Object definiteness effects in Dutch subject wh-extraction
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1. Introduction

Main topic of this talk: object definiteness effects on the presence or absence of *er* ‘there’ in subject extraction contexts in Dutch

- A majority of (Netherlandic) Dutch speakers need *er* with an indefinite object (1a), but not with a definite object (1b) or pronominal object (1c).

(1) a. Wie denk je [ dat ??(er) een boek koopt]? **indefinite DP object**
   who think you that there a book buys
   ‘Who do you think is buying a book?’

   b. Wie denk je [ dat (?er) het boek koopt]? **definite DP object**
   who think you that there the book buys
   ‘Who do you think is buying the book?’

   c. Wie denk je [ dat (?er) hem plaagt]? **pronominal object**
   who think you that there him teases
   ‘Who do you think is teasing him?’

- These facts explain the previously noticed optionality of *er* (Den Dikken 2007; Klockmann & Wesseling 2015):

(2) Wie denk je [ dat %(?er) een boek koopt]?
   who think you that there a book buys
   ‘Who do you think is buying a book?’

- *Er* in subject extractions is not optional, but is inserted when the object is indefinite.

Aims of this talk: provide a theoretical explanation for the data in (1), claiming that:

i) Dutch T bears a [uLoc]-feature that can be checked by the [iLoc]-feature on definite DPs/pronouns;

ii) indefinite DPs lack this feature;

iii) *er* is inserted as a Last Resort option to check [uLoc] on T.
Outline of the talk:

- Presentation of the data
- Analysis
- Some predictions and issues
- Conclusions and implications

2. The data

Starting point: observation that some speakers of Dutch need er in subject extraction contexts, whereas others do not (Den Dikken 2007; Klockmann & Wesseling 2015)

(3) Wie denk je dat er een boek koopt?
who think you that there a book buys
‘Who do you think is buying a book?’

→ To investigate this in more detail, data was collected on native Dutch speakers’ judgments on subject wh-extraction sentences with and without er.

Statistical analysis of the data revealed the following patterns:

- **Subject wh-extraction with er** in transitive clauses is rated best when the embedded object is an indefinite DP, less good with a definite DP and worst with a pronoun as object.

**Er present:**

(4) a. Wie denk je dat er een boek koopt? **indefinite DP object**
who think you that there a book buys
‘Who do you think is buying a book?’

b. Wie denk je dat er het boek koopt? **definite DP object**
who think you that there the book buys
‘Who do you think is buying the book?’

c. Wie denk je dat er hem plaagt? **pronominal object**
who think you that there him teases
‘Who do you think is teasing him?’

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1 The Dutch data were gathered by Klockmann & Wesseling (2015) as part of the VIDI project *The uniformity of linguistic variation: subject-predicate relations* (Utrecht University, UIL-OTS). I collected data on wh-extractions in other Germanic languages for this project. I carried out the data preparation and statistical analyses on the data used in this talk. For the methodology and detailed statistical results, see the Appendix.
• **Subject wh-extraction without er** in transitive clauses is rated best when the embedded object is a definite DP or pronoun, but much lower when the object is an indefinite DP.

**Er absent:**

(5) a. ??Wie denk je dat een boek koopt?   *(indefinite DP object)*  
   who think you that a book buys  
   ‘Who do you think is buying a book?’

b. Wie denk je dat het boek koopt?   *(definite DP object)*  
   who think you that the book buys  
   ‘Who do you think is buying the book?’

c. Wie denk je dat hem plaagt?   *(transitive—pronominal object)*  
   who think you that him teases  
   ‘Who do you think is teasing him?’

• **Subject wh-extraction in intransitive** clauses is rated best with *er* and much less good without *er*:

**Er present:**

(6) Wie denk je dat *er* loopt?   *(intransitive—no object)*  
   who think you that there walks  
   ‘Who do you think is walking?’

**Er absent:**

(7) ??Wie denk je dat loopt?   *(intransitive—no object)*  
   who think you that walks  
   ‘Who do you think is walking?’

**Summarizing:**

<table>
<thead>
<tr>
<th></th>
<th>Transitive sentences</th>
<th>Intransitive sentences</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td><em>Er</em> present</td>
<td><em>Er</em> absent</td>
</tr>
<tr>
<td><strong>Indefinite object</strong></td>
<td>grammatical</td>
<td>??</td>
</tr>
<tr>
<td><strong>Definite object</strong></td>
<td>?</td>
<td>grammatical</td>
</tr>
<tr>
<td><strong>Pronominal object</strong></td>
<td>??</td>
<td>grammatical</td>
</tr>
</tbody>
</table>

*Judgments on subject wh-extraction sentences with and without er.*
3. The analysis

3.1 Main points

• In Dutch, T bears an uninterpretable [uLoc]-feature;

• All definite DPs and pronouns bear an [iLoc]-feature;

• In declarative sentences, the definite subject DP is the closest Goal for Probe T and will therefore check the [uLoc] feature on T;

• When there is no definite subject – e.g. in subject wh-extractions – the definite object DP or pronominal object are the closest Goals for T and will therefore check the [uLoc] feature;

• In case of an indefinite DP which lacks a [iLoc] feature, or in an intransitive clause, er is inserted in Spec,TP to check the [uLoc] feature as a Last Resort option.

