

## Information Structure

Lecture *Advanced Topics in English Linguistics*; Andrew McIntyre

**Information structure (=IS, information packaging):** the arrangement of information in a discourse in order to optimise the transfer of information between the speaker and addressee (=hearer/reader). In particular, it is concerned with the way the speaker's & addressee's respective knowledge affects the presentation of information. Preliminary illustrations:

- (1) *When did Linda throw your books out the window?* Possible/deviant answers:  
a. (She threw them out the window) around noon.  
b. It was around noon (that she threw them out the window).  
d. \*It was Linda who threw them out the window around noon.  
e. \*They were thrown out the window by Linda around noon.

### 1. Basic notions in IS

#### 1.1. Old vs. new information

- ◆ **Old (=given, familiar)** information: is taken by the speaker to be known by the addressee, unlike **new (=unfamiliar)** information.
- ◆ Connection with definiteness (simplified!): definite NPs (e.g. *the/this N*, pronouns) are familiar, indefinite NPs (*a(n)/some N*, no article) are new.

(2) I was sitting in a café. A man and a woman were sitting a few tables away. I heard **the man** say something to **the woman**. Then **she** walked out of **the café**...

- ◆ Two types of newness/familiarity:
  - ◆ **Discourse familiarity: Discourse-old** vs. **discourse-new** info. Discourse-old info can be assumed to be in addressee's consciousness at utterance time. Examples:
    - ◆ Referents mentioned previously in current discourse are discourse-old.
    - ◆ Speaker/addressee (1<sup>st</sup>/2<sup>nd</sup> person pronouns) are discourse-old (since the existence of a discourse implies the existence of speaker/addressee).
    - ◆ Entities normally associated with something previously mentioned are discourse-old:

(3) a. Fred found {**a bottle**/<sup>#</sup>something}. The label looked interesting. He removed the cork.  
b. Ann was in {**her flat**/<sup>#</sup>the city}. The bell rang and she turned on the light.  
c. **Surfing** is a bad idea if the water is full of sharks and the life savers are off duty.- ◆ **Hearer familiarity: Hearer-old** info is familiar to the hearer even if not discourse-old. (Discourse-old entails hearer-old.) E.g. the definites below (interpret discourse-initially):

(4) a. The planet would be fairly cold without the sun.  
b. The minister for health just resigned from the government.- ◆ There is a tendency to express old info using shorter forms (notably proforms, ellipsis).

#### 1.2. Topic vs. comment

- ◆ **Topic:** what the sentence is about; the rest of the sentence is a **comment** on the topic.
- ◆ Expressions overtly marking a constituent as a topic:

## Information Structure

- (5) **As for** Egbert, he won't like the café unless they serve pink lemonade there.  
(6) **As far as Mary is concerned**, I think she would be a good candidate.  
(7) **Personally**, I didn't like the film. [seems to topicalise speaker's feelings/opinion]  
(8) **Other topic markers:** *concerning, while on the subject of, speaking of, as far as x goes*

- ◆ Topics are also recognisable in answers to requests for information about someone/sth.:

(9) -Tell me about Jane. - She<sup>topic</sup> went to Africa.
- ◆ Another test for topichood: **cataphoric** pronouns (pronouns whose antecedent is *after* them, rather than before them (as with *anaphoric* pronouns)):

(10) Because **he** was so pushy, I told **the salesman** to go away.
- ◆ There is a tendency (often overridden) for the subject of a sentence to be its topic (cf. etymology of *subject* in this sense). Examples:

(11) a. Mary has a car. b. The car belongs to Mary.  
(12) a. The dog is on the sofa. b. The sofa has a dog on it.
- ◆ In other languages, topics are marked with special morphemes (Japanese) or by being in a particular position (adjacent to the verb in Hungarian, Basque).
- ◆ **Problem:** The notion *topic* is often hard to define. There is disagreement on whether every sentence has a topic, and whether a sentence can have more than one topic.

(13) -What happened next?  
-A picture fell off the wall and hit the vase.

