New data on an old issue: subject/object asymmetries in long extraction contexts

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1. "The old issue": Long extractions and subject/object asymmetries

2. "The new data": Judgement studies on German

3. Conclusions

Long extractions and subject/object asymmetries

General structure: X … [_{CP} … _ ...]

English:

Extraction from *that*-clause ⇨ *that*-trace effect

   (1) *Which pupil do you think that the teacher told off _?*

   (2) **Which teacher do you think that _ told the pupil off?*

Extraction from embedded *wh*-question (*wh*-island)

   (3) ^{??}*Which pupil do you wonder when the teacher told off _?*

   (4) **Which teacher do you wonder when _ told the pupil off?*

Subject/object asymmetries in German: a controversial case

Lutz (2004) on German:

> *"**Diffuse and contradictory judgements** on extraction data are a property of both traditional and generative approaches."*
>
> *"Diffuse und sich widersprechende Beurteilungen von Daten zu Extraktionskonstruktionen sind eine Eigenschaft sowohl traditioneller wie generativer Ansätze." (p.76)*

Müller/Sabel (1989) contra e.g. Fanselow, Grewendorf etc.

> *Subject/object asymmetries "… appear to us to be an expression of mere **ECP wishful thinking**, which has lead to the English data being transferred onto German."*
>
> *Subjekt/Objektasymmetrien " … erschein[en] uns als ein Ausdruck reinen ECP-Wunschdenkens, das dazu führt, die englische Datenlage aufs Deutsche zu übertragen" (p.24)*

Subject/object asymmetries in German: a controversial case

In summary:

- Disagreement regarding extractions from *dass (that)*-clauses.
- Even bigger disagreement regarding extractions from other clause types.
- Data nevertheless used for theory development.

Haider (1993)

*"I find it regrettable that nobody … made the effort to show that the assumed subject/object asymmetry is given **systematically**."*

"Ich finde es bedauerlich, dass keiner … Mühe darauf verwandte, zu zeigen, dass die vermutete Subjekt-Objekt-Asymmetrie systematisch gegeben ist." (p.148)

The task at hand …

A **systematic** elicitation of
subject/object asymmetries in
German extraction data

Extraction: Factors

Basic question:

Which elements can be moved out of which syntactic contexts?

I.   Mobility

II.   Transparency

Additionally:

III.   Movement Type

Movement Type

Long wh-movement:

(5) *Welchen Schüler denkt er, dass der Lehrer _ getadelt hat?*
    Which   student thinks he   that the   teacher told-off has
    'Which student do you think that the teacher has told off?

Long topicalization

(6) Den Schüler denkt er, dass der Lehrer _ getadelt hat.
    The   pupil   thinks he   that the   teacher told-off has
    'He thinks that the teacher has told off the pupil.'

Question:

   Do the two movement types behave in the same way with respect to mobility and transparency?

Narrowing down the investigation

I.	**Mobility**	Which elements can be moved?
II.	**Transparency**	Movement from which syntactic contexts?
III.	**Movement Type**	Long wh-movement vs. long topicalization?

Not in this talk:

- extractability of adjuncts
- bridge quality of verb
- negative islands etc.

I.	**Mobility**	Subject/object asymmetries?
II.	**Transparency**	Movement from which clauses?
III.	**Movement Type**	Long wh-movement vs. long topicalization?

1. "The old issue": Long extractions and subject/object asymmetries

2. "The new data"
   - Methodology
   - Two jugdement studies on German

3. Conclusions

# Methodology

- **Thermometer judgements** (Featherston 2007), an advancement of Magnitude Estimation (Bard et al 1996)

- Elicited grammaticality judgements ...
  - in **numerical** form
  - **relative to two reference items** and relative to one's own previous judgements

- Task: "If this one gets a 20, and that one a 30, what score will you give this one?"

- "**How natural** do these examples sound?"

- **Online** questionnaire (WebExp2-Tool)

Predecessor Featherston (2003)

I.	**Mobility**	Subject/object asymmetries
II.	**Transparency**	Extraction from *dass* (*that*)-clause
III.	**Movement Type**	*wh*-Movement vs. topicalization
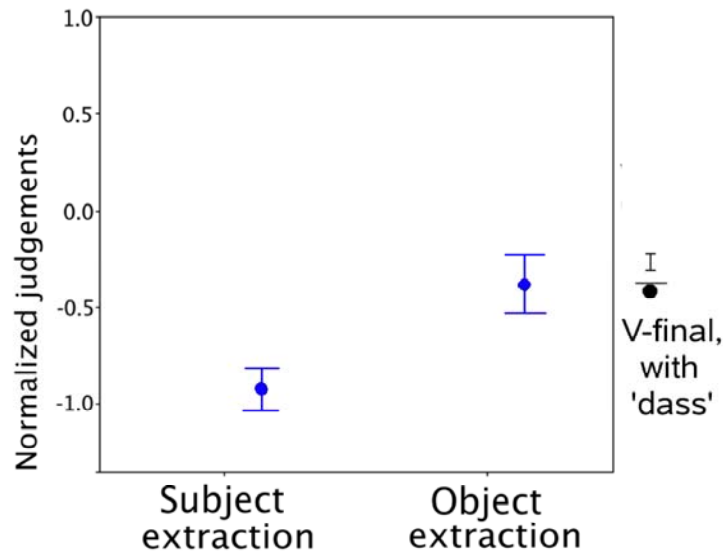
Our aim:
Extend data on transparency

I.	**Mobility**	Subject/object asymmetries
II.	**Transparency**	Extraction from *dass* (*that*)-clause
		Extraction from *ob (whether)*-clause
		Extraction from embedded *wh*-questions
		Extraction from verb-second clause
		⇨ Reis (1995), Kiziak (2007)
III.	**Movement Type**	*wh*-Movement vs. topicalization

Exp I:
S/O asymmetries and Transparency

I.   Mobility

   Case-unambiguous accusative object and subject

   D-linked (for *wh*-movement)

