Information- and discourse-structure analysis with questions under discussion

Session 2: Questions under discussion

Kordula De Kuthy, Eberhard-Karls-Universität Tübingen
Arndt Riester, Universität Bielefeld

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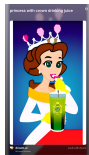# Limits of givenness

Information focus (new):

(1) Q: {What did the princess drink?}
> A: [She drank [raspberry juice]$_F$.]~

> Note that the background ("topic"?) covers more than just the (referential) subject!

Focus on new information, using overt alternatives:

(2) Q: {What did the princess drink?}
> A': [She drank [raspberry juice]$_F$.]~
> A'': [She also drank [ginger lemonade]$_F$.]~   *(list)*

(3) Q: {What did the princess drink?}
> A': [She drank [raspberry juice]$_F$.]~
> A''': No, [She drank [pomegranate smoothie]$_F$!]~   *(correction)*

Focus on given information:

(4)   > A$_1$: One day, the wizard and the princess went shopping.
        > Q$_2$: Who bought sunglasses?   *(overt question)*
        > > A$_2$: [[The wizard]$_F$ (bought sunglasses).]$\sim$

- Overt questions can introduce new information.
- Background information can/should be elided.

Annotating QUDs and information structure

- Transform a text (speech, conversation etc.) into a structural representation that highlights its **topical organisation** (and information structure)
- Reconstruct **sections, subsections** etc. in a systematic (and linguistically informed) way
- Which **questions under discussion** are answered in the text?
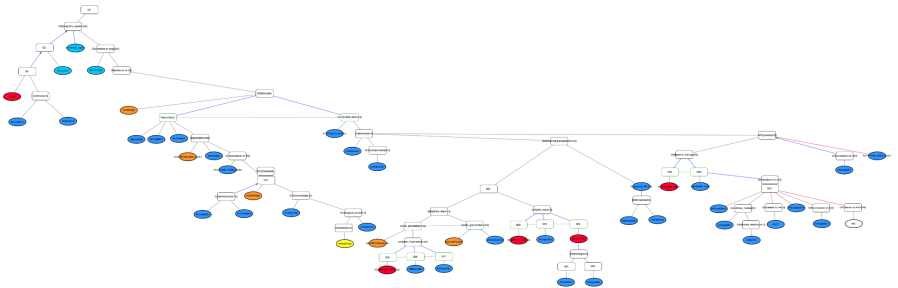
Assumption 1:

> Every assertion of a discourse is the answer to a (typically implicit) question, the so-called (current) **question under discussion**.

(Klein and von Stutterheim 1987, Ginzburg 1996, Roberts 2012 [1996],
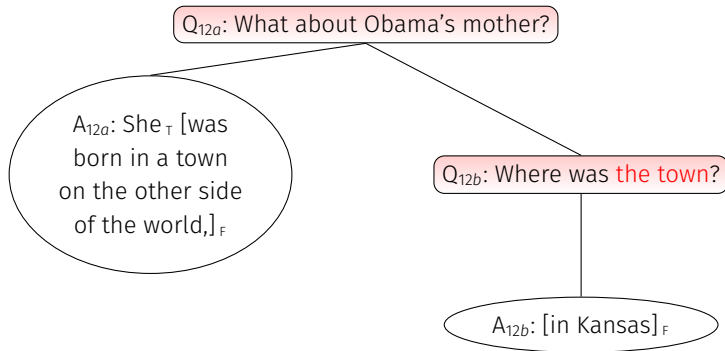Velleman and Beaver 2016)

Q_{12a}: What about Obama's mother?

A_{12a}: She $_T$ [was born in a town on the other side of the world,] $_F$

Assumption 2:

> QUDs are hierarchically ordered, together representing a **discourse strategy**.

Q_{12a}: What about Obama's mother?

A_{12a}: She $_T$ [was born in a town on the other side of the world,] $_F$

Q_{12b}: Where was the town?

A_{12b}: [in Kansas] $_F$

QUD-tree framework (Riester, Brunetti & De Kuthy 2018, Riester 2019)

Identify a QUD for each utterance (assertion / discourse unit)

Two procedures:

⇐ backward-looking: identify given/new information
  · Formulate the QUD about the given (topical) information
  · Leads to **subordinating structures**

⇒ forward-looking: identify contrastive / parrallel segments
  · Formulate the QUD about the shared information
  · Leads to **coordinating structures**

Schwarzschild (1999):

GIVENNESS (P.155):
If a constituent is not given, it must be F-marked [i.e. focused].

→ All new information in a text is focal.

→ Unfocused information is salient.

AvoidF (p. 156):
F-mark as little as possible, without violating GIVENNESS.