### 1.3. Focus vs. background/presupposition

- ◆ An expression is in **focus** if the speaker is choosing it from among a (possibly infinitely large) set of alternatives, thereby contrasting it with them. English marks focus with stress.
- ◆ Examples of contexts involving focus:
  - ◆ Answering constituent questions:

(14) Who did you give the book to? -I gave it to JANE.  
(15) When did you read *Hamlet*? -I read it LAST YEAR.
  - ◆ Focus with corrections:

(16) *Stan loves Fran*. - No, *Stan loves ANN*.
  - ◆ **Polarity focus (=verum focus):** truth/falsehood of a proposition is focussed (rebutting (potential) contradiction) by stressing auxiliary, negation or affirmative particle:

(17) There ARE Martians. I DID see one, and it WILL visit me again.  
(18) You did NOT see a Martian! - I did SO see a Martian!
  - ◆ Focus with **focus-sensitive particles:** The item in the scope of the particle (i.e. what it refers to) is contrasted with/compared to others, hence focussed, hence stressed.

(19) ONLY/MERELY/JUST: indicate that background holds exclusively for focussed element:  
a. Elvis only copied an article on POLITICS. [as opposed to the one on PHYSICS]  
b. Elvis only copied an ARTICLE on politics. [not a BOOK]  
c. Elvis only COPIED an article on politics. [as opposed to actually READING it]

- (20) ALSO, LIKEWISE: indicate that background holds for focussed item in addition to others:  
 a. Elvis also copied an article on POLITICS. [plus stuff on other subjects]  
 b. Elvis also copied an ARTICLE on politics. ...  
 c. Elvis also COPIED the article on politics.
- (21) EVEN: indicates that background unexpectedly holds for focussed element:  
 a. Elvis even copied an article on POLITICS. [expected that Elvis copied articles on other subjects, but politics was not among them]...
- ◆ Multiple focus is possible. E.g. focus on item in scope of a focus-sensitive particle co-occurring with another focus (Pullum/Huddleston 2002:589):
- (22) Only KIM preferred the ORIGINAL version.
- ◆ The non-focussed part of the sentence is called either **background** or **presupposition**. A presupposition is a background assumption which remains true regardless of negation, e.g. (23). Background material behaves like presupposition in this respect, cf. (24).
- (23) a. He didn't manage to poison anybody. [Presupp: He tried to poison somebody]  
 b. He didn't know that she left. [Presupp: She left]  
 c. The present king of France is bald. [Presupp: There is presently a king of Fr.]
- (24) a. He didn't throw a BOOK in his bag. [Presupp: He threw something in his bag]  
 b. He didn't throw a book in his BAG. [Presupp: He threw it into something]  
 c. He didn't THROW a book in his bag. [Presupp: He did something which caused the book to enter the bag, e.g. he placed/kicked/dropped it in there]
- ◆ In English, focus can be marked by stress on a particular syllable in the focussed constituent (often the strongest syllable in the last word in the constituent). This rule sometimes leads to ambiguities in what is focussed (one speaks of *focus projection* when the accent is not marking the smallest possible constituent):
- (25) a. What did she buy a book about? – She bought a book about [focus ARchitecture]  
 b. What did she buy? – She bought a [focus book about ARchitecture]  
 c. What did she do? – She [focus bought a book about ARchitecture]
- ◆ Focussed constituents aren't stressed in writing, which can cause misunderstandings. The following is a translation of an example from Krifka; stress on *total* would render it focussed, hence contrasted; the obvious choice for alternative is chairman's salary as topic, hence no contradiction between sentences:
- (26) *The chairman's salary last year was 900 000 Euro. His total earnings depend on the firm's profits and can amount to several million.*
- ◆ Other cases where focus crucially affects meaning ((28)-(31) from Krifka):
- (27) Employees of this company are only allowed to wear BLACK shoes.  
 → Focus on *black* (ignoring fairly perverse interpretations...)
- (28) a. In English orthography, a B always follows a Q. [true]  
 b. In English orthography, a U always follows a Q. [false]
- (29) Fortunately I spilt WHITE wine on the sofa.
- (30) [Sign in shopping mall:] Dogs must be CARRIED.
- (31) [Sign in library:] Please speak QUIETLY

