



A QUD-based analysis of non-at-issue material in corpus data

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Non-At-Issue Meaning and Information Structure

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Our talk

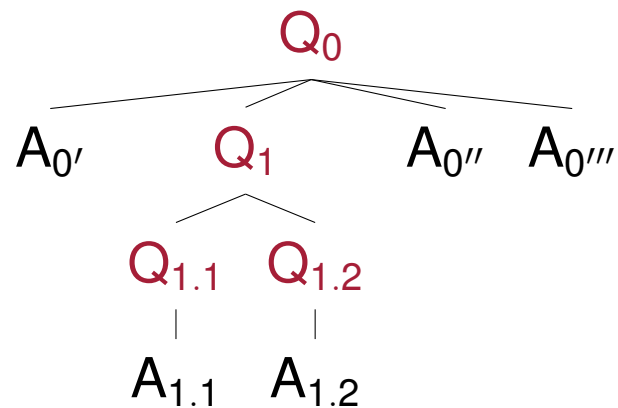
- We briefly introduce our analysis method for information structure and discourse structure in corpus data, which provides rules for the pragmatic identification of QUDs;
- we provide a new QUD-based definition of **non-at-issue material** which facilitates its identification in corpus data;
- we discuss its relation to existing characterizations of non-at-issueness in the literature;
- we suggest an extension of the family of non-at-issue phenomena by new or rarely-discussed examples.

Our assumptions about discourse

- Discourse is hierarchically organized in the form of a **discourse tree** consisting of **elementary discourse units** (Hobbs 1985; Polanyi 1988; Mann and Thompson 1987; Asher and Lascarides 2003).
- Discourse structure is based on **QUDs** (or topics) (Carlson 1983; von Stutterheim and Klein 1989; Van Kuppevelt 1995; Roberts 2012; Büring 2003; Beaver and Clark 2008; Onea 2016).
 - For any assertion there is an implicit QUD that determines which of its parts are **focused** or **backgrounded**, and which ones are **unrelated** to the QUD.
 - A question node may stand in an **entailment relation** to its parent question but **need not** (contra Roberts 2012).
 - Questions may be **anaphorically dependent** on previous material (so called **feeders**), cf. Van Kuppevelt (1995); Onea (2016); Velleman and Beaver (2016); Riester (t.a.)

Our approach (Riester, Brunetti and De Kuthy, submitted)

- Reconstruct the QUDs of a text on the basis of **explicit pragmatic constraints**.
- Compact tree representation (**QUD trees**, Riester t.a.):
 - Non-terminal nodes are current QUDs at their respective position.
 - Terminal elements are the assertions of the text, and represent an answer to their QUD.



QUD principles

Q-A-CONGRUENCE

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

Q-GIVENNESS

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

derived from Schwarzschild (1999)

MAXIMIZE Q-ANAPHORICITY

Implicit QUDs should contain as much given material as possible.

derived from Schwarzschild (1999); Büring (2008)

PARALLELISM

The background of a QUD with two or more parallel answers consists of the (semantically) common material of the answers, potentially violating

Q-GIVENNESS.

Linking QUDs and information structure

- **Focus (F)**: that part of an assertion that answers the current QUD (obligatory)
- **Background**: the part of an assertion which is already mentioned in the current QUD (optional)
- **Focus domain (~)**: combination of focus and background
- **(Aboutness) Topic (T)**: referential entity in the background
- **Non-at-issue (nai) material**: to be defined!

- (1) Q_8 : *{What did these people tell the reporter they wanted to do?}*
 > A8': [[These individuals]_T – [and these are acting government officials]_{nai} – [they]_T said [they]_T would be happy, they would love [to put a bullet in my head]_F]~

Contrastive topic (CT) (Büring 2003)

- The instantiation of a **variable within the background**, which signals the existence of a superquestion-subquestion structure.
 - CTs are backgrounded w.r.t. the subquestion and focal with respect to the superquestion.

(2) A₀: In many countries, as in America too the agencies like the NSA are not allowed to spy within their own borders on their own people.