I.   Transparency

   Extraction from *dass* (*that*)-clause

   ob (*whether*)-clause

   wann (*when*)-clause

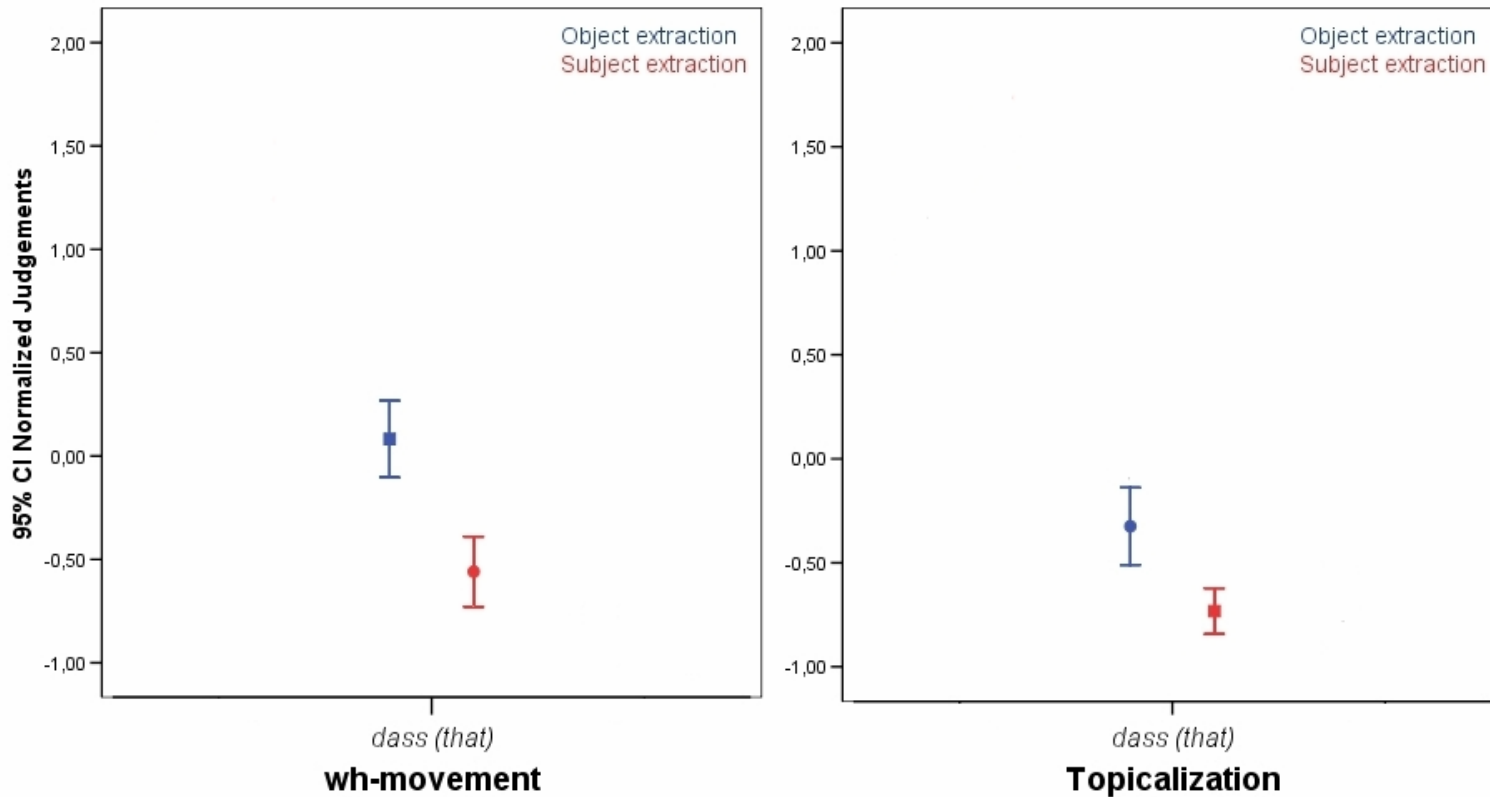   *warum* (*why*) -clause

   wer/*wen* (*who*/*whom*) -clause
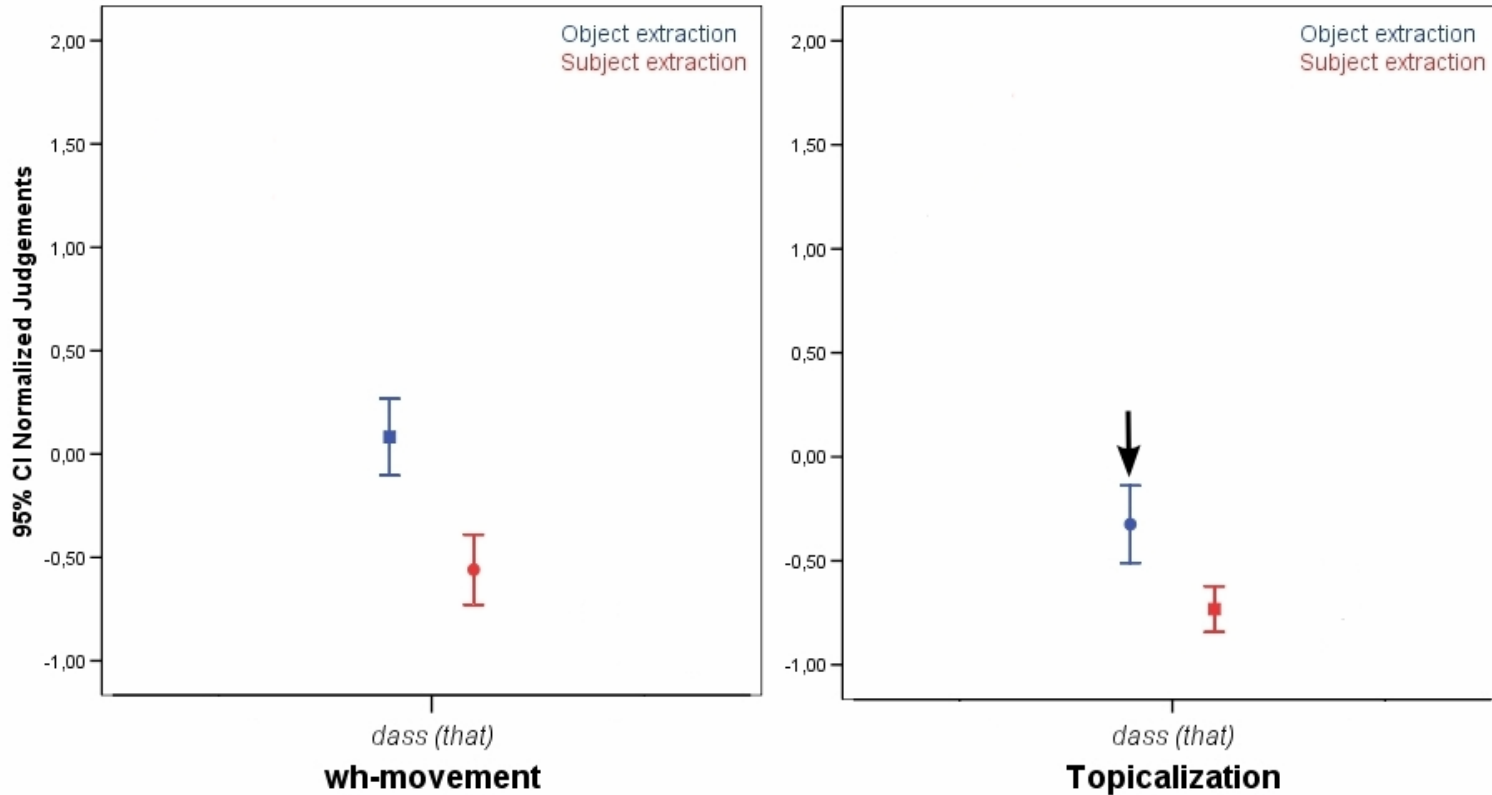
III.   Movement Type

