Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Embedded Clauses and the Question Under Discussion

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Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

1. Background

Recently, it has been argued that the utterance context can be conceptualized as a question (see Simons et al. 2010, Klein and von Stutterheim 1992, Onea 2011, Roberts 1996 and von Stutterheim 1989).

$\rightarrow$ Every discourse aims to answer an explicit or implicit question, the Question Under Discussion (QUD).

The current QUD affects what is said:
As long as the current QUD is unanswered:

- Any declarative utterance must at least partially answer the QUD.
- Any new question Q' must be a sub-question of QUD.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

An answer to the current QUD can be complete or partial (see Simons et al. 2010):

- A complete answer eliminates all alternatives but one:

(1) Q: Who passed the exam?
     A: Bob, and nobody else.

- A partial answer eliminates at least one alternative.

(2) Q: Who passed the exam?
     A: Bob, and maybe some others.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

However, there are utterance parts that do not attempt to answer the current QUD.

- Utterances can express background information, judgements or comments.

- Therefore, we have to distinguish two kinds of meaning:

- Utterance parts that aim to answer the QUD express **at-issue content**.

- Utterance parts that are not relevant with respect to the QUD express **not-at-issue content**.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Definition of at-issueness:

Simons et al. (2010) define at-issueness indirectly via the yes/no-question associated with a proposition:

(3)   "For any proposition p, let ?p denote the question whether
        p. Then the basic definition of at-issueness is: A
        proposition p is **at-issue** relative to a question Q iff ?p is
        relevant to Q."

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Example from Simons et al. (2010):

(4)   *Background scenario: a nutritionist has been visiting first*
      grade classrooms to talk to the children about healthy
      eating.

      QUD: What most surprised you about the first grades?
      A: They didn't know that you can eat raw vegetables.

- Task: Investigate if the embedded clause expresses at-issue content.
- p = You can eat raw vegetables.
- ?p = Can you eat raw vegetables?
- The reduction of the bipartition p $\vee$ ¬p does not entail an answer to the QUD.
- Therefore, p is not-at-issue with respect to the QUD.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

- (Not-)At-issueness is always defined with respect to the current QUD.
- Though, in many cases the QUD is implicit.

Grammatical encoding of (Not-)At-issueness:

- Grammar gives us some hint about which utterance parts are at-issue and therefore also about which question is answered (see Onea 2011 and von Stutterheim 1989).
- Therefore, the current QUD affects not only what is said, but also the linguistic form of what is said.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

By several means, the grammar of a language marks content as at-issue or not-at-issue.

Linguistic marker for at-issueness:

- Focus signals that the constituent is under discussion.

(5) a. Mary met PEter.
     b. Who did Mary meet?
     c. What happened?
     d. #Who met Peter?

The range of possible QUDs is restricted, but the QUD is still underspecified.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Natural language has also specific ways to mark not-at-issue content:

- Definite articles
- Embedded clause structures

According to von Stutterheim (1989, 168), embedded clauses cannot be used to answer the current QUD and subordination signals conventionally not-at-issueness.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Important marker for subordination in German:

- Complementizer in C^0
- finite verb in a clause-final position

(6)   a.   Maria **raucht** täglich   30 Zigaretten.
              Maria smokes every day 30 cigarettes.

      b.   Peter glaubt, **dass** Maria täglich   30 Zigaretten
              Peter believes that Maria every day 30 cigarettes
              raucht.
              smokes.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

As von Stutterheim (1989, 168) correctly predicts, the utterance of the following embedded clause is not felicitous, when it is relevant with respect to the QUD:

(7)   QUD:Hat Maria das Auto gekauft?
            'Did Maria buy the car?'
        B: #Maria hat ihre Mutter besucht, nachdem sie das
            Auto gekauft hat.
            'Maria has visited her mother, after she had bought
            the car.'
        C: Ja, Maria hat ihre Mutter besucht, nachdem sie das
            Auto gekauft hat.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

However, von Stutterheim (1989)'s generalization does not hold for all embedded clauses (example from Simons 2007, 1035):

(8)   QUD: Where was Harriet yesterday?
        B: Henry discovered that she had a job interview at
             Princeton.
             'Henry hat herausgefunden, dass sie ein
             Bewerbungsgespräch in Princeton hatte.'

