Einführung in Pragmatik und Diskurs

Reference and "Activation Status"

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Introduction

- Utterances in discourse change the context
- Context $\approx$ common ground/knowledge, shared information etc.
- The form of linguistic expressions reflects the state of the discourse context
- Discourse model: representation of the discourse context (common ground)
  - discourse referents
  - "information about" discourse referents

Reference Terminology

- Reference: the process in which a speaker uses a referring expression to denote an entity (Sidner 1983)
- Referring expression: an expression used by a speaker to denote an entity
- Referent: the entity a speaker refers to by using a referring expression
- Entities in "real" world vs. entities is a mental model vs. discourse referents, i.e., representations of entities in a discourse model
- Discourse model (Webber 1979, 1998) contains discourse referents, i.e., representations of entities referred to in the discourse, and relations between them

Discourse Model Dynamics

Referring expressions in discourse

- evoke (introduce) "new" discourse referents
- access "old" discourse referents

Linguistic Forms

There is a variety of linguistic forms that can be used to refer to or describe entities, e.g., various types of noun phrases:

- definite NPs: *the N*
- demontrative NPs: *this/that N*
- indefinite NPs: *a/some/one N, Ns*
- quantified NPs: *every/five N, . . .*
- personal pronouns: *it, she . . .*
- proper names: *John*

Reference and Linguistic Form

Typically,

- Indefinite noun phrases introduce new discourse referents
- Definite noun phrases and pronouns access old discourse referents

(1) Jan hat eine Katze und einen Hund. Die Katze ist wählerisch. Sie frisst nur frische Fleisch.

But, definite noun phrases and pronouns can also introduce new discourse referents:

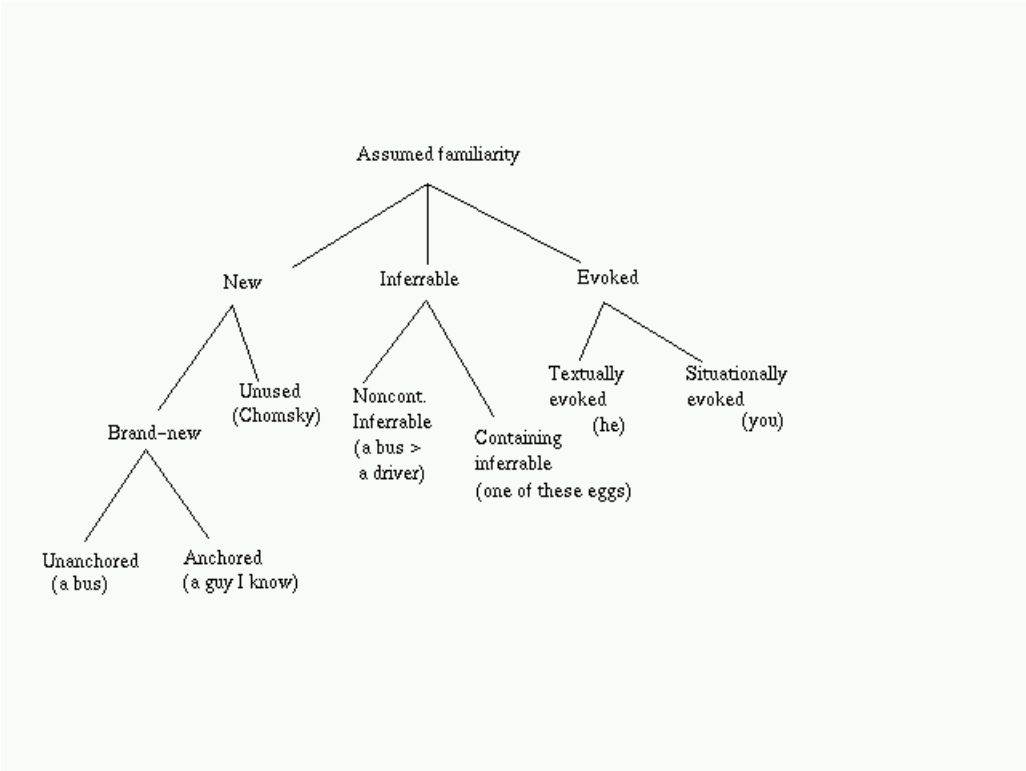
(2) Jan ginge am Samstag zu eine Hochzeit. Das Paar sah ser gut aus. Sie trug ein traumhaftes Kleid, und er einen schicken Anzug.