Q₁: {*Who can spy on whom?*}

> Q_{1.1}: {*Who can the Brits spy on?*}

>> A_{1.1} So [[the Brits]_{CT}, for example, [they]_T can spy on [everybody but the Brits]_F]~

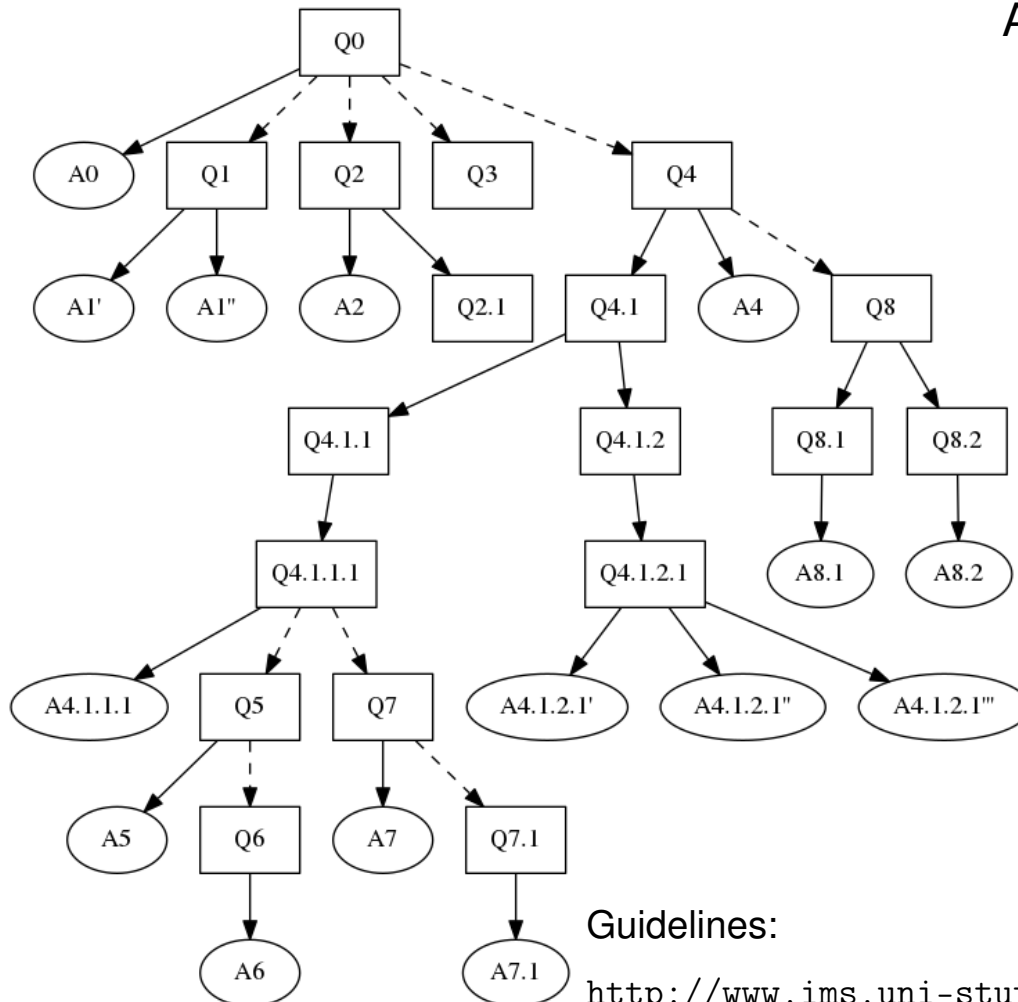
> Q_{1.2}: {*Who can the NSA spy on?*}

>> A_{1.2} but [[the NSA]_{CT} can conduct surveillance [in England]_F]~

An example (section from annotated text)

