Lecture 2

Outline

- IS semantics

- IS realization means

- Entering the IS jungle

IS Semantics

IS-Sensitive Interpretation

- IS semantics using structured meanings (von Stechow, 1990; Jackendoff, 1990; Krifka, 1992; Krifka, 1993)

- Semantics of information packaging using file-change functions (Reinhart, 1981; Vallduví, 1992)

- Semantics of questions in terms of answer-alternative sets (Hamblin, 1973)

- Focus semantics in terms of focus-alternative set (Rooth, 1992)

- Semantics of focus-marked topics in terms of question-alternative sets (Büring, 1997; Büring, 1999)

- Semantics of two-dimensional IS-partitioning in terms of Rheme-alternative set and Theme-alternative set (Steedman, 2000a)

IS and Discourse Dynamics

- IS and the File-Change Metaphor (Reinhart, 1981; Vallduví, 1992)

  Theme : "ushers" hearer to a specific file-card address
  Rheme : provides information to add/modify on the card

- IS-Sensitive Context Update (Strawson, 1950; Krifka, 1993; Kruijff-Korbayová, 1998; Steedman, 2000a)

  $$c_1 \xrightarrow{\theta(\psi)} c_2 \xrightarrow{\rho(\psi)} c_3$$

  Theme-update phase verify Theme presuppositions, restrict context set
  Rheme-update phase assert Rheme

IS Realization

IS Realization Means

- Various means that can be used to realize IS
  (i.e., IS influences various aspects of linguistic form)
  - **intonation** (prosody); e.g., the predominant means in (not only) English
  - (word) **ordering**; e.g. the predominant means in Czech and other Slavic languages, also to some extent in German (particularly in the "Mittelfeld")
  - **morphological/grammatical marking**; e.g., particles 'wa' and 'ga' in Japanese
  - **syntactic constructions**, e.g. it-cleft, wh-cleft, passivization, etc.
  - **ellipsis**
- The means can be used also in combination
- Different languages employ and combine the means differently, depending on their typological characteristics (Vallduví and Engdahl, 1996)

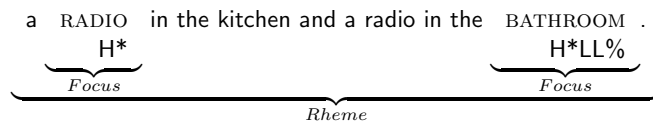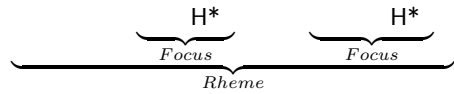## IS Realization Means: Intonation

(Steedman, 2000a) for English; similarly (Uhmann, 1991; Fery, 1993) for German:

- Theme/Rheme partitioning

  - Determines overall intonation pattern
  - Theme and Rheme as one intonation phrase each (boundary between)
  - Theme-accents: L+H*, L*+H   (prototypical Theme-tune: L+H*LH%)
  - Rheme-accents: H*, L*, H*+L, H+L* (prototypical Rheme-tune: H*LL%)

- Background/Focus partitioning

  - Determines placement of pitch accents on particular words
  - Focus: marked by pitch accent
  - Background: unmarked by pitch accent
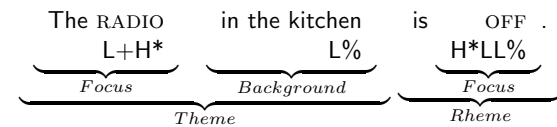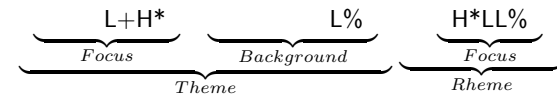
Example from (Kruijff-Korbayová et al., 2003)

(43) U: What does devices are there in the house?
   S: There is a STOVE in the KITCHEN ,
                   H*   H*
                 Focus   *Focus*
                    Rheme

        a RADIO in the kitchen and a radio in the BATHROOM .
          H*   H*LL%
       Focus   *Focus*
                   Rheme

U: What is the status of the kitchen devices?
S: The STOVE in the kitchen is ON .
     L+H*   L%   H*LL%
    Focus   *Background*   *Focus*
            Theme   *Rheme*

The RADIO in the kitchen is OFF .
     L+H*   L%   H*LL%
    Focus   *Background*   *Focus*
            Theme   *Rheme*

IS Realization Means: Word Order

"Normal" (default) order: Theme before Rheme (and Background before Focus)