→ Make the focus as small as possible.

→ Maximize the cohesion of a text.

- The given material of an utterance must be reflected in its QUD.

[T]he task of perfecting our union moves forward.
{Why does the task of perfecting our union move forward?}
It moves forward because of you.

Q-A-CONGRUENCE:
  QUDs must be answerable by the assertion(s) that they immediately dominate.

Q-GIVENNESS:
  An implicit QUD can only consist of given (active / salient) material.

MAXIMIZE-Q-ANAPHORICITY:
  An implicit QUD should contain as much given material from the answer as possible.

Schwarzschild (1999), Büring (2008), Reyle and Riester (2016), and Riester et al. (2018)

Congruent answers match the question with regard to (a) grammatical function, (b) semantic/syntactic type, and (c) sortal restriction (cf. Reich 2002).

QUDs must be answerable by the assertion(s) that they immediately dominate.

✓ {What is the way things are?}

✓ {What about that?}

✓ {What does that provide?}

✓ {What does that provide plenty of fodder for?}

\# {Who owns a bicycle?} (Not congruent!)

A_{30}: And that provides plenty of fodder for the cynics.

Implicit QUDs can only consist of given (or, at least, highly salient) material.

A$_{29'}$:   *I know that political campaigns can sometimes seem small,*
A$_{29''}$:   *even silly.*

✓ {What is the way things are?}

✓ {What about that?}

\# {What does that provide?}

\# {What does that provide plenty of fodder for?}

   (contain discourse-new material!)

A$_{30}$: And that provides plenty of fodder for the cynics.

Implicit QUDs should contain as much given material (from the answer) as possible.

$A_{29'}$:   *I know that political campaigns can sometimes seem small,*
$A_{29''}$:   *even silly.*

 # {What is the way things are?}   (not maximally given!)

 ✓ {What about that?}

A_{30}: *[And [[that]$_T$ [provides plenty of fodder for the cynics]$_F$.]~*

 · Always contribute to textual cohesion!

BACK-TO-THE-ROOT:
A QUD (and its answers) must not attach higher than the antecedent of its given content, and otherwise as high as possible.

- Considerate speakers/authors will, eventually, return to the initial questions they have raised.
- Therefore, incoming information attaches as high in the tree as possible, except if given material forces a lower attachment.
- Givenness/anaphoricity is always givenness of material at the *right frontier* (Polanyi 1988, Asher and Lascarides 2003) of a tree.

Roberts (2012 [1996]: p. 5): "[The] goal of discourse can itself be viewed as a question, the Big Question, 'What is the way things are?'"

Q_0: {What is the way things are?}
> A_0: [[Tonight, is a particular honour for me]$_F$]$\sim$

Roberts (2012 [1996]: p. 5): "[The] goal of discourse can itself be viewed as a question, the Big Question, 'What is the way things are?'"

Q_0: {What is the way things are?}
$> Q_2$: {What about the speaker and the evening?}
$>> A_2$: [[Tonight,$]_T$ [is a particular honor$]_F$ [[for me$]_T]\sim$

Taking situationally given information into account

- In case a series of structurally analogous discourse units are identified, the principles of Q-GIVENNESS and MAXIMIZE-Q-ANAPHORICITY are no longer necessary.
- Givenness becomes irrelevant.

PARALLELISM:
  A QUD that is directly answered by two or more assertions is formulated on the basis of the semantic content that is shared by the answers.

Riester et al. (cf. 2018)

QUDs of parallel structures with a single focus

- Focus domains identify parallelism.
- Several *(partial)* answers may correspond to one QUD.
- The **shared semantic content** in these partial/parallel answers defines QUD.
- Partial answers to Q_1 are indicated by $A_{1'}$, $A_{1''}$, …

Q_{28}: {What will I always be grateful for?}

$A_{28'}$: And [[I]$_T$ will always be grateful for [everything that you've done]$_F$]$\sim$

$A_{28''}$: and [~~I will always be grateful~~ for [all the incredible work that you put in]$_F$.]$\sim$

Q_4: {What about Obama's father? }
> $A_{4'}$: [[My father]$_T$ [was a foreign student,]$_F$]$\sim$
> $A_{4''}$: [[born and raised in a small village in Kenya]$_F$] .
> $A_{4'''}$: [[He]$_T$ [grew up herding goats,]$_F$]
> $A_{4''''}$: [[went to school in a tin-roof shack]$_F$] .