Prince's taxonomy of assumed familiarity

- *brand new*: create a new discourse referent for a previously unknown entity
- *unused*: create a new discourse referent for a known entity
- *inferable*: create a new discourse referent for an inferable entity
- *evoked* (textually or situationally): access an available discourse referent

Familiarity scale:
$E/E^S > U > I > I^C > BN^A > BN$

Prince's Taxonomy



Prince's Taxonomy: Examples

Brand new *I bought a dress.*
(Hearer creates a new entity in DM)

Unused *Chomsky is famous.*
(Hearer moves entity to DM.)

Inferrable *I went to the postoffice and the cleck sold me a stamp.*
(Hearer infers entity from an entity in DM.)

Containing Inferrable *One of these eggs is rotten.*
(Hearer infers entity from an entity denoted by containing NP.)

Textually evoked *Sue went to see her grandma and the sweet lady baked a cake for her.*

(Entity is already in DM because speaker gave hearer an instruction to put it there.)

Situationally evoked *The whiteboard is dirty.*

(Entity is in the situational context.)

Prince's Taxonomy: Explanations

Familiarity scale: $E/E^S > U > I > I^C > BN^A > BN$

This scale can give rise to implicatures based on Grice's Maxim of Quantity, i.e., the use of a weaker expression impli cates that the stronger expression would not have been appropriate/possible.

(3) a. He
b. Manfred
c. Prof. Manfred Pinkal
d. One of the people at Coli
e. A person that works at Coli
f. A person I know
. . . won the Leibnitz Prize.

Prince's Taxonomy: Explanations

In informal conversational discourse, a tendency has been observed (in English) to reserve subjects for entities with higher familiarity; speakers use constructions which enable them to *keep entities with low familiarity out of subject position*

(4) "run-on"

a. I had **a little boy, black, about ten years old**, **he** . . .

b. There's **some male beauty shops**, **they** . . .

(5) "deletion of subject relative markers"

(4) We got a lot of **fancy Cadillac cars** don't tip.

(5) I had **a great-great-great-grandfather or something** fought that Revolution.

(6) There was **a piece of four-inch bone** never mended.

Chafe's Taxonomy

- "knowing something and thinking something are different mental states"
- "not only being aware, but having easy access to a mental representation is important for interpretation"
- cognitive states of concepts in hearer's consciousness at utterance time:
  - active
  - semi-active (accessible)
    - textual: deactivation
    - inferential: from cognitive schema
    - situational: presence in external world
  - inactive

- correlations between cognitive states and verbalization
  - active: pronominal coding, lack of pitch accent
  - inactive: full lexical coding, accentuation

Gundel's Givenness Hierarchy

	Cognitive Status	Ling. Form
1	in focus	*it*
2	activated	*that, this, this N*
3	familiar	*that N*
4	uniquely identifiable	*the N*
5	referential	*an N, this N*
6	identifiable type	*an N*

Claims:

- $1 \supset 2 \supset 3 \supset 4 \supset 5 \supset 6$
- The cognitive status of an item is a necessary and sufficient condition for the use of the corresponding ling. form.

Gundel's Givenness Hierarchy: Examples

Identifiable type H knows the meaning of the type being used; she can access a representation of the type described by N.

I couldn't sleep last night. A rabbit kept me awake.

Referential S refers to specific entity. H does not know which.

I couldn't sleep last night. A rabbit kept me awake.

Uniquely identifiable H can identify the S's intended referent.

I couldn't sleep last night. The rabbit kept me awake.

Gundel's Givenness Hierarchy: Examples

Familiar H uniquely identifies the intended referent because she has a representation of it in memory.
I couldn't sleep last night. That rabbit in the garden kept me awake.

Activated H has a representation of the intended referent in short-term memory.
I couldn't sleep last night. That kept me awake.
"That" = e.g., the rabbit's gnawing on carrots occurring at utterance time.

In focus (center of attention) H has a representation of the intended referent in the center of attention in short-term memory.
I couldn't sleep last night. That rabbit in the garden kept me awake. It gnaws very loudly.

Predictions of Gundel's Givenness Hierarchy

1. A particular ling. form is inappropriate if the required cognitive status is not met.
2. A form corresponding to a weaker cognitive status than the referent actually has can be used (e.g., *the N* for an entity in center of attention).

Tested and mostly verified on naturally occurring discourse for Chinese, English, Japanese, Russian and Spanish (the hierarchy has been tailored to the specifics of each language, e.g., Russian has no articles).

What where the failures like?

Predictions of Gundel's Givenness Hierarchy

Prediction 1:

All but few occurrences meet the necessary condition.