- The subordinate clause shows all typical properties of
  embedded clause structures, nevertheless it can express
  at-issue content.
- Therefore, we can conclude that subordination does not
  conventionally signal not-at-issueness.
- TO DO: Investigate which types of embedded clauses can be
  used to express at-issue content.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

2. Embedded Clauses and At-issueness

Eight different types of embedded clauses were investigated with respect to their ability to express at-issue content:

- **Clauses selected by a verb:** complement clauses of bridge verbs, complement clauses of factive verbs, complement clauses of semi-factive verbs.
- **Adverbial modifiers:** temporal clauses, causal clauses introduced by *weil* (roughly 'because').
- **Modifiers on a nominal head:** appositive and restrictive relative clauses on definite and indefinite heads.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Clauses embedded under a bridge verb can be used to express at-issue content:

(9)   QUD:Wo ist Marche?
                'Where is Marche?'
        B: Homer hat gesagt/glaubt, dass sie shoppen gegangen ist.
                'Homer said/believes that she went shopping.'

The same holds for the complements of a semi-factive verb:

(10)   QUD:Where was Harriet yesterday?
        B: Henry discovered that she had a job interview at Princeton.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

In contrast, factive predicates always embed not-at-issue clauses:

(11) QUD:Wo ist Marche?
      'Where is Marche?'
   B: #Homer ignoriert, dass sie shoppen gegangen ist.
      'Homer ignores that she went shopping.'

(12) QUD:Wo ist Homer?
      'Where is Homer?'
   B': #Marche nimmt ihm übel, dass er nach Las Vegas
       gefahren ist.
       'Marche resents him for going to Las Vegas.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Adverbial modifiers:

Adverbial clauses expressing temporality cannot be used to answer the current QUD:

(13)   QUD:Hat Peter den Film gesehen?
            'Did Peter watch the movie?'
        B: #Peter war müde, als er ihn gesehen hat.
              'Peter was tired when he watched it.'
        B':   #Nachdem er ihn gesehen hatte, war Peter schlecht
              gelaunt.
              'After he had watched it, Peter was in a bad mood.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

An apparent counterexample:

(14)   QUD: Wann hat Peter das Auto gekauft?
            'When did Peter buy the car?'
     B: Er hat es gekauft, bevor er nach Göttingen
            umgezogen ist.
            'He bought it before he moved to Göttingen.'

Here, the temporal clause does not express at-issue content!

(15)   p = Peter moved to Göttingen.
        ?p = Did Peter move to Göttingen?

The reduction of the bipartition p ∨ ¬p does not imply an answer
to the current QUD, therefore the adverbial clause is not-at-issue.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

In contrast to temporal clauses, a **causal clause** introduced by *weil* can express at-issue-content:

(16)   QUD:Warum hat Peter Maria geheiratet?
                'Why did Peter marry Maria?'
        B: Er hat sie geheiratet, weil sie reich ist.
                'He married her because she is rich.'

- p = Maria is rich.
- $?p$ = Is Maria rich?
- The reduction of the bipartition $p \vee \neg p$ is relevant w.r.t. QUD

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Relative clauses:

We have to distinguish between appositive and restrictive relative clauses. Appositives cannot be used to answer the current QUD:

(17)   QUD:Wo ist Peter?
            'Where is Peter?'
       B: #Peter, der gerade in Indonesien ist, mag Eis.
            'Peter, who is currently in Indonesia, likes ice cream.'