(44) What does John write? John writes NOVELS.
                          Theme   *Rheme*
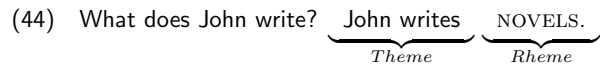
"Subjective ordering" (Firbas, 1971; Firbas, 1992): Rheme before Theme
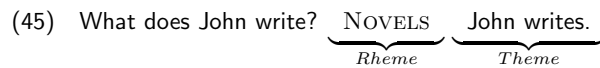
(45) What does John write? NOVELS John writes.
                          Rheme   *Theme*
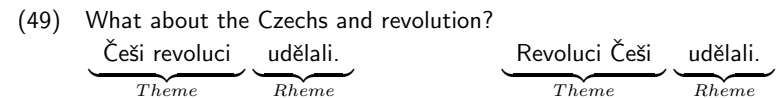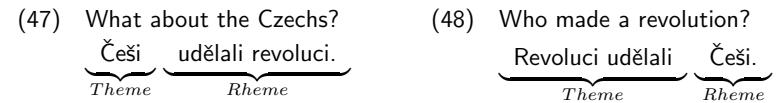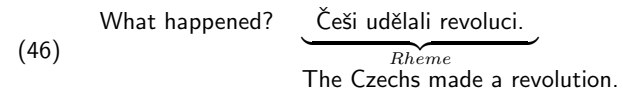   —typically motivated by discourse context

But, any IS-sensitive ordering must respect syntactic constraints!

IS Realization Means: Word Order

WO is (said to be) the predominant IS realization means in Czech ("free WO").

(46) What happened? Češi udělali revoluci.
                              Rheme
                  The Czechs made a revolution.

(47) What about the Czechs?   (48) Who made a revolution?
    Češi udělali revoluci.   Revoluci udělali Češi.
  Theme   *Rheme*   *Theme*   *Rheme*

(49) What about the Czechs and revolution?
    Češi revoluci udělali.   Revoluci Češi udělali.
    Theme   *Rheme*   *Theme*   *Rheme*

IS Realization Means: Word Order

- WO freedom is a matter of degree.

- Even in languages with "fixed" WO, there may be some freedom, e.g.:

(50) German: "free" WO in middle field (*G. Mittelfeld*)

Jan hat Maria GESTERN *gesehen.*   *Jan hat gestern* MARIA *gesehen.*
Jan has Maria yesterday seen.   Jan has yesterday Maria seen.

(51) English: some freedom in order of modifiers
   a. John flew from LONDON to Paris.
   b. John flew to Paris from LONDON.

"Topicalization"

Theme before Rheme: German examples from an MP3-WOZ dialogue corpus

(52) *MP3: Was soll mit den Liedern gemacht werden?*
      What should with the songs done become
   What should be done with the songs?

   U: Mit den Liedern soll eine Playlist erstellt werden.
      With the songs should a playlist created become
   The songs should be put in a new playlist.

(53) *U: Bitte suche Titel von Madonna.*
      Please search tracks from Madonna
   Please find tracks by Madonna.

   MP3: Einen Moment ... Von Madonna haben wir 1711 Treffer.
      A moment From Madonna have we 1711 hits
   Just a moment ... From Madonna we have 1711 hits.

Preposing in English

Topicalization   (Ward, 1988; Birner and Ward, 1998)

(54)   G: Do you watch football?
        E: Yeah. *Baseball I like a lot better.*
(55) [. . .] it was necessary to pass, if I was to stay at Oxford, and *pass I did*
(56) [. . .] Humble they may be. But *daft they are not.*

Focus Preposing

(57) I made a lot of sweetbreads. *A couple of pounds I think I made for her.*
(58) I had two really good friends. *Damon and Jimmy their names were.*
(59) I promised my father – *on Christmas Eve it was* – to kill a Frenchman at
     the first opportunity I had.

IS Realization Means: Syntax

Syntactic constructions that change order or provide "bracketing":

- left dislocation
- right dislocation
- cleft
- pseudo-cleft
- argument reversal
- passivization
- dative shift
- there-insertion

Differences across languages!
Differences in contextual appropriateness.   e.g., (Prince, 1978)

Left- and right-dislocation (of Theme):

(60) a. Novels, John writes them.
      b. John writes them, novels.

Cleft: *It is* Rheme *(that/who)* Theme

(61) a. What does John hate? It is COMICS John hates.
      b. Who hates comics? It is JOHN who hates comics.

Pseudo-cleft: *Who/What* Theme *is/are* Rheme

(62) a. What does John hate? What John hates are COMICS.
      b. Who hates comics? Who hates comics is JOHN.

Argument reversal   (Birner and Ward, 1998)

(63) Up in my room, on the night stand, is a pinkish-reddish envelope that has
      to go out immediately.