- > > > > Q₇: {*How was grandpa's health during his last years?*}
- > > > > > A₇: and all I can say is that [his_T condition was [extremely bad]_F during his last years]~.
- > > > > > Q_{7.1}: {*How bad was his condition?*}
- > > > > > > A_{7.1}: [[He]_T [literally suffocated]_F.]~
- > > Q_{4.1.2}: {*What about occupational safety nowadays?*}
- > > > Q_{4.1.2.1}: The number of what has massively decreased due to occupational safety measures?
- > > > > A_{4.1.2.1'}: and [it is [due to the numerous measures in the past 40 years called occupational safety measures and workplace regulations]_T – that's indeed how they are called – that, Thank God, the numbers of [casualties,]_F]~
- > > > > A_{4.1.2.1''}: [[injuries]_F]~
- > > > > A_{4.1.2.1'''}: and [[accidents]_F has decreased massively]_F]~.
- A₄: And, therefore, [[these safety measures and the workplace regulation bill]_T are [something very valuable]_F]~.
- Q₈: {*What is Nahles's reaction to different attitudes regarding the bill?*}
- > Q_{8.1}: {*What does she do if someone is upset about minor issues?*}
- > > A_{8.1}: [If someone is [upset because of some lockers]_{CT}, oh well, then I would be [the last person unwilling to discuss a compromise]_F.]~

Corresponding QUD tree



Annotated so far:

- French radio conversation (45 min.)
- Parisian French interview (47 min.)
- German radio interviews (10 x 10 min.)
- (English) Interview with E. Snowden (various sections)
- Conversation in Sumbawa (Austronesian) (20 min.)

Guidelines:

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Identifying non-at-issue material

NON-AT-ISSUE EXPRESSION

An expression X whose denotation is discourse-new and which is embedded in an assertion A is **non-at-issue** with respect to the current QUD Q iff **X is optional with respect to Q** ,

- where optional means that under deletion of X , A is still an answer to Q .

NAI material vs. NAI content

- Note that we make no claims about abstract propositions (e.g. potential projective content), here.
- We claim that optionality is a **sufficient** condition for detecting triggers of non-at-issue **content**, but not a **necessary** one.
- Presumably, all of our examples represent triggers of **conventional implicatures**, (or "class B" contents, [Tonhauser et al. 2013](#)).
 - Contents categorized as **presuppositions** (alternative presupposition of *too*, pre-state of *stop* etc.) are not linguistically realized within the current assertion, and their triggers often overlap with either focus or background.

Identifying non-at-issue material

Given our definition, the following expressions tend to be classified as non-at-issue material:

- **Appositions, non-restrictive relative clauses, parentheticals, speaker-oriented expressions**
 - "(...) the constructions are united in contributing **discourse-new**, speaker-oriented entailments – Cls." (Potts 2003, 12)
- Expressions describing the speaker's source of and confidence in the truth of the main proposition (**evidentials**)
 - cf. Simons's (2007) analysis of evidentials as not the main point of the utterance, where the main point is seen as an answer to a question.
- Temporal, spatial, manner, concessive, conditional, etc. **adjunct phrases and clauses.**

Non-at-issue material: Evidentials

(3) Q₁₃: Vous aviez quel âge?

'How old were you?'

> A₁₃: [[j']_T [devais]_{nai} avoir [dans les six ans]_F] ~ [j'pense]_{nai}
'[[I]_T [must]_{nai} have been [about six]_F] ~ [I think]_{nai}'

Non-at-issue material: Speaker-oriented expressions

- (4) Q_5 : { *What has changed because of the measures?* }
- > A_5 : [[*dadurch*]_T sind [*Gott sei Dank*]_{nai} [*die Anzahl der Toten massiv zurückgegangen*]_F .]~
- '[Because of [that]_T – [Thank God!]_{nai} – [the number of casualties has massively decreased.]_F]~'*

Non-at-issue material: Parentheticals

- (5) Q_8 : {*What did these people tell the reporter that they wanted to do?*}
- > A8: [[These individuals]_T — [and these are acting government officials]_{nai} — [they]_T said [they]_T would be happy, they would love [to put a bullet in my head]_F]~

Non-at-issue material: Adverbial adjuncts

(6) Q_{60} : {*What does the speaker appreciate about the chancellor?*}

> A_{60} : [[Ich]_T begrüße, dass [sie]_T [zusammen mit Frankreich]_{nai} [eine europäische Initiative ergriffen hat, das Abkommen von Minsk mit neuem Leben zu füllen.]_F]~