When not, two things are happening:

- H fails to identify the intended referent (and asks for clarification)
  A. *Do these go in here?* B. *These?*
  (The referent of "these" was not activated.)
- H accommodates to be able to associate the correct referent with the form
  A. *Barb has it. I suspect she was a cat in some previous life. Oh, did I tell you that* ***they*** *have a cat?*
  (Barb's family was not in focus.)

Predictions of Gundel's Givenness Hierarchy

Prediction 2:

Although it is confirmed that forms coding weaker status can be used, the distribution varies across different statuses for the various forms.

- Demonstrative pronouns (2) are rarely used for referents in center of attention (1).
- Demonstrative NPs (2,3) are rarely used for familiar referents (3).
- No occurrences of indefinite NPs (6) for referents with higher status than referential (5).

What explains this?

Conversational implicatures!!!

Failures of Predictions Explained

Maxim of quantity (Grice 1975)

- Q1: Say enough.
- Q2: Do not say too much.

Scalar implicatures: based on an entailment scale

- Q1: Use of weaker form implicates that stronger form does not hold:

  1. Use of indefinite (6) implicates referent not uniquely identifiable (4).

     Jon is meeting a woman tonight.

  2. Use of demonstrative pronouns (2) implicates referent not in center of attention (1).

Going back from the kitchen is a little hallway and across from the kitchen is a big walk-through closet. On the other side of {*that/it*} *is another hallway.* (kitchen is in focus; "that" does not refer to kitchen, "it" does)

- Q2: Use of weaker form implicates that stronger form holds: Use of definite description (4) implicates familiarity (3).

Accessibility vs. Identifiability

Accessibility/Activation "awareness", "easy access" (cf. Chafe)

Identifiability hearer's ability to pick out a particular referent ("file") from among all those which can be designated with a part. ling. expression, and identify it as the one the speaker intends

- no one-to-one correspondence between (non)identifiability and (in)definiteness
- other dimensions: specific vs. non-specific indefinite NPs; generic NPs

Identifiability and activation/accessibility are independent but correlated:

- unidentifiable are outside Chafe's activation parameter (in Prince's taxonomy they can be brand new or inferable)
- identifiable can be inactive, accessible or active

Summary So Far

Taxonomies of Cognitive Status of Discourse Entities

- Chafe 1974, 1976 (see Lambrecht 1994, Ch. 3): predictions concerning correlations between cognitive status (accessibility) of a referent and the ling. form, including prosody
- Prince 1981: predictions concerning speaker's assumptions about hearer's familiarity with the intended referent of an expression, based on its ling. form
- Gundel et al. 1980, 1988, 1989, 1993 etc.: predictions concerning the choice of ling. form for a referent of a given cognitive status (accessibility and identifiability), concentrating particularly on various types of determiners (definite/indefinite article, demonstrative determiners, etc.).

Centering Theory (Grosz, Joshi and Weinstein 1995)

- Attempt to
  - account for attentional limitations of discourse participants: they can only attend to a small number of referents at the same time
  - reduce inference load in the process of discourse interpretation (i.e., more likely candidates for coreference considered first)
- There are local and global aspects of attention centering (e.g., based on overall task structure or communicative goals)
- CT is a computational model of local centering of attention

Centering Theory (Grosz, Joshi and Weinstein 1995)

- each utterance has one backward looking center C_b and an ordered set of forward looking centers C_f
- proposed C_f ordering $Subj < Obj < Other$
  (various other proposals considered in the literature)
- types of center-transitions depending on whether backward looking center is maintained or changed: continuation, retaining, shift
- preference for sequences of center continuation, or smooth (=gradual) shift

Centering Theory

(7) a. John went to his favorite music store to buy a piano.
b. He had frequented the store for many years.
c. He was excited that he could finally buy a piano.
d. He arrived just as the store was closing.

(8) a. John went to his favorite music store to buy a piano.
b. It was a store John had frequented for many years.
c. He was excited that he could finally buy a piano.
d. It was closing just as John arrived.

Summary

- Discourse context is represented in a discourse model (cf. discourse representation structures in previous lecture)
- Discourse model contains representation of entities referred to in discourse (discourse referents) and information about them
- Discourse referents are not all equally accessible: e.g., more recently mentioned ones are more activated
- Even entities that have not been explicitly referred to, but that are known or inferable by the hearer, may become activated
- The choice of linguistic form(s) by a speaker reflects/indicates the assumed degree of activation of the entity she intends to refer to (this is another reflex of the cooperative principle)
- Modeling activation of discourse referents is important for anaphora resolution