The same holds for a restrictive modifier on a definite head:

(18)   Q: Does [the car]$_i$ have air conditioning?
       B: #I bought the [the car, that does not have air conditioning]$_i$.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

In contrast, if a restrictive relative clause modifies an indefinite
antecedent, it can be used to express at-issue content:

(19)   QUD:Welche Qualifikationen werden benötigt?
               'What qualifications are required?'
       B: Die Firma sucht einen Mitarbeiter, der Chinesisch
             kann.
             'The company is looking for an employee who speaks
             Chinese.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Clause type	[at-issue]
Sentential complement of a bridge verb	+/-
Sentential complement of a semi-factive verb	+/-
Sentential complement of a factive verb	-
Causal clause introduced by *weil*	+/-
Temporal clause	-
Restrictive relative clause with an indefinite antecedent	+/-
Appositive relative clause	-
Restrictive relative clause with a definite antecedent	-

Table: Embedded clauses and at-issueness

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Two types of embedded clauses:

(20)   **Type 1**:
         Embedded clauses of type 1 can, depending on the
         context, express at-issue or not-at-issue content.
         Sentential complements of bridge verbs and semi-factive
         verbs, adverbial clauses introduced by *weil* and restrictive
         relative clauses on indefinite heads belong to this group.
         Type 2:
         Embedded clauses of type 2 cannot express at-issue
         content.
         Sentential complements of factive verbs, temporal clauses,
         appositive relative clauses and restrictive relative clauses
         on definite heads belong to this group.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

3. Typical properties of not-at-issue inferences

Simons et al. (2010) and Roberts et al. (2009) observe that all inferences that are not-at-issue share two properties:

- They project under embedding of an entailment-cancelling operator.
- Their truth cannot be denied directly.

Hypothesis: Embedded clauses of type 2 always project and are not sensible for direct denial. Embedded clauses of type 1 do not generally project and they are sensible for direct denial.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

3.1 Projection

Definition of projection (see Simons et al. 2010)=

"An implication projects iff it survives as an utterance implication when the expression that triggers the implication occurs under the syntactic scope of an entailment-cancelling operator."

Example:

(21) a. Peter ignores that Mary smokes.
      b. Peter doesn't ignore that Mary smokes.
      ≫ Mary smokes.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Holes:

(22)   If $A \gg B$, then:

   a. $\neg A \gg B$
   b.   It is possible that $A \gg B$
   c. $A \rightarrow C \gg B$
   d. $A? \gg B$

Traditionally, the *Holes* were used to identify presuppositions:
complements of factive predicates project.

(23)   a.   Does Peter ignore that Mary smokes?
        b.   It is possible that Peter ignores that Mary smokes.
        c.   If Peter ignores that Mary smokes he is quite stupid.
        $\gg$ Mary smokes.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

In contrast to the complement of the factive verb *ignore*, the sentential complement of the non-factive predicate *believe* does not project:

(24)   Peter believes that Mary smokes.

     a.   Peter doesn't believe that Mary smokes.

     b.   If Peter believes that Mary smokes, he doesn't know her well.

     $\not\gg$ Mary smokes.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

However, the projection holes do not constitute an adequate test for presupposition:

Appositive relative clauses:

(25)   Jap, who is from Indonesia, likes ice cream.

   a.   Jap, who is from Indonesia, doesn't like ice cream.
   b.   Does Jap, who is from Indonesia, like ice cream?
   c.   It is possible that Jap, who is from Indonesia, likes ice cream.

   ≫ Jap is from Indonesia.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Appositive relative clauses project under embedding, nevertheless, their content is not presupposed. The utterance of an appositive relative clause is even infelicitous if its content is aforementioned as shown in Holler (2005), Roberts et al. (2009) and Chierchia and McConnell-Ginet (1990)):

(26)   a.   Jill lost something on the flight. #Jill, who lost something on the flight, likes to travel by train.
       b.   #Ein Mann küsste eine Frau und diese Frau, die er übrigens küsste, war verheiratet.

$\rightarrow$ Projection is no distinct property of presuppositions!

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Simons et al. (2010) und Roberts et al. (2009) analyse projection as a pragmatic property (see Xue/Onea 2011 for an empirical verification):

II. **Hypotheses about what projects and why**

    i. All and only those implications of (embedded) sentences which are not-at-issue relative to the Question Under Discussion in the context have the potential to project.

    ii. Operators (modals, negation, etc.) target at-issue content.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

We have seen that the sentential complement of the non-factive predicate *believe* does not project, whereas factive complement clauses survive under embedding:

(27)   If Peter ignores that Mary smokes he is quite stupid.
        ≫ Mary smokes.