'[[I]_T appreciate that [she]_T [has taken, [together with France]_{nai}, a European initiative to fill the Minsk II deal with new life]_F .]~'

(7) Q_{20} : {*What did the political class do?*}

> A_{20} : [Instead of circling around the public and protecting their rights]_{nai} [[the political class]_T [circled around the security state]_F]~

NAI diagnostics: the case of appositives

- Appositives (like other triggers of CIs) do **not** exhibit a **Strong Contextual Felicity Constraint** (Tonhauser et al. 2013)
 - i.e., the context in which they are uttered need not (in fact: should not) entail their meaning.
- (The content of) an appositive **projects**, although it is not presuppositional (Chierchia and McConnell-Ginet 1990).
 - Appositives pass the **Family-of-Sentences Diagnostic for Projection**:
 - (8) a. **NEG** My grandfather, *who has a white beard*, doesn't live far away.
 - b. **QUEST** Have you already asked your grandfather, *who has a white beard*?
 - c. **COND** If my grandfather, *who has a white beard*, doesn't work tomorrow, we'll visit him.
 - d. **MOD** It is possible that my grandfather, *who has a white beard*, will let you take his picture.

(Tonhauser et al. 2013, 87)

Applying NAI diagnostics to adverbial adjuncts

(9) **Q₅**: {*What about these rallies?*}

> **A₅**: [[Eine]_T musste [vergangenen Montag]_{nai} sogar [abgesagt werden.]_F]
 '[*Last Monday,*]_{nai} [[*one of them*]_T even [*had to be cancelled*]_F]~.'

Assertion: A rally had to be cancelled.

Adjunct content: The cancellation was on Monday.

- (10)
- a. **NEG** It is not true that one, on Monday, had to be cancelled .
 - b. **QUEST** Did one, on Monday, have to be cancelled ?
 - c. **MOD** Probably one, on Monday, had to be cancelled.
 - d. **COND** If one, on Monday, had to be cancelled, people will have stayed at home.

- The adjunct content seems to fail the tests.
- If the main event is negated or put into question, adjunct modifiers become pointless.

Applying NAI diagnostics to adjunct clauses

(11) Q_3 : {*What is the debate on linguistic policy about?*}

> A_3 : [[*Bien que les règles statutaires définissent des langues officielles*]_{nai} [[*un monolingualisme de fait s'impose.*]_F]~

'Although statutory rules define the official languages, monolingualism is in fact establishing itself.'

Assertion: Monolingualism is in fact establishing itself.

Adjunct content: Statutory rules define the official languages.

- (12)
- a. **NEG** It is not true that, *although statutory rules define the official languages*, monolingualism is in fact establishing itself.
 - b. **QUEST** Is monolingualism, *although statutory rules define the official languages*, in fact establishing itself?
 - c. **MOD** Probably, *although statutory rules define the official languages*, monolingualism is in fact establishing itself.
 - d. **COND** If, *although statutory rules define the official languages*, monolingualism is in fact establishing itself, then we don't need interpreters anymore.

- In this case, the content of the adjunct clause projects (but only because it is independent of the main point).

Adjuncts and projection

- It seems difficult to maintain that adjuncts are generally projective.
 - The more an adjunct depends on the event or state being negated or questioned, the more difficult it is to apply projection tests.
 - It is legitimate to question whether projection tests are a useful criterion for (non-)at-issueness, in these cases.
- We therefore argue in favor of a definition of non-at-issueness relative to the QUD.

Adjuncts are part-time non-at-issue triggers

- Focussed adjuncts are **very** at-issue.