Passivization: allows opposite ordering than corresponding active sentence

(64) Who hates comics?
      a. Comics are hated by JOHN.
      b.   JOHN hates comics.

Dative shift:

(65) Whom did John give a book?   (66) What did John give to Mary?
      a. John gave a book to MARY.   a. John gave a BOOK to Mary.
      b. John gave MARY a book.   b. John gave Mary a BOOK.

There-insertion: gets Rheme-subject away from the beginning of the sentence

(67) What is in the garden?
      a. There is a TROLL in the garden.
      b. A TROLL is in the garden.

(68) German radio:

      Es   spielt die Tschechische Philharmonie.
      There plays the Czech   Philharmonic

      Now we will be playing the Czech Philharmonic.

      Es   dirigiert Hilary Griffiths.
      There directs   Hilary Griffiths

      It is directed by Hilary Griffiths.

IS Realization Means: Ellipsis

What is "known" (available, retrievable) in context can be left out:

(69)   A: What does John hate?
          B: COMICS.
(70)   A: Who hates comics?
          B: JOHN.

Ellipsis example from the Map Task corpus   (Ericsson, 2006)

(71) G: where are you in relation to the top of the page just now?
      F: Uh, about four inches.
      G: Four inches?
      F: Yeah.
      G: Where are you from the left-hand side?
   F: About two.

IS Theories

IS Theories

Phenomena known at least since mid 19th century (France, Germany)
Since then, essentially three classes of theories:

1. IS is described from the viewpoint of semantics, in a "degrammatized" way —mostly theories following up on Karttunen, Cresswell, von Stechow . . .

2. Only the realization of IS (syntax, intonation) is described —mostly Generative Grammar-based theories, following up on Chomsky, Bolinger . . .

3. Theories that stress the integration, into a single framework, of the "semantics" of IS and its realization —such as Sgall et al., Halliday, Vallduví, Steedman . . .

The following diagram displays a view of the influences and terminological dependencies in theories of IS, and their links to theories of discourse structure and discourse semantics, as presented in (Steedman and Kruijff-Korbayová, 2001)
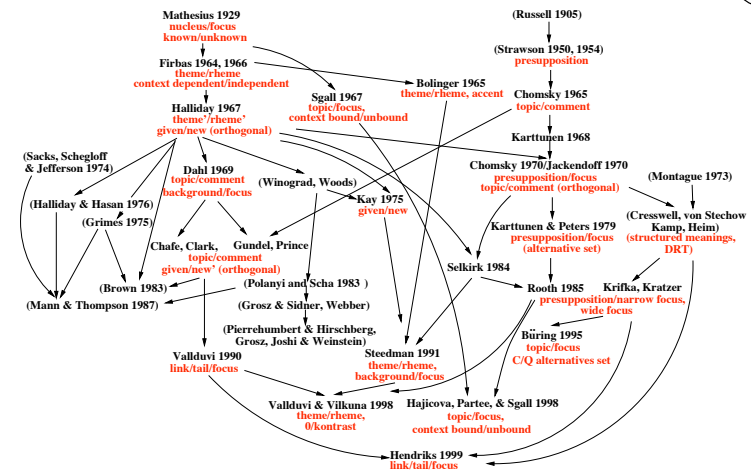
Aligning IS Terminologies

Mathesius, Firbas, Daneš	Theme	vs.	Rheme	
Sgall et al.	Topic (CB)	vs.	Focus (NB)	
	topic proper vs. contrastive topic communicative dynamism		focus proper	
Halliday	[Theme] Given vs. New		[Rheme] Given vs. New	
Chomsky, Jackendoff,	Topic	Comment		
Krifka Rooth	Presupposition	vs.	Focus	
Vallduví	Ground	vs.	Focus	
	Tail vs. Link (Kontrast)			Kontrast
Steedman	Theme	vs.	Rheme	
	Background vs. Focus		Background vs. Focus	

Aligning IS Terminologies

But, be aware of differences concerning:

- Definitions of the IS categories and operational criteria
- Level(s) at which IS distinctions are made, e.g., surface, deep, meaning . . .
- Flexible vs. fixed syntactic constituents, and how do IS components correspond to them
- Multiple "foci", discontinuity of IS components
- Degree of recursivity of IS notions (if any)
- IS-boundary at main clause level vs. "deeper"
- IS in complex sentences

Summary

- utterance meaning is partitioned to reflect the relation of the utterance to the context

- communicating the same propositional content with different IS partitioning typically has a diferent effect on the context

- IS can be realized by a range of linguistic means (depending on language)

- there is a plethora of theories that try to explain IS, its semantics and it realization

- the terminologies are overlapping, and sometimes contradictory