   wh-movement and topicalization

For comparison: matrix clauses   Examples: ⇨Appendix
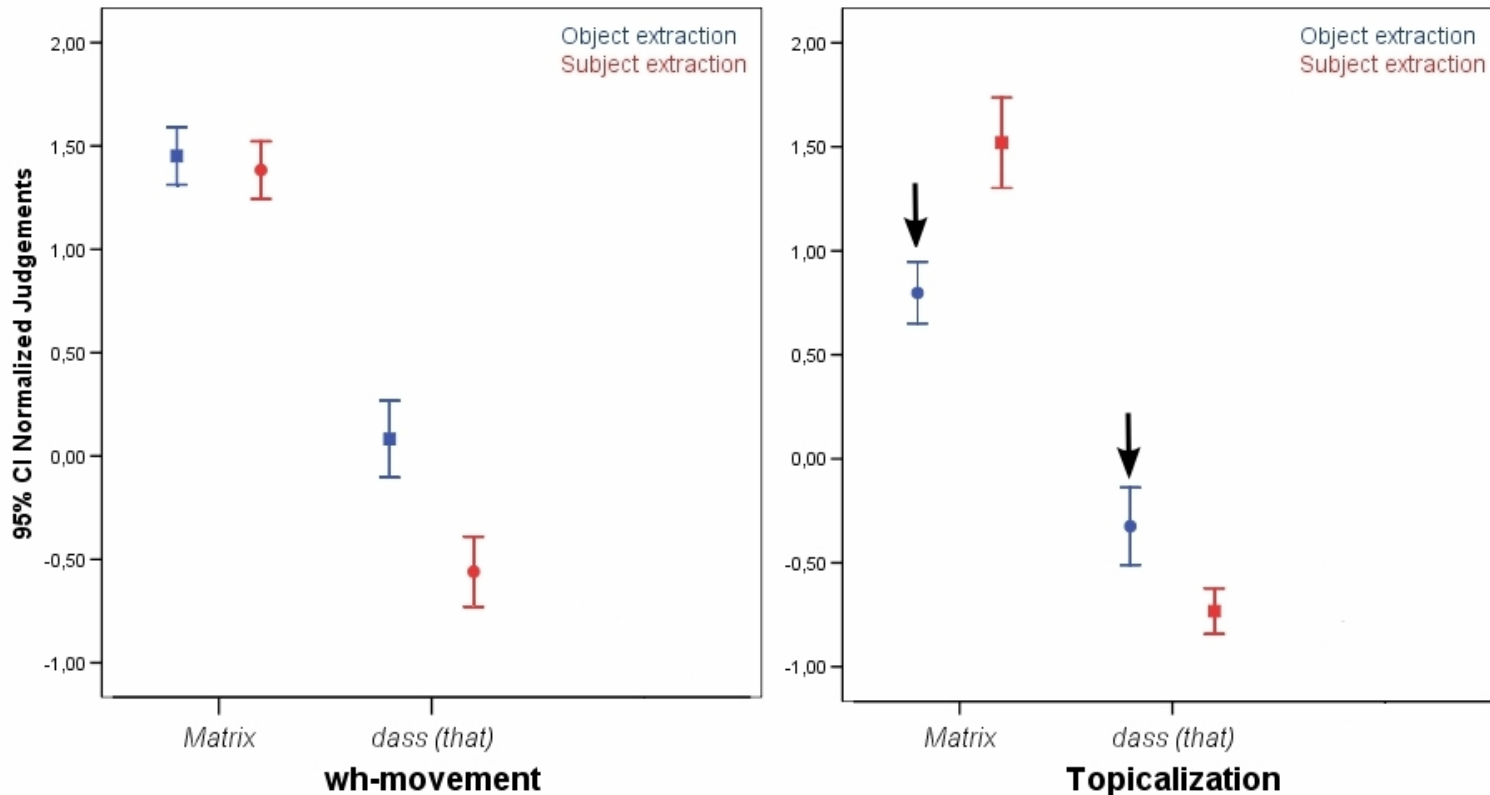
Exp I: Extractions from *dass*-clause
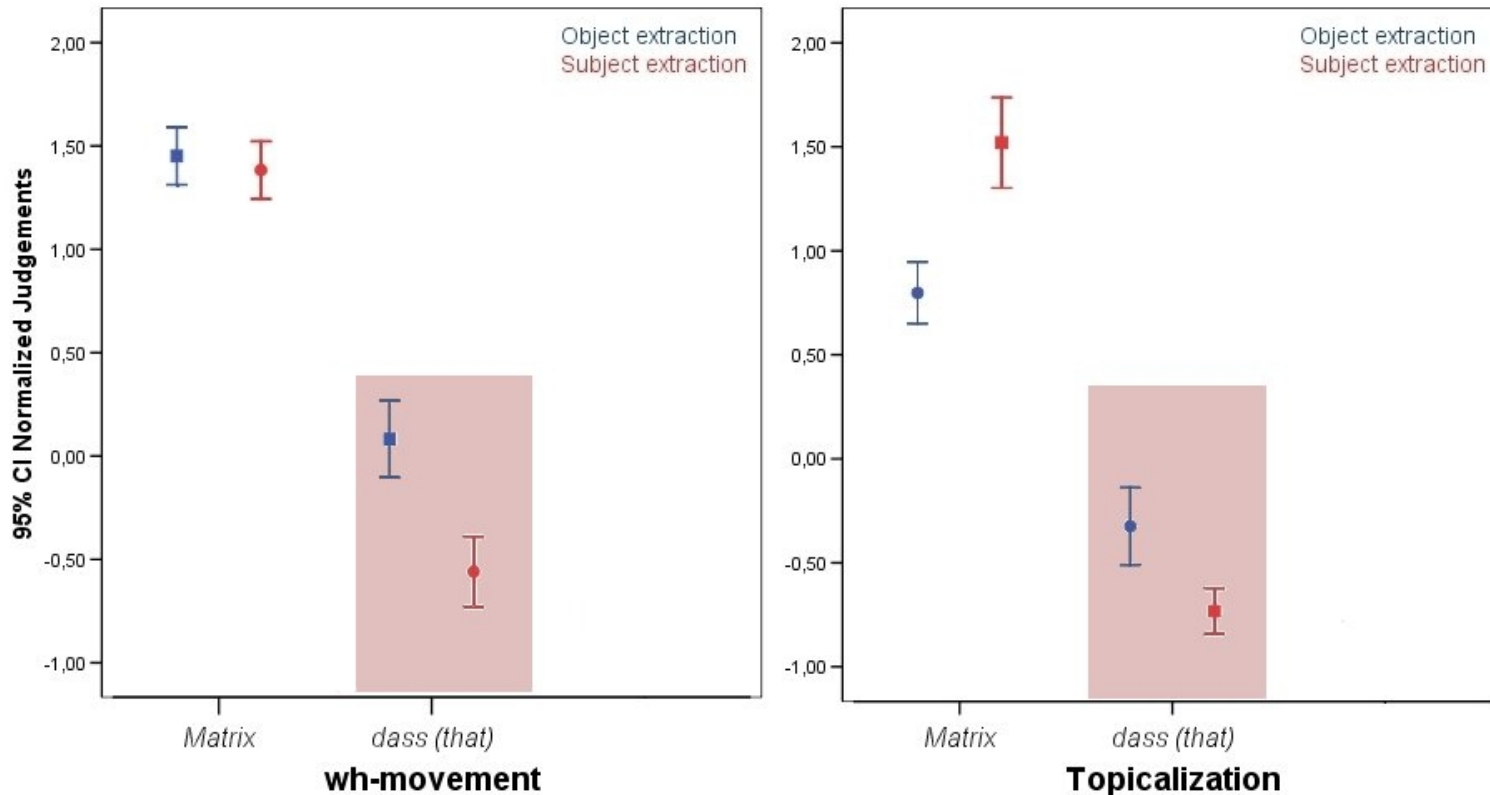
Exp I: Extractions from *dass*-clause