(28)   Peter doesn't believe that Mary smokes.
        ≫̸ Mary smokes.

Now, if the complement of *believe* is not-at-issue, its content projects, too:

(29)   Q: Warum ist Maria so wütend?
              'Why is Maria so angry?'
        B: Peter glaubt ihr nicht, dass sie volljährig ist.
              Peter believes her not   that she of age   is.
              ≫ Maria ist volljährig.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Complements of semi-factive predicates do not project (see also Hooper/ Thompson 1973, 480 and Karttunen 1971):

(30) a. Wenn ich später entdecken sollte, dass ich nicht die
          Wahrheit gesagt habe, werde ich es allen beichten.'
          'If I discover later that I have not told the truth, I will
          confess it to everyone.'
      b. Hast du danach entdeckt, dass du nicht die Wahrheit
          gesagt hast?
          'Did you discover later that you had not told the
          truth?'
      ⊮ A has not told the truth.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

In contrast, if a semi-factive complement clause is not relevant
w.r.t. QUD, its content projects:

(31)   *Context: Loud yelling*

      QUD:Was ist denn los?

          'What's happening?'

    B: Hm, sollte Marche entdeckt haben, dass Bart raucht,
       würde das das Geschrei erklären.
       'Well, if Marche discovered that Bart smokes, that
       would explain the yelling.'

    ≫ Bart smokes.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Temporal clauses:

(32) Die Kommissarin erreichte den Tatort, bevor die Leiche gefunden wurde.

'The commissioner reached the crime scene before the corpse was found.'

a. Die Kommissarin erreichte den Tatort nicht, bevor die Leiche gefunden wurde.

'The commissioner did not reach the crime scene before the corpse was found.'

b. Erreichte die Kommissarin den Tatort, bevor die Leiche gefunden wurde?

'Did the commissioner reach the crime scene before the corpse was found?'

≫ Die Leiche wurde gefunden.

'The corpse was found.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Causal clauses introduced by weil:

(33)   Peter hat die Sitzung verpasst, weil er verschlafen hat.
        'Peter has missed the meeting because he overslept.'

   a.   Peter hat die Sitzung nicht verpasst, weil er
        verschlafen hat.
        'Peter did not miss the meeting because he overslept.'

   b.   Hat Peter die Sitzung verpasst, weil er verschlafen
        hat?
        'Did Peter miss the meating because he overslept?'

   c.   Wenn Peter die Sitzung verpasst hat, weil er
        verschlafen hat, wird sein Chef sauer sein.
        'If Peter has missed the meeting because he overslept
        his boss will be angry.'

   ⤳̸ Peter overslept.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

In contrast, if a *weil*-clause is used in a context where its content is not relevant w.r.t. QUD, it projects with a high probability.

(34)   QUD:Warum ist Maria so traurig?
               'Why is Maria so sad?'
       B: Es ist möglich, dass Peter sie verlassen hat, weil sie
            ihn betrogen hat.
            'It is possible that Peter left her because she was
            unfaithfull.'
       ⤳ Maria hat Peter betrogen.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Restrictive relative clauses with a definite antecedent:

(35)   Dominik mag die Frau, die für die Polizei arbeitet.
         'Dominik likes the woman who works for the police.'

   a.   Mag Dominik die Frau, die bei der Polizei arbeitet?
         'Does Dominik like the woman who works for the
         police?'
   b.   Wenn Dominik die Frau mag, die bei der Polizei
         arbeitet, sollte er aufhören Autos zu knacken.
         'If Dominik likes the woman who works for the police
         he should stop stealing cars.'

