General Linguistics Jennifer Spenader, February 2006 (Some slides: Petra Hendriks)

Levels of language

Text/Dialogue	\Rightarrow	Pragmatics	(lecture 11)
Sentences	⇒	Syntax	(lectures 5 en 6)
		Sentence semantics	(lecture 10)
Words	⇒	Morphology Lexical semantics	(lecture 4) (lecture 9)
Syllables	\Rightarrow	Phonology	(lecture 3)
Sounds	⇒	Phonetics	(lecture 2)
	Sentences Words Syllables	Sentences \Rightarrow Words \Rightarrow Syllables \Rightarrow	Sentences⇒SyntaxSentence semanticsWords⇒Morphology Lexical semanticsSyllables⇒Phonology

Structure of lecture

- 1. What is pragmatics
- 2. Context dependent form and meaning
 - 1. Deixis: directly coded context-dependent meaning
 - 2. Anaphoric expressions
 - 3. Information structure
 - 4. Discourse Topic
- 3. Inferences
 - 1. lexical based inferences
 - 2. rhetorical/discourse structural based inferences
 - 3. presuppositions
 - 4. conversational implicatures

- Semantics = study of meaning
- Pragmatics = study of the meaning of expressions in a certain context or use

• The distinction between semantics and pragmatics isn't always easy to determine

- Pragmatics deals with cases where
 if **the context** is changed, then
 - production must be changed
 - the earlier form is no longer appropriate
 - interpretation changes
 - the form gets a different meaning in a different context
 - non-linguistic knowledge encroaches on linguistic knowledge

- Contextual dependence
- Anaphora
- Information structure
- World knowledge-dependent interpretations
- Presuppositions
- Conversational strategies

Form or meaning affected by context

Context dependent form and meaning

- Deixis: directly coded context-dependent meaning
- Anaphoric expressions
- Information structure
- Discourse Topic

What is context?

- The context of an utterance is:
 - the time and place of an utterance
 - the speaker and addressee(s) and their relationship
 - the current discourse topic
 - the previous utterances
 - the knowledge shared by the conversational participants
 - world knowledge
 - specific, personal knowledge

Deixis

- Linguistic references to a space and time
 - Gert isn't here.
 - On Tuesday John said he'd finish his homework by the next day.
 - Depending on where and when these are said they get different interpretations
- Deictic expressions
 - here, there, now, then, before, come, go
 - Can you come here?
 - Can you go there?
 - *Can you come there?
 - The appropriate form is dependent upon the position of the speaker.

Person deixis

- current speaker, addressee(s) and others
 e.g. I, you, we, they, he she it
- Inclusive and exclusive "we"
 - Ethiopian Omotic language Zayse
 - núy: inclusive- "we"
 - níi: exclusive- "we"

Social deixis

- The relationship between the speakers determines the possible linguistic forms
- Je/U, Sie/Du, Tu/Vous

Japanese: Even the form of verb changes according to relationships

- (6) Tanaka-sensei ga kudasaimashita. Prof. Tanaka gave it to me.
- (2) Tanaka-san ga kudasatta.

Mr. Tanaka gave it to me.



Anaphors

- Anaphors are words whose interpretation is dependent on another element in the linguistic context
- Anaphors form a well-known problem for compositionality
- Because anaphors are very frequent, anaphor resolution (determining what the referent of an anaphoric expression is) is a major problem in NLP work.

Anaphor + antecedents

- An antecedent is a linguistic expression that refers to the same referent that the anaphoric expression does
- Determining the antecedent of anaphoric expressions = anaphor resolution

Simple anaphor resolution



- (1) John loves Rita. **He** asked **her** to marry **him**.
- Antecedent should match anaphor in features, e.g. number and gender
- Recency: most recent referents are more likely to be antecedents
- Parallel structure often maintained.
 - same topic from one sentence to next

Harder anaphor resolution



- (1) John thinks his son Mike should get married. Rita would make a nice daughter-in-law. He asked her to marry him.
- Finding the correct antecedent is sometimes much harder than just matching features!

Anaphors and world Knowledge

Anaphor resolution is sometimes dependent on knowledge of the world:

- De rechter wees het verzoek van de gevangene af omdat <u>hij</u> voorzichtig was.
- De rechter wees het verzoek van de gevangene af omdat <u>hij</u> gevaarlijk was.

Information structure

Forms of noun phrases dependent on information status of referent in discourse:

- 2. <u>De</u> vrouw staat voor <u>de</u> deur.
- 3. <u>Een vrouw staat voor de deur.</u>
- 4. Een man kwam in de café. Een man bestellde een amsterdamertje.

Focus

(1) It was John who brought licorice to class.

- background: we know someone brought licorice to class
- focus: John did it

Some words "associate" with focus, e.g. "only" (2) John only introduced **Bill** to Sue "The only person John introduced to Sue is Bill." (He might have introduced Bill to other people) (3) John only introduced Bill to **Sue.** The only person John introduced Bill to is Sue." (He might have introduce other people to Sue)



Discourse topics

An important concept is *topic* : What a text or sentence is about.

- De politie achtervolgde de tassendief.
- De tassendief werd achtervolgd door de politie.

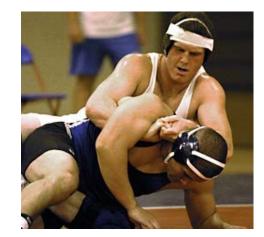
The subject of the sentence is often the topic.

