Information Structure and the Formal Presupositions of Discourse Connectives (work in progress)

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Overview

- Discourse Connectives
- Assertion vs. Presupposition
- Anaphoric vs. Formal Presupposition
- Discourse Connectives and Information Structure: the puzzle
- Information Structure
- Information Structure & Anaphoric Presupposition
- Information Structure in Examples with *although*
- Concluding Remarks

Discourse Connectives

- linguistic expressions signaling discourse relations

- other names: discourse markers, clausal connectives, discourse cues, cue phrases, clue phrases

- *although, however, nevertheless,*
  because, so, but
  otherwise, for example,
  on the one hand . . . on the other hand

- this talk concentrates on negative polarity causal connectives, in part. *although*

Assertion vs. Presupposition

(1) (1) John went to the zoo. However,
(2) he took his cell phone with him.

(2) (1) Although John went to the zoo,
(2) he took his cell phone with him.

(3) (2) John took his cell phone with him,
(1) although he went to the zoo.

assertion:
$e_1 \in s_1, e_2 \in s_1, unusual(s_1)$,
$\neg(prop_1 \rightarrow generalization(\neg prop_2))$

presupposition:
$generalization(prop_1) > generalization(\neg prop_2)$

- in general:
  - α *however*β presupposes:
    $gen(\alpha\prime) > gen(\neg\beta\prime)$
  - α *although*β presupposes
    $gen(\beta\prime) > gen(\neg\alpha\prime)$

Anaphoric vs. Formal Presupposition

- anaphoric presuppositions - presupposing the presence of some entity in the discourse context (and accommodating it, if possible, if it's not there)

- formal presuppositions - presupposing that speaker and hearer both recognise some proposition (which they may or may not both believe), including both non-defeasible and defeasible rules

<u>Discourse Connectives and Information Structure</u>

(4) a. Ačkoli řídila Jana, měli nehodu.
although drove JANE had-they accident

Although JANE drove, they had an accident.

b. Ačkoli Jana řídila, měli nehodu.
although jane drove had-they accident

Although Jane DROVE, they had an accident.

(5) If a safe driver drives, no accident happens.

(6) a. Ačkoli Jana jela autem, přijela pozdě.
although jane went by-car she-came late

Although Jane went by car, she was late.

b. Ačkoli autem jela Jana, přijela pozdě.
although by-car went jane she-came late

Although JANE went by car, she was late.

(7) If one goes by car, one arrives on time.

Discourse Connectives and Information Structure (cont'd)

(8) a. Dogs must be CARRIED.
    b. DOGS must be carried.

(9) a.

Ačkoli	Jana	psa	nesla,	dostala	pokutu.	
Although	Jane	dog	carried,	she	got	fine

Although Jane CARRIED the/a dog, she got a FINE.

b.

Ačkoli	Jana	nesla	psa,	dostala	pokutu.	
Although	Jane	carried	dog,	she	got	fine

Although Jane carried a dog DOG, she got a FINE.

Information Structure

- Theme vs. Rheme dichotomy
- within each: Background vs. Focus
- interplay of factors, e.g. intonation and word order

(10) context: hi-fi components (amplifier, speaker, pre-amp), origin (UK, USA), sound quality (clean, muddy), range (bass, treble)

a. I know the British speaker produces MUDDY treble, but (WHAT kind of treble)$_{th}$ (does the British AMPLIFIER produce?)$_{rh}$
(The British AMPLIFIER)$_{th}$ (produces CLEAN treble.)$_{rh}$

b. I know which amplifier produces clean BASS, but (WHICH amplifier)$_{th}$ (produces clean TREBLE?)$_{rh}$
(The BRITISH amplifier)$_{rh}$ (produces clean TREBLE.)$_{th}$

(11) $produce\prime(british\prime(amplifier\prime), clean\prime(treble\prime))$

(12) a. Theme: $british\prime({}^{\star}amplifier\prime)$
Rheme: $\lambda x.\ produce\prime(x,\ {}^{\star}clean\prime(treble\prime))$

b. Theme: ${}^{\star}british\prime(amplifier\prime)$
Rheme: $\lambda x.produce\prime(x,\ clean\prime({}^{\star}treble\prime))$

Information Structure & Anaphoric Presupposition

- Theme-tunes presuppose a Rheme-alternatives set
  Rheme-tunes restrict the Rheme-alternatives set

- Theme presupposes a prior Theme (or Rheme?)
  with pitch accents: differing in the starred element(s)
  without pitch accents: no difference

(13) (The British AMPLIFIER)$_{th}$ (produces CLEAN treble.)$_{rh}$

- Theme: $british\prime(^\star amplifier\prime)$
  Rheme: $\lambda x.\ produce\prime(x,\ ^\star clean\prime(treble\prime))$

- Rheme-alternatives set: $\exists x\ \diamond produce\prime(x, ^\star clean\prime(treble\prime))$
  $\{x :\ \diamond produce\prime(x, ^\star clean\prime(treble\prime))\}$

