the forehand, backhand and the serve, and then I will tell you how long or how many sets the match is going to last before I win.

And Garry said the same thing on Friday at the press conference. He said basically I need to see the computer on offense, on defense, and then the match is going to be mine. So he basically saw the first 2 games as just being his ability to sum up his opponent and then vanquish him in the latter half of the match.

Well, that may still work, but he’s got his work cut out for him. He’s made it more difficult for himself.

MR. ASHLEY: What about the psychological pressure on him? From what I’ve seen, I’ve seen Kasparov down in matches before. He was down against Anand in game 9. He was down against Kramnik in the Paris leg of the Gran Prix tournament and came back and won. In each case Kasparov seems to bounce back from matches. He is not just the kind of guy who goes down in chess games and falls apart.