Discourse as context From Anderson et al. (1977)



A Prisoner Plans His Escape

Rocky slowly got up from the mat, planning his mistake. He hesitated a moment and thought. Things were not going well. What bothered him was being held, especially since the charge against him had been weak. He considered his present situation. The lock that held him was strong, but he thought he could break it. Perceived topic guides interpretation



A Wrestler in a Tight Corner

Rocky slowly got up from the mat, planning his mistake. He hesitated a moment and thought. Things were not going well. What bothered him was being held, especially since the charge against him had been weak. He considered his present situation. The lock that held him was strong, but he thought he could break it.

Background knowledge



- 1. John chased the dog with the stick.
- 2. John chased the dog with the bone.
- 3. John chased the dog with the broom.
- 4. John chased the dog the trombone.
- 5. John chased the dog the white tail.
- 6. John chased the dog the pointed ears.
- 7. John chased the dog black spot.
- 8. John chased the dog wound.
- Kess & Hoppe: Structurally there should be ambiguity in all the sentences, but only the first sentence is ambiguous.

Inferences

• Inference:

 the reasoning involved in drawing a conclusion or making a logical judgment on the basis of circumstantial evidence and prior conclusions rather than on the basis of direct observation (WordNet)

• Types of inferences

- lexical inferences, e.g. bridging
- inferences about rhetorical relations
- presuppositional inferences
- conversational implicatures

Inferences

Bridging Inferences

(1) I looked into the room. **The ceiling** was very high.

Inferences about rhetorical relations

(2) John fell. Mike pushed him.

Inference > Mike fell BECAUSE John pushed him. **EXPLANATION-**RELATION

(3) China violates human rights every day and the U.S. continues to trade with them. CONTRAST-RELATION



"and" vs. "but"

 It was Saturday. Sven wanted to buy a bottle of wine, and it was after 3PM.
 It was Saturday. Sven wanted to buy a bottle of wine, but it was after 3PM.

What is said vs. what is meant



A: Heb je zin om vanavond mee naar de bioscoop te gaan?

B: Ik moet studeren voor een tentamen.

Presuppositions

Some sentence have certain assumptions "baked in" :

(1) Jan is gestopt met roken.

>Presupposition: Jan smoked at a time previous to the time of the utterance
(2) Jan gaf toe dat hij gespiekt had.
>Presupposition: Jan cheated

• A presupposition is part of the meaning of a sentence that must be true for the sentence to be interpreted

Presuppositions (2)

• Presuppositions are insensitive to logical operators, e.g.

(1) Jan is niet gestopt met roken.

>>Presupposition: Jan smoked at a time previous to the time of the utterance

(2) Misschien gaf Jan toe dat hij gespiekt had.

>>Presupposition: Jan cheated

Conversational strategies

• The Co-operative Principle (Paul Grice):

- Make your contribution appropriate to the conversation.
- This principle makes sure that we can understand dialogues where responses seem to be inappropriate

Conversational implicature: What is meant (different from what is said)

Quality

- Maxim of Quality
 - Try to make your contribution one that is true, i.e.
 - a. do not say what you believe is false
 - b. do not say that for which you lack adequate evidence

(1)

- A: Hoe is het weer vandaag?
- B: Het sneeuwt.
- A assumes that B is telling the truth.

Manner

Maxim of Manner:

Be perspicuous, and specifically:
a. avoid ambiguity
b. avoid obscurity
c. be brief
d. be orderly

(1) A: Dat is de man met wie Marie samenwoont.
+> Implicature: this man isn't Marie's husband

Relevance

- Maxim of relevance:
 - Make your contributions relevant.

(1) A: Heb je zin om vanavond mee naar de bioscoop te gaan?
B: Ik moet studeren voor een tentamen.
+> Implicature: I can't come.

- (2) A: Can I borrow 5 Euros?
 - B: My purse is in the hall.

+> Implicature: Yes, get it yourself. (from Saeed)

Maxim of quantity

- Maxim of Quantity
 - Make your contribution as informative as required for the current purposes of the exchange (i.e. not more or less informative).
- A: Waar woont Marie?
- B1: In de Nieuwe Kijk in 't Jatstraat.
- B2: In Groningen.
- B3: In Nederland.
- B4: Op aarde.

Quantity

- (3) A: Did you read the chapters for this week's lectures?
 - B: I intended to.
 - +> Implicature: No.
- (2) Some of the students failed the exam.

+> Implicature: Not all of the students failed the exam.

Scaler implicatures: <All,Some>

Breaking Maxims

- Conversational maxims can be broken to achieve a certain effect, such as e.g. irony
 - His talk was the best I'd ever heard!
 - (after a very bad talk)
- Additionally, there is a certain tension between the maxims: if a speaker is retain quality, he or she might not be as informative as necessary,

e.g.

- A. Do you know Jennifer's new address?
- B. I know she lives in Helpman.
- +> I don't know exactly, but its better to be truthful and break quantity than to break quality

Implicatures everywhere?

- Hirschberg (1985) implicatures more general
- (3) A: Did you get Paul Newman's autograph?
 B: I got Joanne Woodward's
 +> Not Paul Newman's
- (2) A: Do you speak Spanish?B: I speak Portugese.+> I don't speak Spanish.

Next time...

- Psycholinguistics and Neurolinguistics:
 - language processing!