#### 1.4. Are the dichotomies old-new, focus-background, topic-comment the same?

It is not always true that old=background=topic and new=focus=comment:

- ◆ It is often the case that only part of the comment is in focus.
- (32) a. As for Svetlana, she works in the OFFICE on weekends.  
 b. As for Svetlana, she works in the office on WEEKENDS.
- ◆ Comment can be old info:
- (33) Basil didn't see the report, and as for Francine, she didn't see it either.
- ◆ Focus inside topic:
- (34) Speaker A: *Tell me about the wives of Henry VIII*  
 Speaker B: *Well, [his FIRST<sub>focus</sub> wife]<sub>topic</sub> found herself in an unfortunate situation...*
- ◆ Focus needn't be new information:
- (35) Did Francine or Gwendoline write the letter? – FRANCINE wrote it.

#### 1.5. Theme vs. rheme

- ◆ Terms corresponding to either topic/comment or new/old. Not common nowadays.
  - ◆ Don't confuse *theme* in IS sense with the thematic role *theme*, though perhaps there is a connection when *theme* is an argument of a PP or AP in cases like the following:
- (36) a. The food made John sick. [John topic commented on by AP]  
 b. They left John in the garden. [John topic commented on by PP]

#### 1.6. Heaviness

- ◆ Heaviness is not an information-structural notion, but is discussed here because it is potentially confused with other info-structural notions like newness, focus.
  - ◆ Heaviness is particularly relevant for *heavy NP shift*, an exception to the rule that NP complements of verbs must be next to the verb:
- (37) a. He performed at the concert [NP one of the hardest pieces of piano music ever written].  
 b. He performed [NP one of the hardest pieces of piano music ever written] at the concert.  
 c. \*He performed at the concert [NP a sonata].
- ◆ Heavy information is more likely to be new, as old info can be expressed using short expressions like pronouns. But heavy NP shift requires heaviness, not newness.

#### 1.7. Generalisations about IS and word order

- I. If possible, given information precedes new information.
- II. Topic comes before comment where possible.
- III. Focus is by preference towards the end of the clause.
- IV. Heavy constituents are put as late as possible.
- V. **Non-canonical (=marked)** syntactic constructions are typically chosen in response to the above IS factors.

Marked construction	Example	Parallel unmarked sentence
Passive	The patient was treated by the doctor.	The doctor treated the patient.
NP preposing	Such behavior I won't tolerate.	I won't tolerate such behavior.
Locative inversion	Into the room ran some llamas.	Some llamas ran into the room.
Left dislocation	Businessmen, they drink my wine.	Businessmen drink my wine
Right dislocation	They shot him, the poor bastard.	They shot the poor bastard.
<i>It</i> -cleft	It was his hairstyle that they disliked	They disliked his hairstyle.
<i>Wh</i> -cleft	A brain transplant is what he needs.	He needs a brain transplant.

- ◆ We later look at some of these constructions, showing how they reflect the above principles.
- ◆ Notice that these non-canonical constructions are one source of exceptions to the generalisation that the arguments of a head are directly adjacent to it.

## 2. How information structure affects the use of particular constructions

### 2.1. Passive

- ◆ Normal active sentences mostly have paraphrases with either agentive or agentless passive:
 

(38) a. ACTIVE: Grandma played the drums.  
 b. AGENTIVE PASSIVE: The drums were played by Grandma.  
 c. AGENTLESS PASSIVE: The drums were played.
- ◆ Agentless passives: speaker doesn't know/care who the agent is, or doesn't want to say.
- ◆ Agentive passive is used in response to information-structural factors.
  - ◆ Subjects of agentive passives are mostly definite, hence old info:
- (39) a. {The/\*A} computer was bought **by Mary** yesterday.  
 b. A computer was bought for the institute yesterday.
  - ◆ Studies of real language use indicate that when a direct object is referred to in a subsequent sentence, it is more likely to be expressed as a passive subject than as an object, e.g. (a) below is more likely to be continued with (b) than with (c).
- (40) a. I saw a documentary about Uganda last night...  
 b. ...The documentary was made by a journalist who spent two years there.  
 c. ??...A journalist who spent two years there made the documentary.
- ◆ Thus, agentive passives require their subjects to be topics and discourse-old, and the agent (in the *by*-phrase) to be discourse-new, conforming to generalisations in §1.7.