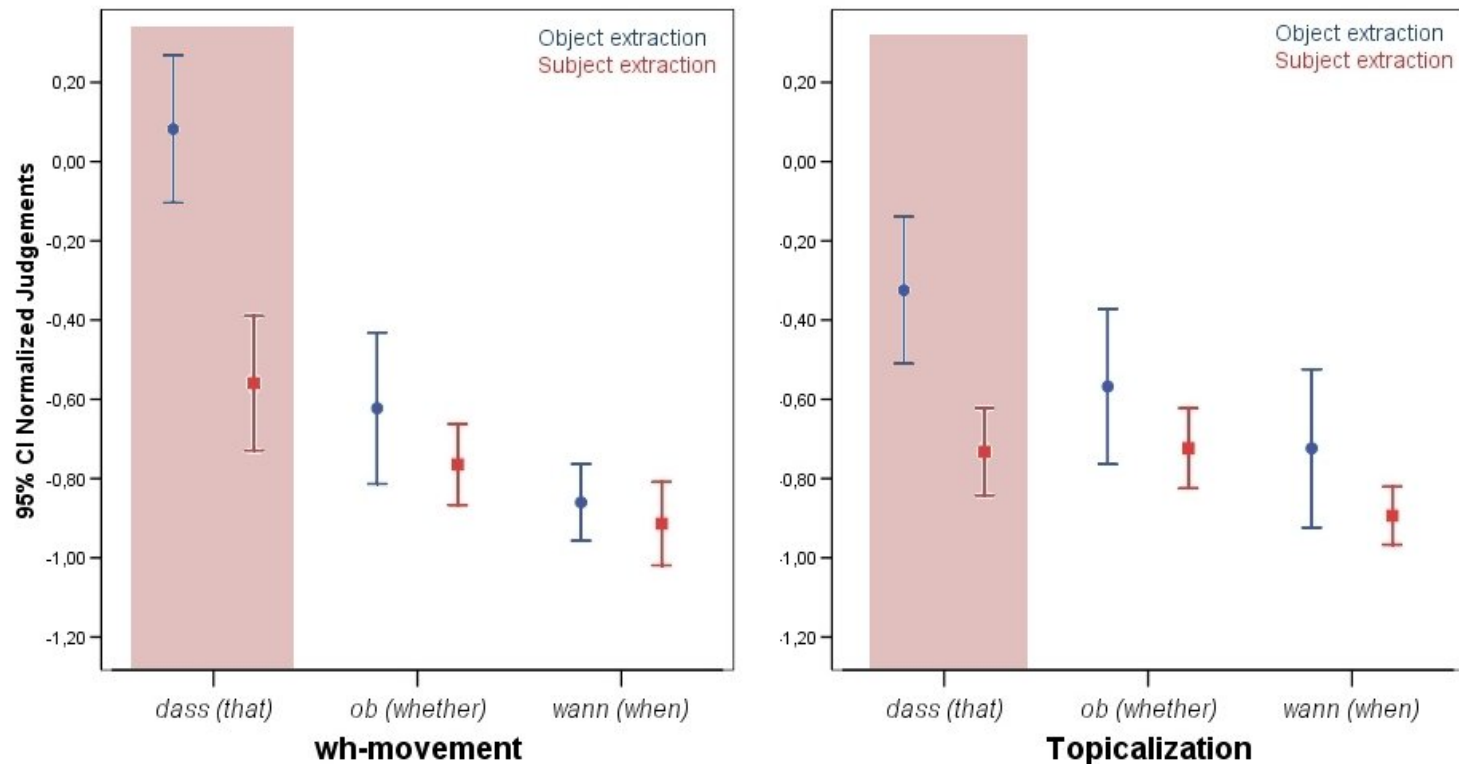# Exp I: Extractions from *dass*-clause and simple matrix clauses

Topicalization: Dispreference for putting the object in initial position

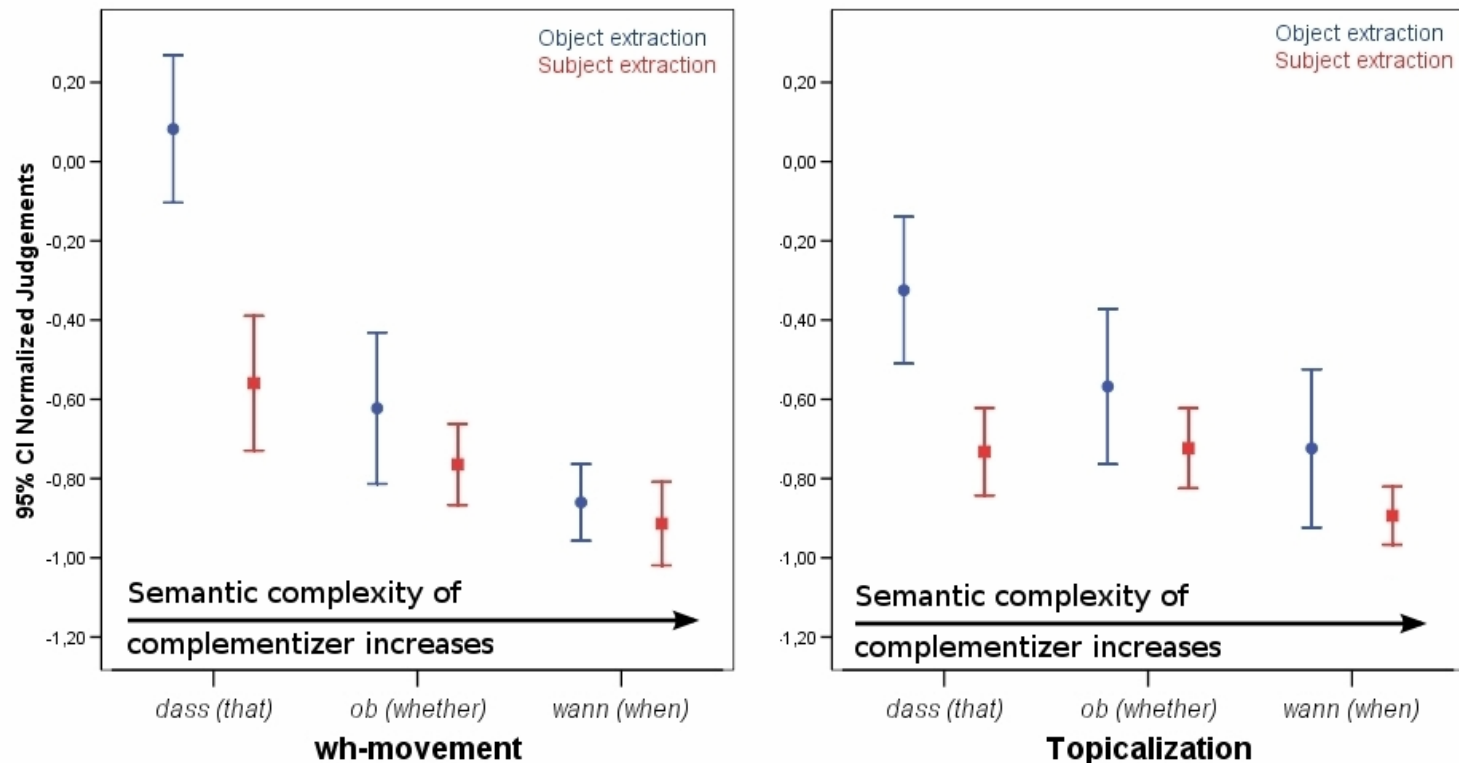# Exp I: Extractions from *dass*-clause and simple matrix clauses

Topicalization: Dispreference for putting the object in initial position

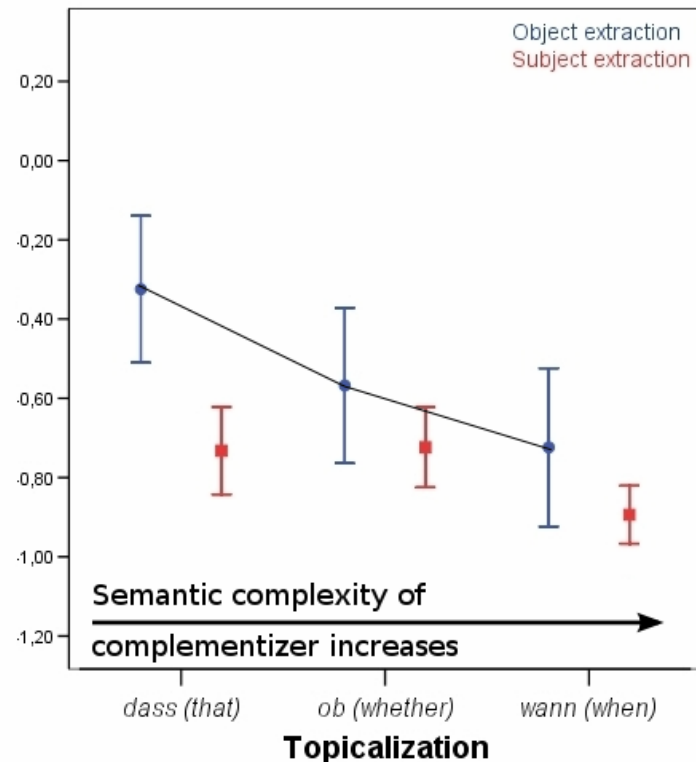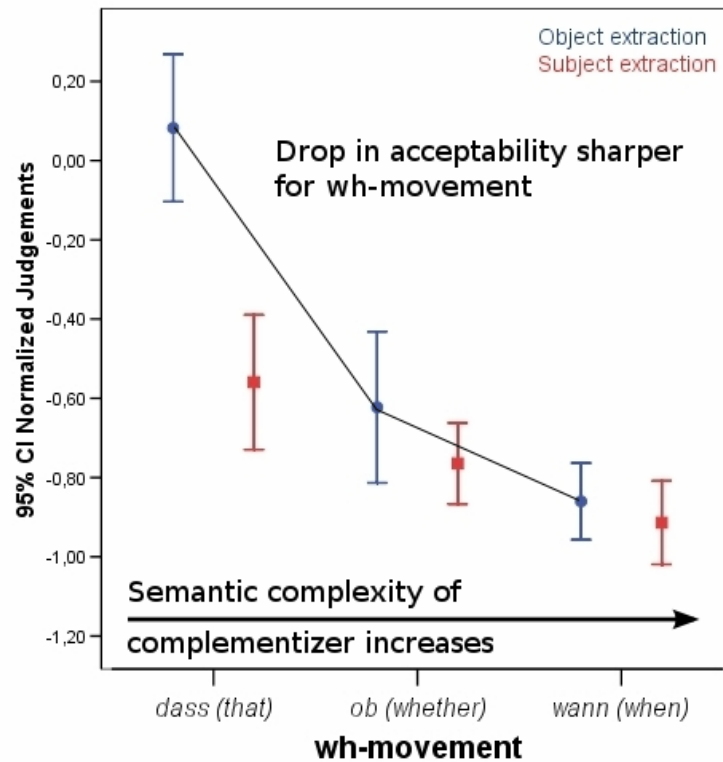# Exp I: Extractions from *dass-*, *ob-*, and *wann*-clauses