(13) Q_{51} : {*Where do we need hospice facilities?*}

> A_{51} : [[Wir]_T brauchen [diese Versorgung]_T [in jedem Winkel
unseres Landes]_F .]~

'[[We]_T need [these facilities]_T [in every corner of our country]_F .]~'

- Backgrounded adjunct:

(14) $A_{32''}$: [[ça]_T [nous]_T [a pris **deux ans**]_F]~

'it to us took two years'

Q_{33} : {*What happened to you during these two years?*}

> A_{33} : [en deux ans on [nous]_T [avait fait d'autres propositions]_F]~

'in two years we received other offers'

Non-at-issue material becoming at-issue

- Contrastive Topic

(15) A₁₅: I: [The greatest fear I have", [and I quote you]_{nai}, ["regarding the disclosures]_{nai} is [nothing will change.]_F]~

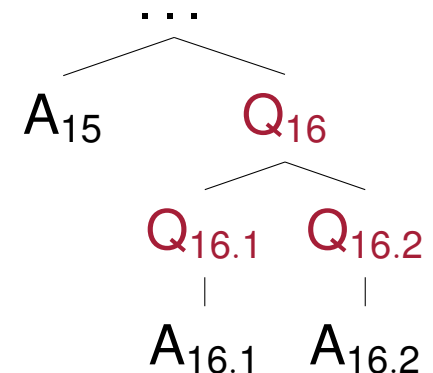
Q₁₆: {What about the risk that nothing will change?}

> Q_{16.1}: {What was that risk, at the time you said that?}

>> A_{16.1}: [[That]_T was [one of your greatest concerns]_F [at the time]_{CT}]

> Q_{16.2}: {What about this risk in the meantime?}

>> A_{16.2}: but [in the meantime]_{CT} [there is a vivid discussion about the situation with the NSA]_F]~

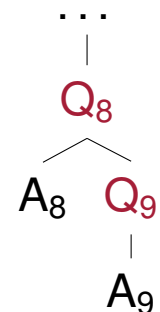


NAI material in discourse structure

NAI material introduces a subquestion that is anaphorically dependent on some part (background or focus) of the at-issue assertion.

(16) Q_8 : {*What did these people tell the reporter that they wanted to do?*}
 > A_8 : [[These individuals]_T – [and these are acting government officials]_{nai} – [they]_T said [they]_T would be happy, they would love [to put a bullet in my head]_F]~

(17) Q_8 : {*What did these people tell the reporter that they wanted to do?*}
 > A_8 : [[These individuals,]_T [they]_T said [they]_T would be happy, they would love [to put a bullet in my head]_F]~
 > Q_9 : {*Who are these people?*}
 >> A_9 : and [[these]_T are [acting government officials]_F]~



Conclusion

- We presented a combined analysis method of discourse and information structure in naturally occurring data,
 - using QUDs as a hinge between the two.
- The formulation of QUDs is guided by pragmatic principles (Q-A-CONGRUENCE, Q-GIVENNESS, MAXIMIZE-Q-ANAPHORICITY, PARALLELISM).
- QUDs define the information structure.
- Also, non-at-issue material (CI triggers) is defined relative to the QUD.
- Under this definition, adjuncts can be at-issue or non-at-issue.

Questions?

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An example annotation

Q1: {*What was Snowden's role in the debate?*}

> A1': I: [[You]_T [started]_F [this debate]_T ,]~

> A1'': [[Edward Snowden]_T is [in the meantime]_{nai} [a household name for the whistleblower in the age of the internet]_F .]~

Q2: {*What did Snowden do until last summer?*}

> A2': [[You]_T [were working]_F [until last summer]_T [for the NSA]_F]~

> A2'': and [[during this time]_T [you]_T [secretly]_{nai} [collected thousands of confidential documents]_F]~.

> Q3: What was the decisive moment {?}

> Q4: or was there a long period of time or something happening, {?}

> Q5: why did you do this?

> > Q5.1: {*What was the decisive moment for collecting thousands of confidential documents?*}

> > > A5.1: [I would say]_{nai} [sort of [the breaking point]_T is [seeing the Director of National Intelligence, [James Clapper,]_{nai} directly lie under oath to Congress]_F]~.