   ≫ Es gibt eine (kontextuell relevante) Frau, die bei der
   Polizei arbeitet.
   'There is a (contextually relevant) woman who works for
   the police.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Restrictive relative clauses with an indefinite antecedent:

(36) Dominik mag eine Frau, die bei der Polizei arbeitet.
      'Dominik likes a woman who works for the police.'

   a. Mag Dominik eine Frau, die bei der Polizei arbeitet?
       'Does Dominik like a woman who works for the
       police?'

   b. Wenn Dominik eine Frau mag, die bei der Polizei
       arbeitet, sollte er aufhören Autos zu knacken.
       'If Dominik likes a woman who works for the police
       he should stop stealing cars.'

   ⋡ Es gibt eine Frau, die bei der Polizei arbeitet.
   'There is a (contextually relevant) woman who works for
   the police.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

We have already seen that appositives cannot be used to express at-issue content. Furthermore, we can observe that appositives project even if their content is relevant w.r.t. QUD:

(37)   QUD:Wo ist Peter?
          'Where is Peter?'
   B: #Peter, der gerade in Indonesien ist, mag Eis.
          'Peter, who is currently in Indonesia, likes ice cream.'
   C: # Peter, der gerade in Indonesien ist, mag kein Eis.
          'Peter, who is currently in Indonesia, doesn't like ice
          cream.'
   ⤳ Peter is currently in Indonesia.

This shows that the embedded clause is interpreted as not-at-issue. The oddness of 2 results then from a mismatch between comnventional marking of not-at-issueness and actual usage as bearer of the main point of utterance.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

- Generally, the embedded clauses of type 1 do not project. However, if the embedded clause expresses not-at-issue content, its projection probability increases ($\rightarrow$ need for experimental verification).

- In contrast, the embedded clauses of type 2 always project out of the scope of an entailment-cancelling operator.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

3.2 Direct denial

Some inferences are not sensible for direct denial (Roberts et al. 2009, Shannon 1976, von Fintel 2004):

(38)   A: Have you stopped drinking beer for breakfast?

⤳ m = You have been in the habit of drinking beer for breakfast.

a. **direct denial:** *No, (I haven't stopped)/(#I have never been in the habit of drinking beer for breakfast).*

b. **indirect rejection:** *Hey! Wait a minute!, What d'ya mean?)*

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Some examples:

(39)   A: Evi glaubt, dass Jenny die roten Schuhe gekauft hat.
            'Evi believes that Jenny has bought the red shoes.'
       B: Nein, das stimmt nicht. Jenny hat die GRÜnen
            gekauft.
            'No, that's wrong. Jenny bought the GREEN ones.'

No can be taken as a denial of the complement of a bridge verb
(example (39)), but it does not target the complement of a factive
predicate:

(40)   A: Peter ignoriert, dass Maria in Göttingen ist.
            'Peter ignores that Maria is in Göttingen.'
       B: Nein, das stimmt nicht. # Sie ist in BerLIN.
            'No, that's wrong. She is in Berlin.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Experiment: Embedded clauses and direct denial[1]

- Method: questionnaire
- Subjects: 170 German native speakers
- Tested: 8 different types of embedded clauses w.r.t. their sensibility to direct denial.
- Stimulus: a yes/no-question containing an embedded clause, followed by a direct denial *Nein* ('No').
- Task: to judge if the content of the embedded clause is true by choosing one of three given answers.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Examples:

(41)   A: Verkauft Nadine ihr Auto, weil es kaputt ist?
             'Does Nadine sell her car because it's broken?'
       B: Nein. ('No')
       Ist Nadines Auto kaputt? O Ja O Nein O Ich weiß nicht.
       'Is Nadine's car broken?' O Yes O No O I don't know.'