Contrastive topics

- A *contrastive topic (thematic contrast)* is a second focus within the background.
- Riester et al. (2020) estimate that about 20% of utterances in a corpus of German interviews contain CTs.
- Büring (2003): CTs mark a **discourse strategy** with subquestions.
- Purpose: break down a complex question into simpler ones

(5) Q_1: What did the royals buy?
  > $Q_{1.1}$: {What did the princess buy?}
  > > $A_{1.1}$: [[The princess]$_{CT}$ bought [a unicorn saddle]$_F$.]$\sim$
  > $Q_{1.2}$: {What did the king buy?}
  > > $A_{1.2}$: [[The king]$_{CT}$ bought [gold flip flops]$_F$.]$\sim$

- CTs are **focal** w.r.t. the main question, and **backgrounded/topical** w.r.t. their subquestion.
- As subordinate topics, CTs are often semi-active information

Note that, from an annotation perspective, CT *labels* are similar to focus in that they need not be assigned to a referential expression.

(6) Q_1: What did the popstars wear?
        > $Q_{1.1}$: {What did the female popstars wear?}
        > > $A_{1.1}$: [The [female]$_{CT}$ popstars wore [caftans]$_F$.]~
        > $Q_{1.2}$: {What did the male popstars wear?}
        > > $A_{1.2}$: […]

Büring (2003: p. 525)

Example annotation

Split the text into separate assertions

A: She took the girls at each new moon,
A: going from hut to hut,
A: watched by the entire village,
A: asking each mother whether her daughter was now ready.
A: The mothers knew what to reply;
A: the moon herself would have told them since her last visit.
A: The girls packed a few belongings
A: and some food;
A: it was a day's walk to the hostel.
A: The men watched them leave,

Determine given and new material

A: She took the girls at each new moon,
A: going from hut to hut,
A: watched by the entire village,
A: asking each mother whether her daughter was now ready.

Formulate QUDs

Q_1: {What did she do with the girls?}

\> A_1: She took the girls at each new moon,

\> Q_1: {How did she do this?}

\>\> $A_{2'}$: going from hut to hut,

\>\> $A_{2''}$: watched by the entire village,

\>\> $A_{2'''}$: asking each mother whether her daughter was now ready.

Example annotation

Annotate Information Structure

Q_1:   {What did she do with the girls?}

> A_1:   [[She]$_T$ [took]$_F$ [the girls]$_T$ [at each new moon,]$_F$]$\sim$

> Q_1:   {How did she do this?}

>> $A_{2'}$:   [[going from hut to hut]$_F$]$\sim$,

>> $A_{2''}$:   [[watched by the entire village]$_F$]$\sim$,

>> $A_{2'''}$:   [[asking each mother whether her daughter was now ready]$_F$]$\sim$.

Determine given and new material

A_3:   The mothers knew what to reply;
A_4:   the moon herself would have told them since her last visit.

Formulate QUDs

$>>$ Q_3:   {What about the mothers?}
$>>>$ A_3:   The mothers knew what to reply;
$>>>$ Q_4:   {How would they know?}
$>>>>$ A_4:   the moon herself would have told them since her last visit.

Annotate Information Structure

>> Q_3:   {What about the mothers?}
>>> A_3:   [[The mothers]$_T$ [knew what to reply]$_F$]∼;
>>> Q_4:   {How would they know?}
>>>> A_4:   [the moon herself would have told]$_F$ [them]$_T$
              [since her last visit]$_{NAI}$.

Determine given and new material

A_5:   The girls packed a few belongings

A_5:   and some food;

A_6:   it was a day's walk to the hostel.

A_7:   The men watched them leave,

Formulate QUDs

> Q_5:   {What did people do then?}
>> $Q_{5.1}$:   {What did the girls do?}
>>> $Q_{5.1.1}$:   {What did they pack?}
>>>> $A_{5.1.1}$:   The girls packed a few belongings
>>>> $A_{5.1.2}$:   and some food;
>>>> Q_6:   {What did they pack these things for?}
>>>>> A_6:   it was a day's walk to the hostel.
>> $Q_{5.2}$:   {What did the men do?}
>>> $A_{5.2}$:   The men watched them leave,

Example annotation

Annotate Information Structure

> Q_5: {What did people do then?}
>> $Q_{5.1}$: {What did the girls do?}
>>> $Q_{5.1.1}$: {What did they pack?}
>>>> $A_{5.1.1}$: [[The girls]$_{CT}$ packed [a few belongings]$_F$]$\sim$
>>>> $A_{5.1.2}$: and [[some food]$_F$]$\sim$;
>>>> Q_6: {Why did they pack these things?}
>>>>> A_6: [[it]$_T$ [was a day's walk to the hostel]$_F$]$\sim$.
>> $Q_{5.2}$: {What did the men do?}
>>> $A_{5.2}$: [[The men]$_{CT}$ [watched them leave]$_F$]$\sim$,

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