Exp I:
Semantic heaviness of complementizer

Semantic heaviness of complementizer influences judgements negatively, cf. Kluender/Kutas 1993 for English

Exp I:
Movement type x Complementizer type

Effects of semantic heaviness of complementizer more severe
for wh-movement (2 wh-elements vs. 1); cf. Culicover 1999

Exp I: Summary

Subject-object asymmetry exits. It is influenced by

- Word-order preference (subject-initial better than object-initial in declarative matrix clauses)

- Semantic heaviness of complementizer (*dass* < *ob* < *wh*-element)

- Movement type interacts with complementizer type (*wh-wh* worse than top-*wh*)

Moreover: Floor effects obscure subject/object asymmetry.

Floor effects

At a certain level of badness, judgements get compressed.
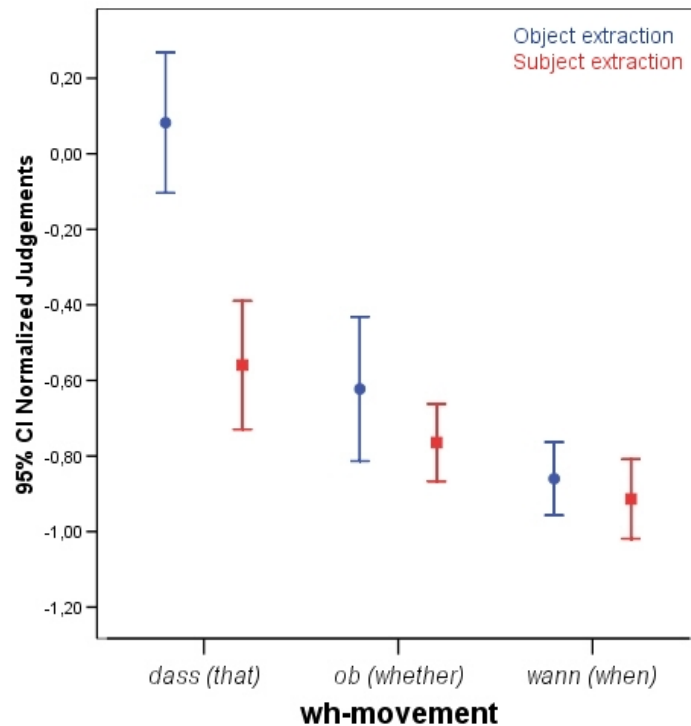
Floor effects

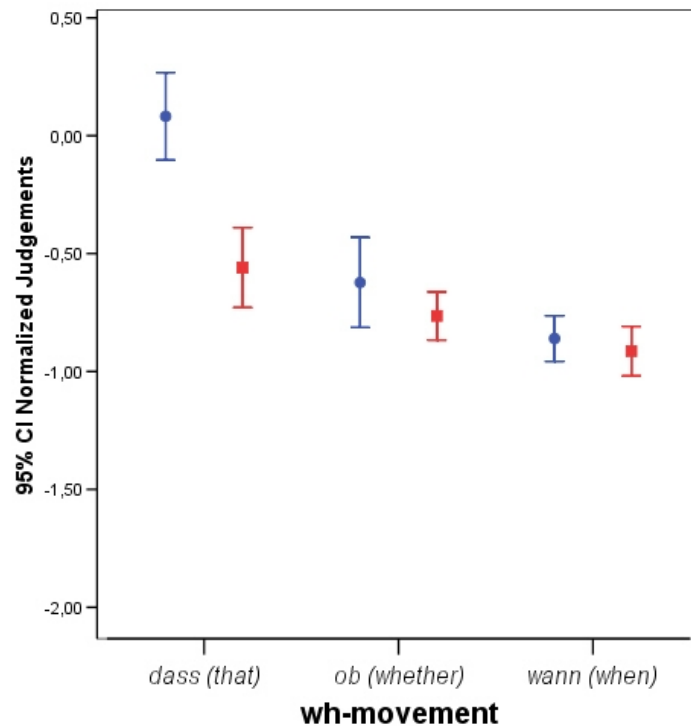At a certain level of badness, judgements get compressed.

Floor effects

At a certain level of badness, judgements get compressed.
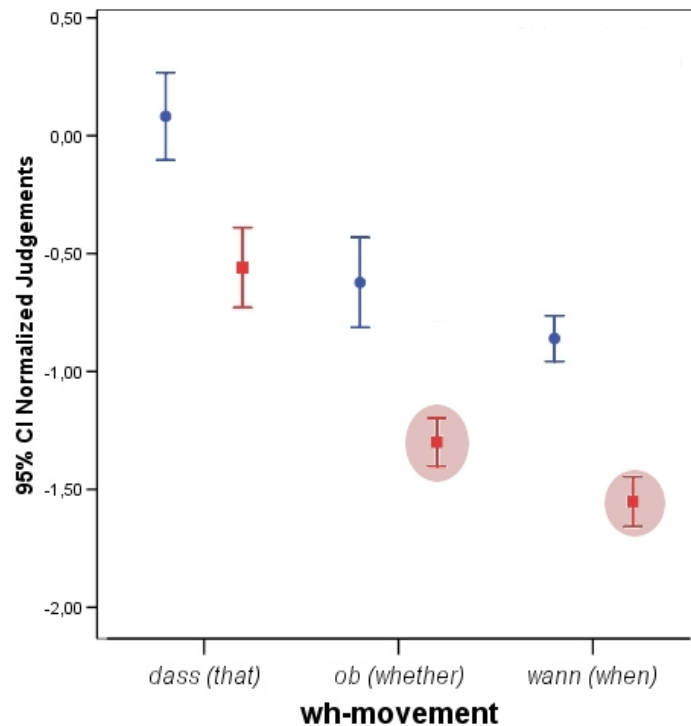
(What the data might look like without floor effects.)