(42)   A: War Petra einkaufen, bevor sie die Kinder abgeholt
             hat?
             'Did Petra go shopping before she picked up the
             children?'
       B: Nein. ('No')
       Hat Petra die Kinder abgeholt? O Ja O Nein O Ich
       weiß nicht.
       'Did Petra pick up the children?' O Yes O No O I don't
       know.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Assumptions:

- Subjects reconstruct a conversational context to interpret the stimulus sentences.
- Probability of the *No*-answers = probability that the embedded clause is interpreted as at-issue.
- Probability of the *Yes*-answers = probability that the embedded clause is interpreted as not-at-issue

Hypothesis:

- H1: The content of embedded clauses of type 2 cannot be challenged by a direct denial, therefore, the subjects will always choose *Yes*.
- H2: Depending on the reconstructed context, the embedded clauses of type 1 can be sensible to a direct denial or not.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial
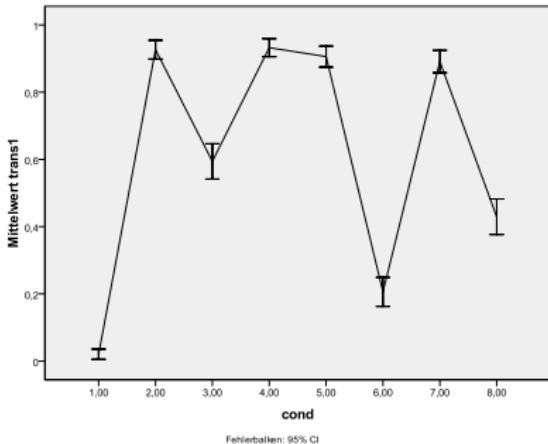
Figure: Results 1

Con 1 = complement of a bridge verb, Con 2 = temporal clause, Con 3 = complement of a semifactive verb, Con 4 = appositive relative clause, Con 5 = complement of a factive verb, Con 6 = causal clause with *weil*, Con 7 = restrictive relative clause on a definite head, Con 8 = restrictive relative clause on an indefinite head

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial
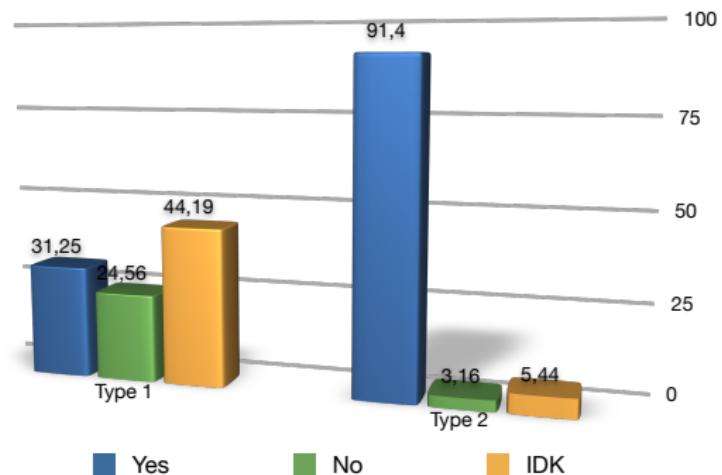
Figure: Results type 1 and type 2

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

- The results confirm hypothesis 1: With a very high probability, embedded clauses of type 2 are interpreted as not-at-issue.

- The difference between the two types of embedded clauses (31,25% *Yes*-answers for type 1 and 91,4% *Yes*-answers for type 2) are statistically significant ($F(1,169)=916,65$, $p<.001$, partiell $\eta^2=.844$).

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

The different types of embedded clauses of type 2 behave very similarly:

Figure: Results type 2

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial
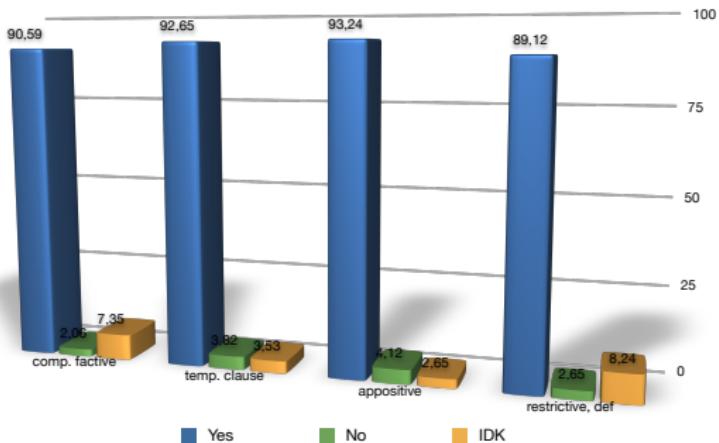
In contrast, we can observe important differences between the different types of embedded clauses of type 1:

Figure: Results type 1

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial
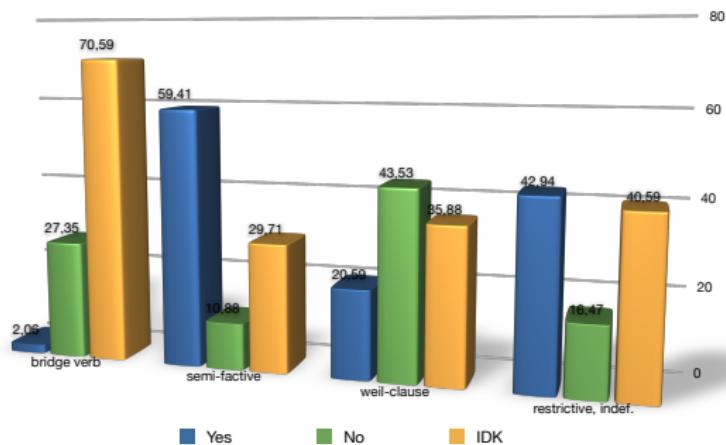
Interpretation of the results:

- The embedded clauses of type 2 behave uniformly in that they are interpreted with a very high probability as not-at-issue.
- Embedded clauses of type 1: different probability that the clause is interpreted as at-issue for each clause type.[2]
- For an embedded clause of type 1, the ability to express at-issue content is a gradual phenomenon.[3]

---

[2]The differences are statistically significant, as for example the difference between condition 3 (semi-factives) and condition 8 (rest. relatives with indefinite head): $F(1,169)=22,09$, $p<.001$, partiell $\eta^2=.116$.

[3]see also the results of Xue/Onea 2011 who show that that for a presupposition the probability to project depends on the lexical trigger.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Projection
Direct denial

Overview:

Embedded clause	at-issue	projection	dir. denial
Complement of a bridge verb	+/-	+/-	+/-
Complement of a semi-factive verb	+/-	+/-	+/-
Adverbial clause with *weil*	+/-	+/-	+/-
Restrictive relative clause on an indefinite head	+/-	+/-	+/-
Complement of a factive verb	-	+	-
Temporal clause	-	+	-
Appositive relative clause	-	+	-
Restrictive relative clause on a definite head	-	+	-

Table: Overview

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

4. Embedded V2: A linguistic marker of at-issueness

In general, German embedded clauses have verb-final order, whereas root clauses have V2-order:

(43) a. Maria **raucht** täglich 30 Zigaretten.
      b. Peter glaubt, **dass** Maria täglich 30 Zigaretten
          raucht.

In specific contexts, embedded clauses can also undergo V2-movement:[4]

(44) Peter glaubt, Maria raucht täglich   30 Zigaretten.
      Peter believes Maria smokes every day 30 cigarettes.

---

[4]for more details see Altmann 1997, Antomo/Steinbach 2010, Breindl 2009, Frank 2000, Gärtner 2001, Reis 1997, Uhmann 1998, Volodina 2011 and Wegener 1993.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Embedded Root Phenomena (ERP):

Syntactic transformations which are normally limited to un-embedded (= root) clauses, but which occur in embedded clauses (here: V-to-C movement in German).

The main issues:

- Which embedded clauses can undergo ERP?
- What are the licensing conditions?

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Licensing contexts for embedded V2 in German:

Complements of bridge verbs:

(45)   Peter glaubt, Maria raucht täglich   30 Zigaretten.
       Peter believes Maria smokes every day 30 cigarettes.