An example annotation

> > > Q6: {*What about the intelligence community after this?*}

> > > > A6: [[There's no saving]_F [an intelligence community that believes it can lie to the public and the legislators]_T].~

> > > > Q7: {*What should the legislators be able to do with the intelligence community?*}

> > > > > A7': [[who]_~ need to be able to [trust]_F [it]_T].~

> > > > > A7'': and [[regulate]_F [its]_T [actions]_F].~

> > > Q8: {*How did the experience effect Snowden?*}

> > > > A8: [[Seeing that]_T really meant for [me]_T [there was no going back]_F].~

> > > Q5.1.1: {*The decisive moment for collecting thousands of confidential documents was the realization that WHO was going to do this?*}

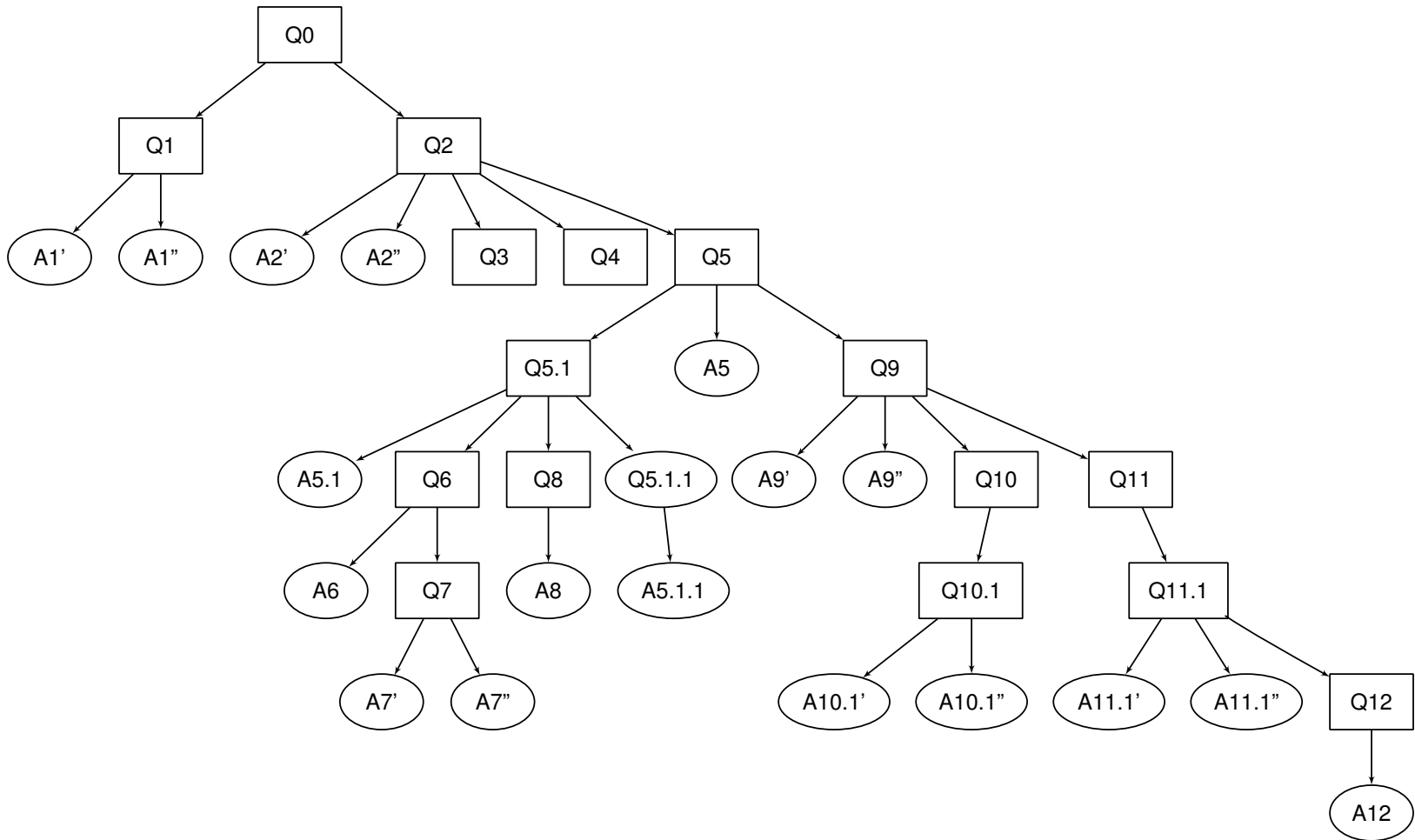
> > > > A5.1.1: Beyond that, [[it]_T was the creeping realisation that [no one else]_F was going to do [this]_T].~