Exp I: Results revisited
Long topicalization *dass*, *ob*, *wann*
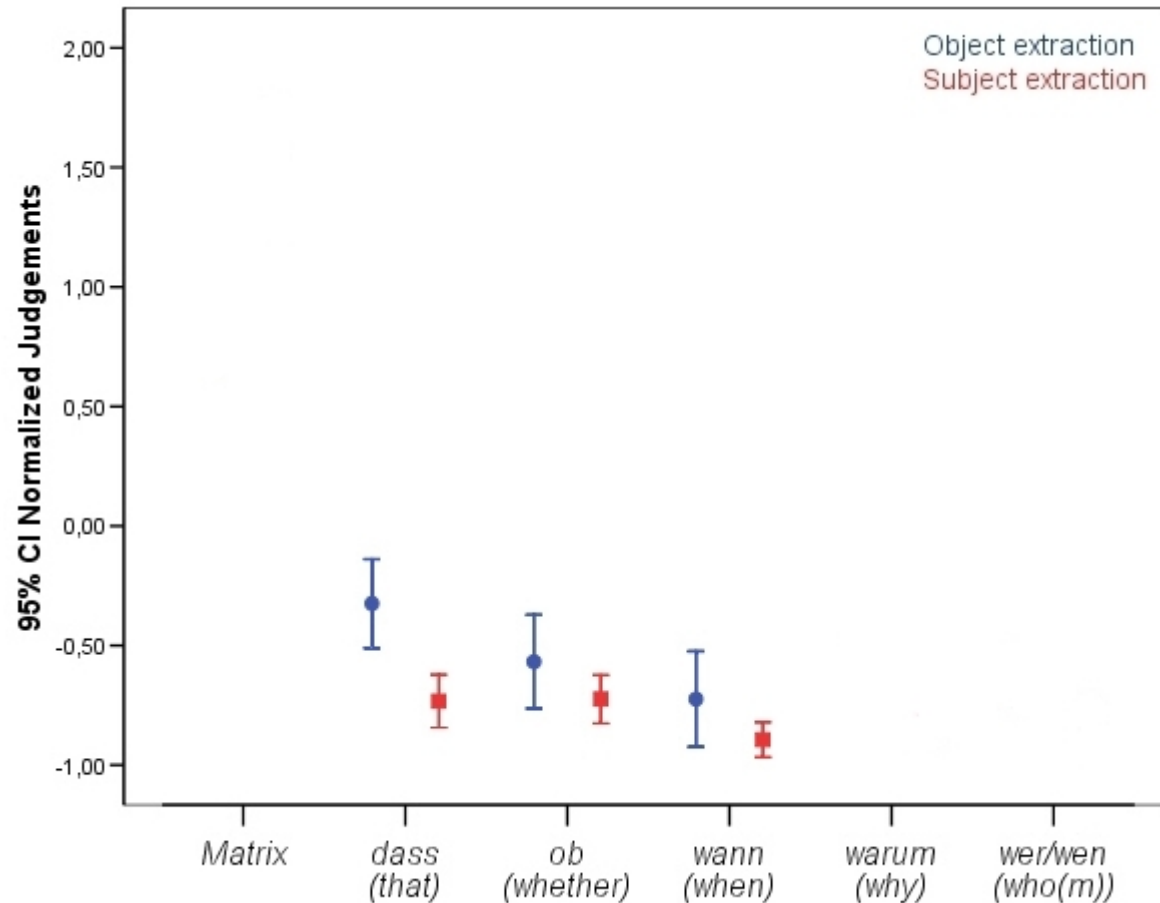
Exp I: Results revisited
Long topicalization *dass*, *ob*, *wann,* Matrix
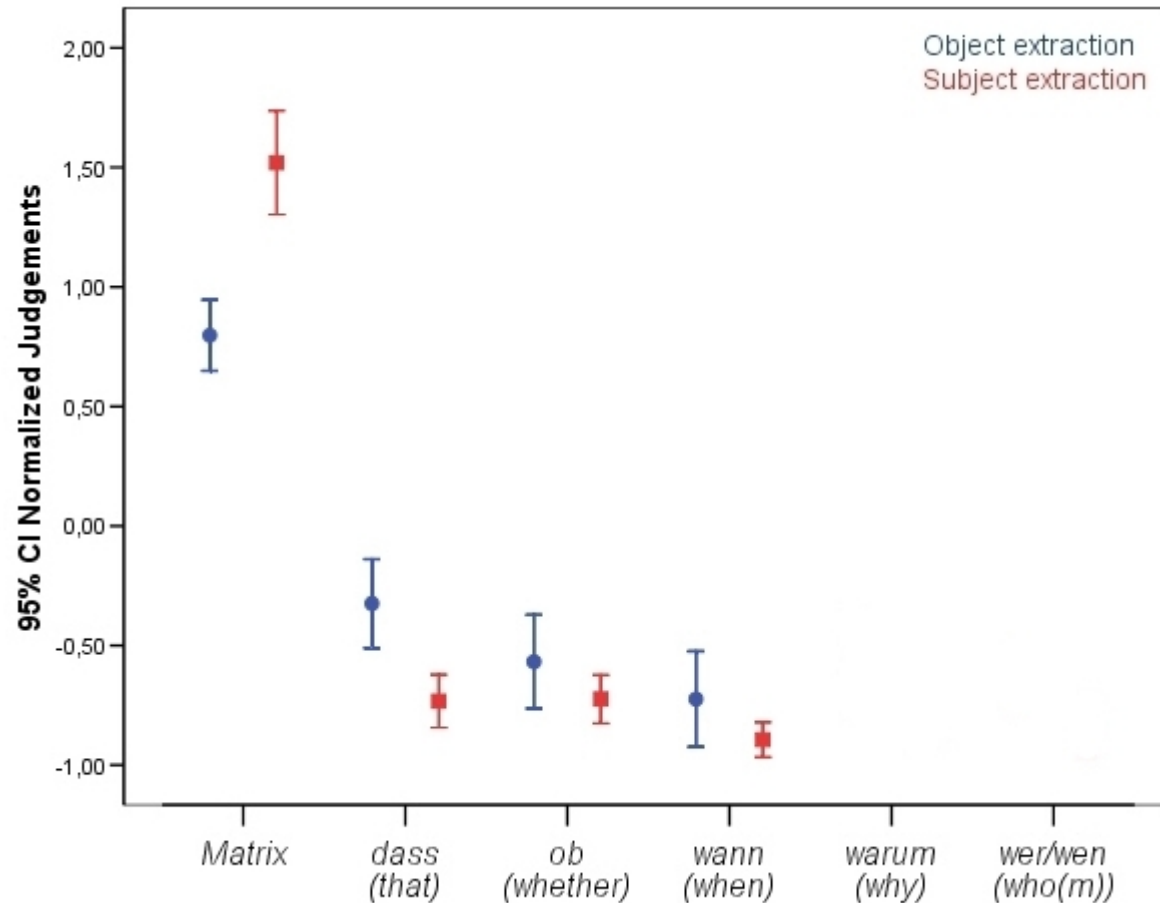
Exp I: Results revisited
Long topicalization - the full picture
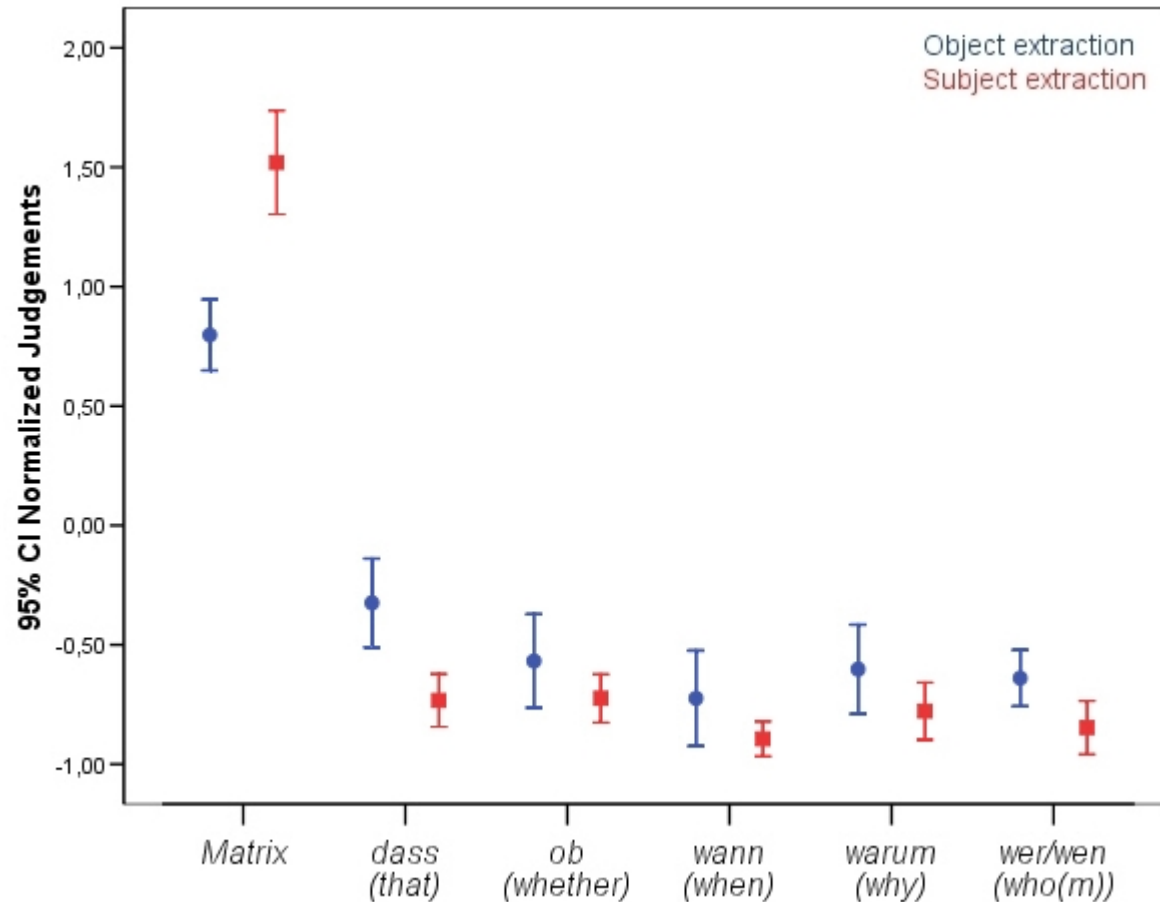
Intermediate Conclusion