### 2.2. Constructions with subjects after the verb

- ◆ Constructions with subject after the verb, and some other element (a PP or an expletive subject) occupies the subject position. We discuss two examples.

### Information Structure

- ◆ **THERE-INSERTION:** Expletive *there* in subject position. Subject NP appears later in the clause. The NP is new information, since its existence is being asserted. It shows the 'definiteness effect', it can't be definite (since it is new).
 

(41) a. There is a cow in the kitchen.  
 b. \*There is the cow in the kitchen.  
 c. ??A cow is in the kitchen.

(42) a. There is {a/\*the} solution.  
 b. \*A solution is there. [judgments hold for meaningless *there*]

(43) a. There is someone knocking on the door.  
 b. Someone is knocking on the door.

(44) a. There was {a/\*the} student arrested.  
 b. {A/The} student was arrested.

- ◆ **LOCATIVE INVERSION:** PP appears in subject position instead of NP.

- (45) a. In Grandma's garden stood a 3-metre statue of Elvis Presley.  
 b. Down the Hill ran a herd of llamas.

- ◆ Inversion of normal order marks the preposed constituent as at least as old as the postposed one (e.g. Pullum/Huddleston 2002:1386). E.g. (a) above no good if statues have been mentioned but garden hasn't.

### 2.3. Topicalisation

- ◆ **Topicalisation** (=preposing, fronting) of complements of V: movement of phrase out of complement position in VP to the front of the sentence, leaving a gap. Contrast to left-dislocation, in which gap is filled by a pronoun:
 

(46) a. TOPICALISATION: Mary I didn't speak to \_\_\_  
 b. LEFT DISLOCATION: Mary I didn't speak to her
- ◆ Topicalised phrase must be old info, and contrastive. Rest of the clause is presupposed.
 

(47) *Did you see a dog in the garden?* - A dog I didn't see. [entails he saw sb./sth. else]

(48) Do you like Mary's brothers? - John I like. Dave I hardly know.

(49) [on telephone] *Hi, it's me. What are you doing now?*  
 a. *I'm reading a book.*  
 b. \*A book I am reading.

(50) *What are you reading?* - \*A book I'm reading.

(51) *Are you reading a book?* - A book I'm NOT reading.

### 2.4. *It*-clefts

- (52) *It was the boss that I spoke to, and it was him who told me the news.*
- (53) *It was the fact that he was wearing a pink jumpsuit that didn't please the boss.*
- ◆ Clefted constituent (underlined) may be new, but sometimes old.
  - ◆ Clefted constituent is focussed (or contains focus).

- (54) *When did she go to Cambodia?* -  
 a. *It was in 1999 that she went there.*  
 b. *\*It was to Cambodia that she went in 1999.*
- ◆ Relative clause is presupposed:
- (55) It wasn't *War and Peace* that Cyril read last week. [presupp.: Cyril read sth. last week]
- ◆ Focussed constituent is by default interpreted exclusively, i.e. as if modified by *only*:
- (56) It was *John who left*. [suggests that nobody else left]
- ◆ Normally relative clause is old info, but (in formal written language) there are exceptions. Hence, the following examples could begin a new discourse (e.g. newspaper article):
- (57) a. *It was in 1877 that Edison invented the phonograph.*  
 b. *It is with great regret that we announce the death of Ethel P. Taylorson.*

## 2.5. Wh-clefts (=pseudoclefts)

- (58) a. *A bottle of wine was what she bought.*  
 b. *What she bought was a bottle of wine.*
- ◆ *Wh*-clefts are like *it*-clefts but differ from them in that presupposition in relative clause must be discourse-old, hence no discourse-initial structures parallel to things like (57).