- Theme-alternatives set $\exists y\ \diamond british\prime(y))$
  $\{y :\ \diamond british\prime(y)\}$

(14) (The BRITISH amplifier)$_{rh}$ (produces clean TREBLE.)$_{th}$

- Theme: $^\star british\prime(amplifier\prime)$
  Rheme: $\lambda x.\ produce\prime(x,\ clean\prime(^\star treble\prime))$

- Rheme-alternatives set:
  $\exists x\ \diamond produce\prime(x, clean\prime(^\star treble\prime))$
  $\{x :\ \diamond produce\prime(x, clean\prime(^\star treble\prime))\}$

- Theme-alternatives set:
  $\exists P\ \diamond P(amplifier\prime)$
  $\{P :\ \diamond P(amplifier\prime)\}$

Information Structure in Examples with *although*

(15) a. if someone has some attitude to one thing, then she has (the same polarity) attitude to another thing

b. if someone has some attitude to something then another person has (the same polarity) attitude to that thing

(16) a. Although Pauline favors OPERA,
(She)$_{th}$ (hates MUSICALS.)$_{rh}$
or perhaps: (She)$_{th}$ (HATES MUSICALS.)$_{rh}$

b. Although Pauline favors OPERA,
(SUSANE)$_{th}$ (favors JAZZ.)$_{rh}$

(17) a. $although(favor\prime(pauline\prime, opera\prime),\ hate(pauline\prime, musicals\prime))$

b. $although(favor\prime(pauline\prime, opera\prime),\ favour(susane\prime, jazz\prime))$

- $although\alpha, \beta$:
  presupposition: $gen(\alpha\prime) > gen(\neg\beta\prime)$

- without regard for information structure, no difference can be predicted

- does information structure influence the presupposed rule?

- does information structure influence the source of its failure?

although Theme1-Rheme1, Theme2-Rheme2

- note we're querying about properties

(18) Although (the British AMPLIFIER)$_{th}$ (produces CLEAN treble)$_{rh}$ (the British SPEAKER)$_{th}$ (produces MUDDY treble)$_{rh}$

  i. If gen(prop((the British AMPLIFIER)$_{th}$ (produces CLEAN treble)$_{rh}$)) then gen(prop((the British SPEAKER)$_{th}$ (produces CLEAN treble)$_{rh}$))

  ii. If gen(prop((a British component)$_{th}$ (produces CLEAN treble)$_{rh}$)) then gen(prop((another British component)$_{th}$ (produces CLEAN treble)$_{rh}$))
  . . .

  iii. If a component has some property then another component has the same property.

(19) Although (The BRITISH amplifier)$_{th}$ (produces CLEAN treble)$_{rh}$ (the AMERICAN amplifier)$_{th}$ (produces MUDDY treble)$_{rh}$.

(20) Although (The British AMPLIFIER)$_{th}$ (produces clean TREBLE)$_{rh}$ (the British SPEAKER)$_{th}$ (produces clean BASS)$_{rh}$.

(21) Although (The BRITISH amplifier)$_{th}$ (produces clean TREBLE)$_{rh}$ (the AMERICAN amplifier)$_{th}$ (produces clean BASS)$_{rh}$.

- observe: continuations cannot be exchanged
  probably can be explained by the same principles of coherent information structure in discourse as proposed for question-answer pairs

- Rhemes in the latter two examples seem to give rise to exhaustive reading

although Rheme1-Theme1, Rheme2-Theme2

- we're querying about components

(22) Although (the British AMPLIFIER)$_{rh}$
(produces CLEAN treble)$_{th}$
(the British SPEAKER)$_{rh}$ (produces MUDDY treble)$_{th}$

(23) Although (The BRITISH amplifier)$_{rh}$ (produces CLEAN treble)$_{th}$
(the AMERICAN amplifier)$_{rh}$ (produces MUDDY treble)$_{th}$.

(24) Although (The British AMPLIFIER)$_{rh}$ (produces clean TREBLE)$_{th}$
(the British SPEAKER)$_{rh}$ (produces clean BASS)$_{th}$.

(25) Although (The BRITISH amplifier)$_{rh}$ (produces clean TREBLE)$_{th}$
(the AMERICAN amplifier)$_{rh}$ (produces clean BASS)$_{th}$.

(26) If some property is exhibited by some component
then the same property is exhibited by another component.

- the problem seems to lie in the attemt to falsify the rule within Theme2

Concluding Remarks

- information structure of the relata linked by a discourse connective is relevant

- it seems to influence both the presupposed rule and the source of its failure

- so far one causal connective with negative polarity only *although*
  need to look at others, and also at positive ones

- interplay of intonation and word order, e.g. in Czech. . .

- information structure and scope of negation . . .

- information structure and local vs. global accommodation of presuppositions . . .