Despite Floor Effects:

Subject/object asymmetries visible

- for long *wh*-movement and long topicalization (movement type)
- for the embedded clause types we tested (transparency)

Explanations for the asymmetry?
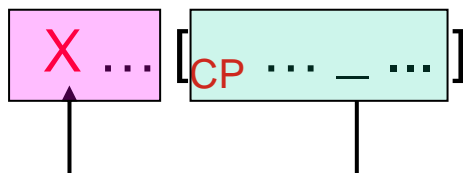
General structure: $X \ldots [_{CP} \ldots \_ \ldots]$

Explanation in matrix clause:

There is a problem with the nominative in first position

- Agreement/Case clash between nominative and matrix verb ("Kasusaufprall")

- "Ambiguity helps"-Account

Explanation in embedded clause:

There is a problem with the subject trace

- Empty Category Principle

- Bayer (2005): Movement must not affect the topic position of an embedded clause

The "Ambiguity helps"- Account
How a sentence could continue …

Accusative object in first position:

Wen glaubst du …

　　… dass Peter gesehen hat?　　Extraction from *dass*-clause
　　… gesehen zu haben?　　　　Extraction from infinitival clause

Infinitival clause is a possible continuation

Nominative subject in first position:

Wer glaubst du …

　　… dass Peter getroffen hat?　　Extraction from *dass*-clause
　　*… getroffen zu haben?　　　　Extraction from infinitival clause OUT

Infinitival clause is not a possible continuation

In infinitive: no overt subject ⇨ no extraction of subject

The "Ambiguity helps"- Account
General reasoning

1. Local ambiguity improves overall acceptability of a sentence.
(Fanselow/Frisch 2004)

2. Extractions from infinitival clauses are rated better than extractions from *dass*-clauses.

3. Idea: If sentence looks like be the beginning of an extraction from an infinitival clause ⇨ Acceptability may be improved

4. Object extractions from *dass*-clauses are locally ambiguous in this sense. Subject extractions are not. (Proviso: Subject clearly marked as nominative)   (cf. Fanselow 2007)

⇨ subject/object asymmetry expected
⇨ processing, not grammar

Exp II: Killing two birds with one stone

Bird I:

If "ambiguity helps"-account were correct, all types of subject extractions should be rated the same as long as the subjects look the same.

Bird II:

What if the extracted subject is "base-generated" in the object position?

Explanations for the asymmetry?

General structure: X … [$_{CP}$ … _ ...]

Explanation in matrix clause:

There is a problem with the nominative in first position

- Agreement/Case clash between nominative and matrix verb ("Kasusaufprall")

- "Ambiguity helps"-Account

Explanation in embedded clause:

There is a problem with the subject trace

- Empty Category Principle

- Bayer (2005): Movement must not affect the topic position of an embedded clause

Exp II: Subject Extraction – a closer look

I.   Mobility

        If embedded verb in the active voice:

                Extraction of accusative object

                Extraction of subject

        If embedded verb in the passive voice:

                Extraction of subject

        NPs: case-unambiguous, D-linked; Examples: ⇨Appendix

II.   Transparency

        Extraction from *dass (that)*-clause

III. Movement Type
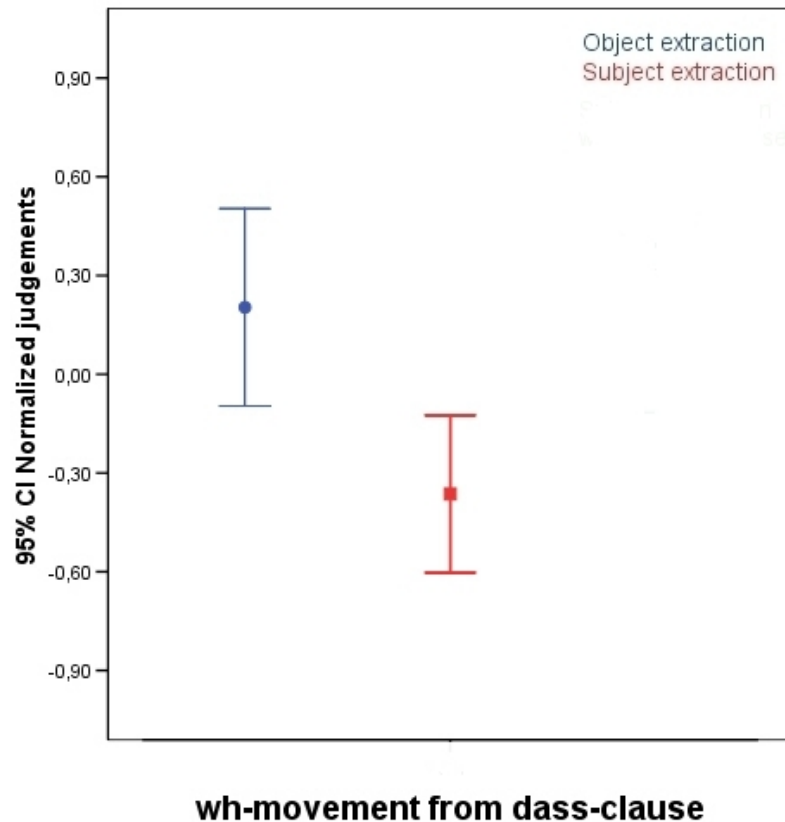
        wh-movement

Exp II: Embedded clause in active voice

⇨ subject/object asymmetry as usual

Exp II: Active and Passive Voice
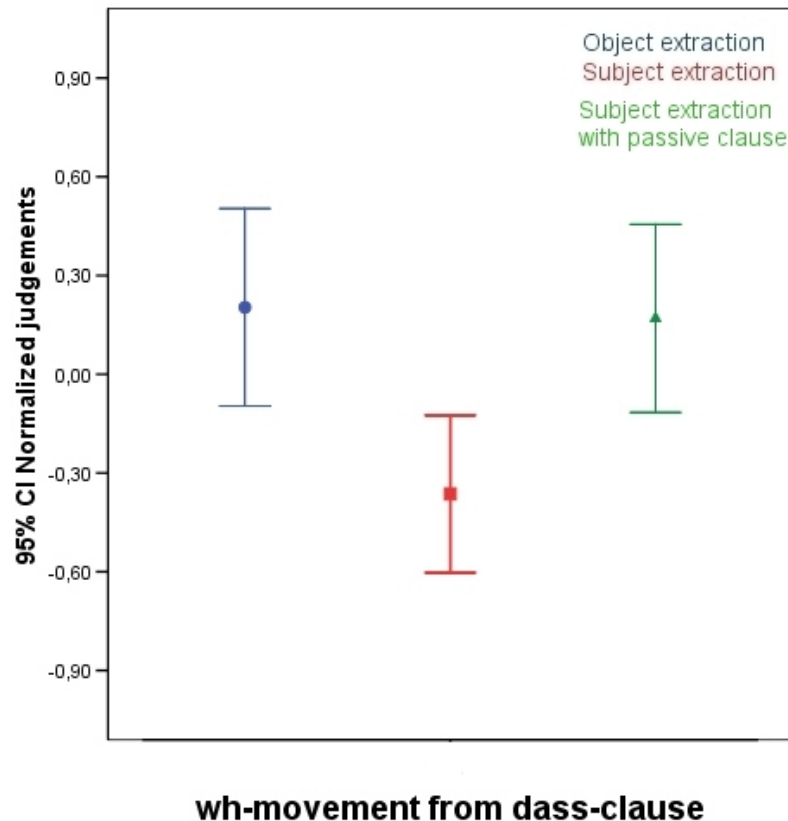
⇨ Extraction of passive subject is as good as object extraction

⇨ Extraction of passive subject is better than extraction of active subject

Exp II: Evaluation
Bird I – The "ambiguity helps"-account

Recapitulation: Extractions from infinitival clauses are very good.
Question: Can ambiguity help with sentences in experiment?

Object Extraction:
Welchen Anwalt glaubst du …
    … dass der Richter gesehen hat?   Extraction from *dass*-clause
    … gesehen zu haben?   Extraction from infinitival clause

Subject (passive or active) extraction:
Welcher Anwalt glaubst du …
    … dass gesehen wurde/den X gesehen hat? Extraction from *dass*-clause
    *… gesehen zu haben?   Extraction from infinitival cl. OUT

⇨ subject/subject asymmetry unexpected
⇨ passive subject/object symmetry unexpected

Exp II: Evaluation
Bird II – Subject trace account

Bird II repeated:

What if the extracted subject is "base-generated" in the object position?

Observation: No subject/object asymmetry

Apparent conclusion: Position/Theta-marking of trace is decisive

BUT

Passive sentence less complex than active counterpart.

Passive: *Welcher Anwalt glaubst du, dass gesehen wurde*?

Active: *Welcher Anwalt glaubst du, dass den Richter gesehen hat*?

Extracted Element easier to integrate

1. "The old issue": Long extractions and subject/object asymmetries

2. "The new data": Judgement studies on German

3. Conclusions
   - Summary
   - Some further facts

Conclusions

The starting point:

Disagreement about subject/object asymmetries in German

Our task:

Systematic elicitation of German subject/object asymmetries with respect to

    I.   Mobility

    II.   Transparency

    III. Movement Type

Conclusions II

I.   Mobility

accusative object = dative object > subject

II.   Transparency

subject/object asymmetries found for

dass-clauses, *ob*-clauses, embedded *wh*-questions

III. Movement type

subject/object asymmetries found for

long wh-movement and long topicalization

➔ Subject-object asymmetries do exist in German

Conclusions III

The subject/object asymmetry is influenced by

- word order preferences dependent on movement type
- the semantics of the complementizer
- the "deep structure" position of the extracted NP/ the complexity of the embedded clause
- the specificity of the extraced NP (case-ambiguity waters down subject/object asymmetry)

Moreover: The asymmetry is obscured by floor effects.

… but it is a real effect!

Thank you!
Questions?

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Appendix – Exp I: Structures tested Extractions from *dass*-extraction

Object extractions from *dass*-clause:

see (5), (6)

Long Wh-Movement: Subject extraction from dass-clause

(7) *Welcher X denkst du, dass _ den Y geVERBt hat?*

    Which   X   think you that   the   Y   VERBed has

    'Which X do you think that has VERBed the Y?'

Long Topicalization: Subject extraction from dass-clause:

(8) Der *X denke ich, dass _ den Y geVERBt hat.*

    The X   think I   that   the   Y   VERBed has

    'The X, I think, has VERBed the Y.'

Appendix – Exp I: Structures tested wh-movement from *wann*/*ob*-clause

Object extraction from *ob/wann*-clause

(9) *Welchen Y weißt du nicht, ob/wann   der X _ geVERBt hat?*
      Which   Y know you not   whether/when   the   X   VERBed   has
      'Which Y don't you know whether/when the X has VERBed?

Subject extraction from *ob/wann*-clause

(10) *Welcher X weißt   du   nicht, ob/wann   _ den Y geVERBt hat?*
      Which   X know   you not   whether/when   the Y   VERBed   has
      'Which X don't you know whether/when has VERBed the Y?

Appendix – Exp I: Structures tested topicalization from *wann*/*ob*-clause

Object extraction from *ob/wann*-clause

(11) *Den Y weiß ich nicht, ob/wann   der X _ geVERBt hat.*
    The Y know I   not   whether/when   the X   VERBed   has
    'I don't know whether/when the X has VERBed the Y.'

Subject extraction from *ob/wann*-clause

(12) *Der X weiß ich nicht, ob/wann   _   den Y geVERBt   hat.*
    The X know I   not   whether/when   the   Y VERBed   has
    'I don't know whether/when the X has VERBed the Y.'

Appendix – Exp I: Structures tested wh-movement from *wer/wen*-clause

Object extraction from *wer*-clause

(13) *Welchen   Y weißt du nicht, wer _   geVERBt hat?*

  Which Y know you not who VERBed   has

  'Which Y don't you know who has VERBed?

Subject extraction from *wen*-clause

(14) *Welcher   X weißt   du nicht, wen   _   geVERBt   hat?*

  Which X   know   you   not who VERBed   has

  'Which X don't you know whom has VERBed?

Appendix – Exp I: Structures tested topicalization from *wer/wen*-clause

Object extraction from *wer*-clause

(15) *Den Y weiß ich nicht, wer _ geVERBt hat.*

     The Y know I not who VERBed has

     'I don't know who has VERBed the Y.'

Subject extraction from *wen*-clause

(16) *Der X weiß ich nicht, wen _ geVERBt hat.*

     The X know I not whom VERBed has

     'I don't know whom the X has VERBed.'

Appendix – Exp II: Structures tested

Extraction from **active** clause:

(17) *Welchen X denkst du, dass der Y geVERBt hat?*   (=5)
    Which   X think you that the Y VERBed has
    'Which X do you think that the Y has VERBed?'

(18) *Welcher X denkst du, dass den Y geVERBt hat?*   (=7)
    Which   X think you that the Y VERBed has
    'Which X do you think that the Y has VERBed?'

Extraction from **passive** clause:

(19) *Welcher X denkst du, dass geVERBt wurde?*
    Which   X think you that VERBed was
    'Which X do you think that was VERBed?'