> A5: [[The public had a right to know]_F about [these programs]_T].~

An example annotation

- > Q9: *{The public had a right to know that which the government is doing in WHAT relation to the public?}*
- >> A9': *[[The public]_T had a right to know that which the government is doing [in]_F [its]_T [name]_F,]~*
- >> A9'': *and [that which the government is doing [against]_F the public],~*
- >> Q10: *{What permission did we have to do what with which of these things?}*
- >>> Q10.1: *{What permission did we have to do what with neither of these things?}*
- >>>> A10.1': *but [[neither]_{CT} of [these things]_T [we]_T were allowed [to discuss]_F]~,*
- >>>> A10.1'': *[[we]_T were allowed [to know]_F]~,*
- >>> Q11: *{Who was prohibited of doing what with these programs?}*
- >>> Q11.1: *{What were the elected representatives prohibited of doing with these programs?}*
- >>>> A11.1': *even [[the wider body of our elected representatives]_{CT} were prohibited from [knowing]_F]~*
- >>>> A11.1'': *or [[discussing]_F [these programs]_T]~*
- >>>> Q12: *{What about these prohibitions?}*
- >>>>> A12: *and [[that's]_T [a dangerous thing]_F]~.*

An example QUD tree



Beaver et al. (2017) on at-issueness

Definition (At-issueness:)

A proposition expressed by a constituent is *at-issue* if it contributes to the ordinary semantics of the clause in which it is located (i.e. it has *Obligatory Local Effect*), and entails that some possible answer to the QUD is false; otherwise the proposition is not at-issue.

Diagnostics

OLE test:

- Evidentials: not applicable
- Expressives: not applicable/ NO???
- Appositions: NO???
 - I believe that the director, James Clapper, lied to Congress
- Parentheticals: OK
 - I believe that these individuals - and these are government officials - want to murder me.
- Other adjunct types: OK???
 - What did Mary's grandfather do?
 - Mary thinks that her grandfather, at the time, worked in the mines.
 - Mary thinks that her grandfather, in 1954, worked in the mines.
 - John believes that if you do it carefully, no one will never know

Diagnostics

Projection tests:

- Evidentials: Non applicable
- Expressives: OK
- Appositions: Ok
 - I believe that the director, James Clapper, lied to Congress
- Parentheticals: OK
 - I believe that these individuals - and these are government officials - want to murder me.
- Other adjunct types:
 - What

NAI diagnostics on adjuncts

(18) **Interrogative:** Est-ce que l'enfant, par son jeu d'imitation, se les approprie?

Does the child, by his imitation game, make them his own?

Negation: Ce n'est pas vrai que l'enfant, par son jeu d'imitation, se les approprie.

It's not true that the child, by his imitation game, makes them his own.

Epistemic modal: Il est possible que l'enfant, par son jeu d'imitation, se les approprie.

It is possible that the child, by his imitation game, makes them his own.

OLE: Je crois que l'enfant, par son jeu d'imitation, se les approprie.

I believe that the child, by his imitation game, makes them his own

NAI diagnostics on adjuncts

(19) > >Q₁₄: What needs to be done, given that the child makes signs at an early age?

> > >A₁₄: [[il suffit juste de]_{nai} [lui]_T [en]_T [montrer d'autres]_F]~

'it is sufficient to show him more'

> > >Q₁₅: For the child to do what with such other signs?

> > > >A_{15'}: [pour que [par son jeu d'imitation]_{nai} [il]_T [se les approprie]_F]~

'so that by his imitation game he makes them his own'

(20) **Interrogative:** Est-ce que l'enfant, par son jeu d'imitation, se les approprie?

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OLE: Je crois que l'enfant, par son jeu d'imitation, se les approprie.