Complements of semi-factive verbs:

(46)   Ich habe gerade erfahren,   ich bin durchgefallen.
       I   have just   discovered I   am failed

Complements of factive verbs:

(47)   *Peter ignoriert, Maria ist in Mainz.
       Peter ignores   Maria is in Mainz.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Adverbial clauses introduced by weil:

(48)   Jenny studiert in Athen, weil   sie **mag** griechisches
       Jenny studies in Athens because she likes Greek
       Essen.
       food

Temporal clauses:

(49)   *Die Kommissarin erreichte den Tatort,
        the commissioner reached   the crime scene
        als/nachdem/bevor die Leiche **wurde** gefunden.
        when/after/before the corpse was   found.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Restrictive relative clauses with an indefinite antecedent:

(50)   Ich kenne einen Linguisten, der   kann nicht lesen.
        I   know   a   linguist   who can   not   read.

Restrictive relative clauses with a definite antecedent:

(51)   *Dominik liebt die Frau,   die arbeitet für der Polizei.
         Dominik loves the woman who works   for the police

Appositive relative clauses:

(52)   *Ich habe mir ein neues Fahrrad gekauft, das war übrigens
          sehr teuer.
          'I bought a new bike, that was, by the way, very
          expensive.'

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Previous account:

- Hooper/Thompson (1973) on ERP in English: presupposed clauses resist root transformations
- This analysis has often been adapted to German V2 clauses (for example Antomo/Steinbach 2010, Gärtner 2001, Reis 1997, Uhmann 1998).
- However: not all contexts that block V2 movement are presupposed!
- Whereas appositive relative clauses can undergo ERP in English, they resist V2 movement in German.
- All embedded clauses that can undergo V2 movement in German share one property: they can express at-issue content (cf. Wiklund et al. 2009 for a similar observation concerning ERP in Norwegian).

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

embedded clause	at-issue	projection	dir. denial	V2
Complement of a bridge verb	+/-	+/-	+/-	+
Complement of a semi-factive verb	+/-	+/-	+/-	+
Adverbial clause with *weil*	+/-	+/-	+/-	+
Rest. relative clause, indef. head	+/-	+/-	+/-	+
Complement of a factive verb	-	+	-	-
Temporal clause	-	+	-	-
Appositive relative clause	-	+	-	-
Rest. relative clause, def. head	-	+	-	-

Table: Embedded V2 in German

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

- Only embedded clauses of type 1 can undergo V2 movement.
- An embedded clause of type 1 is ambiguous: at-issue or not-at-issue
- Hypothesis: Embedded V2 is used to signal at-issueness.

Prediction:
V2 should be excluded from an embedded clause of type 1, if the clause expresses not-at-issue content.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

(53)   Q: Warum ist Maria so wütend?
             'Why is Maria so angry?'
        B: Peter glaubt ihr nicht, dass sie volljährig ist.
             Peter believes her not   that she of age   is
             ≫ Maria is of age.
        B': *Peter glaubt ihr nicht, sie ist volljährig.

V2-complement clauses are merged inside the c-commando-domain
of the matrix clause:

(54)   Jeder$_i$ denkt, er$_i$ ist klug.
        everybody thinks he is intelligent.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

(55)   *Loud yelling*
       Q: Was ist los?
            'What's happening?'
       a.   (??) Marche hat entdeckt, Bart raucht.
            'Marche discovered that Bart smokes.'

Problem: Finding an example that does not allow for an at-issue
reading without being presupposed.

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Conclusion:

- A subset of embedded clauses can be used to express at-issue content.
- Therefore, sentential subordination does not signal conventionally not-at-issueness.
- Embedded clauses that cannot express at-issue content always project under embedding and they are not sensible to direct denial.
- Only embedded clauses that are relevant w.r.t. the current Q can undergo V2-movement.

Open questions:

- Investigate the corelation between at-issueness and V2 in more detail.
- Differences between assertion and at-issueness?
- Structural representation of at-issueness?

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

Thank you!

(56)   **QUD: War das Publikum aufmerksam?**

   a.   # **Ich bedanke mich dafür, dass alle aufmerksam waren!**

Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

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Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

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Background
Embedded Clauses and At-issueness
Typical properties of not-at-issue inferences
Embedded V2: a linguistic marker of at-issueness?
References

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