## 2.6. Particle verbs (=phrasal verbs)

- ◆ New/contrasted/heavy NPs after particle. Old NPs before particl. This is obligatory with pronouns and heavy NPs. With other NPs it is a weaker tendency, nevertheless confirmed by experiments (Dehé 2002).
- (59) a. She threw it out.                                 b. \*She threw out it.  
 c. I'm not going to throw out THEM.             [Stressed (i.e. focussed) pronouns are the only pronouns that can precede particle. *it* can't be stressed, hence always before particle]
- (60) a. Mary cried her eyes out.  
 b. \*Mary cried out her eyes. [*her eyes* is old info, since their existence is implied by mentioning Mary and the verb *cry*]
- (61) a. She put on [NP a cd with some of the most dreadful guitar playing I'd ever heard].  
 b. \*She put [NP a cd with some of the most dreadful guitar playing I'd ever heard] on.
- (62) a. After work, she wanted to relax, so she *got out a dvd*.  
 b. <sup>??</sup>After work, she wanted to relax, so she *got a dvd out*.
- (63) a. When his bike broke down, he rang somebody to *fix his bike up*.  
 b. <sup>?</sup>When his bike broke down, he rang somebody to *fix up his bike*.

## Information Structure

**Exercise A:** In the early 19<sup>th</sup> century, constructions like the following were still possible:

1. *He loves not her.*                                 2. *He loves her not.*

An 1837 grammar (D. Booth, *Principles of English Grammar*. London: Knight. p.322f) tries to explain the difference by saying that in sentence 1 "...the idea might be suggested (placing emphasis on *her*) that he loves someone else." Express this more precisely.

**Exercise B:** Pretend that the following sentences are the beginning of a story. Each sentence features the use of an information-structural device which makes the sentence sound weird. Explain why the sentences sound odd and reformulate them more normally.

1. *It was the weather that was inclement that day.*
2. *So Cuthbert thought "Mary I will visit" and so he went to the car.*
3. *There stood the car on the street near Cuthbert's home.*
4. *Before getting into the car, what he went into was the gift shop.*
5. *Some nice cheap plastic flowers were bought by him.*
6. *He said to the shop owner "Haha, much respect dude. Mary will like very much these."*
8. *As for thoughts, he had happy ones all the way to Mary's abode.*
7. *When at Mary's door there was him, it was the bell he rang.*
8. *Triumphantly dribbling, the floral pièce de resistance he had just procured he gave to her.*
9. *What she threw straight into the rubbish tin was the flowers.*

## 3. References

- Brinton, L.J. (2000) *The Structure of Modern English*. Amsterdam: Benjamins. pp. 290-301.
- Dehé, N. 2002. *Particle Verbs in English: Syntax, Information Structure, and Intonation*. Amsterdam: John Benjamins.
- Birner, B. & Ward, G. 2004. Information structure and non-canonical syntax. In Horn, L. & Ward, G. *The Handbook of Pragmatics*. London: Blackwell. 153-174.
- Birner, B. & Ward, G. 2006. Information structure. In Aarts, B. & McMahon, A. *The Handbook of English Linguistics*. London: Blackwell. 291-317.
- Erteschik-Shir, N. 2007. *Information Structure*. Oxford.
- Finegan, E. (1999) *Language: Its Structure and Use* (3rd ed). Philadelphia: Harcourt. 262-282.
- Gregory, M. & Michaelis, L. 2001. Topicalization and left-dislocation. *Journal of Pragmatics* 33: 1665-1706.
- Krifka, Manfred 2006 *Informationsstruktur* (course notes, Humboldt Universität, Berlin; <http://amor.rz.hu-berlin.de/~h2816i3x/lehstuh1.html>)
- Lambrecht, K. 1994. *Information structure and sentence form*. Cambridge University Press.
- Prince, E. 1978. A comparison of *it*-clefts and *wh*-clefts in discourse. *Language* 54: 883-908.
- Pullum, G. & Huddleston, R. 2002. *The Cambridge grammar of the English language*. Cambridge. Esp. ch. 16.