I believe that the child, by his imitation game, makes them his own

NAI diagnostics on adjuncts

(21) > Q₃₂: et vous avez euh vous êtes restés longtemps sur la liste d'attente ou... pour toi ça a été rapide pas rapide à ton avis ça

'and you stayed a long time in the waiting list or... for you was that fast or not fast, in your opinion'

> >A₃₂: [euh bah [j]'pense que]_{nai} [par rapport à beaucoup d'gens]_{nai} [[ça]_T [a été un peu rapide]_F ~

'well I think that compared to many people that has been rather fast'

(22) **Epistemic modal:** Il est possible que, par rapport à beaucoup de gens, ça a été rapide.

'It is possible that, compared to many people, it's been fast.'

Interrogative: Est-ce que, par rapport à beaucoup de gens, ça a été rapide?

'Was it fast, compared to many people?'

Negation: Ça n'a pas, par rapport à beaucoup de gens, été rapide.

'It was not fast, compared to many people.'

OLE: Je pense que, par rapport à beaucoup de gens, ça a été un peu rapide.

'I think that, compared to many people, that has been rather fast'

NAI diagnostics on evidentials

(23) Q_{13} : {*What happened to you instead?*}

> A_{13} : But [*fortunately*]_{nai} [[*you*]_T [*are still alive with us*]_F]~

(24) **OLE: *non appl.***: ??John believes that fortunately you are still alive with us.

Interrogative: *non appl.*: ??Is Snowden fortunately still alive with us?

Epistemic modal: *non appl.*: ??It is possible that Snowden is fortunately still alive with us.

Negation: But he is not fortunately still alive with us

NAI material as an answer to a sub-question

NAI material introduces a sub-question that is anaphorically dependent on some part (background or focus) of the at-issue assertion.

- (25) Q_2 : {*What did Snowden do until last summer?*}
- > A2': [[You]_T [were working]_F [until last summer]_T [for the NSA]_F]~
 - > A2'': and [[during this time]_T [you]_T [secretly]_{nai} [collected thousands of confidential documents]_F]~.
- (26) Q_2 : What did Snowden do until last summer?
- > Q_{2a} : How did he do it?

NAI material as an answer to an *explicit* sub-question

- (27) Q_8 : {*What did these people tell the reporter that they wanted to do with Snowden?*}
- > $A_{8'}$: [[These individuals]_T – [and these are acting government officials]_{nai} – [they]_T said [they]_T would be happy, they would love [to put a bullet in]_F my [head]_F]~,
 - > $A_{8''}$: [[to poison]_F [me]_T]~ [as I was returning from the grocery store]_{nai}
 - > A_{8iv} : and [[have]_F [me]_T [die]_F]~ [in the shower]_{nai}
- (28) > $A_{8''}$: [[to poison]_F [me]_T]~
- > Q_9 : {*When would they want to poison Snowden?*}
 - > > A_9 : [as [I]_T [was returning from the grocery store]_F]~
 - > A_{8iv} : and [[have]_F [me]_T [die]_F]~
 - > Q_{10} : {*Where would they have him die?* }
 - > > A_{10} : [[in the shower]_F]~

Adjuncts as part-time NAI triggers

- (29) Q_2 : {*What did Snowden do until last summer?*}
- > $A_{2'}$: [[*You*]_T [*were working*]_F [*until last summer*]_T [*for the NSA*]_F]~
- > $A_{2''}$: and [[*during this time*]_T [*you*]_T [*secretly*]_{nai} [*collected thousands of confidential documents*]_F]~.
- (30) > Q_{32} : *et vous avez euh vous êtes restés longtemps sur la liste*
and you stayed a long time in the waiting list or...
d'attente ou... pour toi ça a été rapide pas rapide à ton avis ça
for you was that fast or not fast, in your opinion
- > > A_{32} : [*euh bah [j]'pense que*]_{nai} [*par rapport à beaucoup d'gens*]_{nai}
well I think that compared to many people
 [[*ça*]_T [*a été un peu rapide*]_F]~
that has been rather fast