3.2 [uLoc] on T in Dutch

❖ Assumption: there is an uninterpretable [uLoc] feature on T in Dutch (cf. also Van Urk, Klockmann & Wesseling (2015) and Ritter & Wilschko (2009, 2014)):

Ritter & Wilschko (2009): INFL is an abstract category that anchors the event into the utterance. The content of INFL is subject to variation (restriction: it must be a deictic category):

Tense, e.g. English
Location, e.g. Halkomelem Salish
Person, e.g. Blackfoot

INFL Tense-based language:

(8) a. I walk.  
     b. I walked.

→ Contrasts present and past tense
**INFL Location-based language:**

(9) a. Li qw'eyílex tu-tl’ò.  
_AUXdistal dance he_  
‘He is/was dancing _there._’  

b. í qw'eyílex tu-tl’ò.  
_AUXproximate dance he_  
‘He is/was dancing _here._’  

(Ritter & Wiltschko 2009: 155)

→ Contrasts proximal and distal location

**INFL Person-based language:**

(10) a. Kit-ino-o-hp –oaawa  
2-see-1:2-LOCAL -2PL  
‘I saw you (PL).’

b. Ann-wa pokinga-wa ino-yii-Ø –wa ann-yi imitaa- yi  
DEM -PROX child-PROX see-3:4-NON-LOCAL–PROX DEM -OBV dog-OBV  
‘The child saw the dog.’  

(Ritter & Witschko 2014: 1341)

→ Contrasts utterance participants (i.e. 1st and 2nd person) from no-utterance participants (i.e. 3rd person).

**Important:** although languages obligatorily indicate contrasts on INFL for only one of the categories, they can still show agreement for (one of the) other categories.

For example: English showing 3rd person agreement:

(11) a. I walk.  

b. He walks.

This agreement is not obligatorily marked however, whereas present versus past is:

(12) a. I walked.  

b. He walked.

→ I argue this is also the case in Dutch: Dutch INFL (henceforth T) needs to be contrasted for Tense, but also shows agreement for Location, i.e. it bears a [ULoc] feature.
3.3 [iLoc] on definite DPs and pronouns

- **Evidence for a [iLoc]-feature on pronominal objects**: in various languages accusative personal pronouns are morphologically identical to spatial expressions (Gruber 2013).

  **For example**: in Italian, accusative first/second person plural object clitics are identical to the expletive/locative/ adverb *ci* ‘here, there’ (Ferrazzano 2003: 2):

  ![Table](image)

  **Evidence in Dutch**:  
  
  In West-Flemish dialects, the third person neuter pronoun is also used as a locative expletive:

  (13) *T zijn gisteren drie studenten gekomen.*  
  *Lapscheure Dutch*  
  *it are yesterday three students come*  
  *‘Three students came yesterday.’*  
  *(Grange & Haegeman 1989: 163)*

  \[→ 'T' is a reduced form of the third person neuter pronoun *het*.\]

- **Evidence for [iLoc] on definite DP objects**: in a number of languages the definite direct object or proper noun is marked with a locative marker (e.g. Hindi, Rumanian, Spanish (Nandris 1953) and Malagasy (Keenan 2008)).

  **For example**:  
  
  *Pe as a locative preposition in Rumanian:*  
  
  (14) *Cernăuţul e asezat pe malul Prutului.*  
  *Rumanian*  
  *Cernautsi is situated on bank.of.DEF Pruth*  
  *‘Cernautsi is situated on the bank of the river Pruth.’*

  *Pe marking a definite object DP in Rumanian:*  
  
  (15) *N'am văzut pe cine căutam.*  
  *Rumanian*  
  *not.1sg see LOC person sought.1sg*  
  *‘I did not see the person I was looking for.’*  
  *(Keenan 2008: 243)*
An as a locative preposition in Malagasy:

(16) Tsy ao an-trano Rabe. 
not there at-house Rabe
‘Rabe isn’t home.’

An marking a proper noun in Malagasy:

(17) Nanenjika an-dRabe aho
chase.PAST.AF ACC-Rabe I
‘I chased Rabe’
(Keenan 2008: 245)

Crucially: Malagasy indefinite DP objects cannot combine with an- → only definite DPs bear [iLoc]:

(18) Manao (*an-) farafara mahafinaritraio mpandrafitra io
make.PRES.AF (ACC-) bed. INDEF pleasing carpenter that
‘That carpenter makes pleasing beds.’

Evidence in Dutch:

Prepositional er is used instead of the object:

(19) a. Ik probeer op de tafel te springen.
   I try on the table to jump
   ‘I’m trying to jump onto the table.’

   b. Ik probeer er op te springen.
      I try there on to jump
      ‘I’m trying to jump onto it.’

Definite DP objects can be combined with locative daar ‘over there’, whereas indefinite DP objects cannot:

(20) a. Geef me het boek daar.
    Give me the book over.there
    ‘Give me that book.’

   b. *Geef me een boek daar.
      Give me a book over.there

→ I therefore assume Dutch definite DPs and pronouns bear a [iLoc]-feature, whereas indefinite DPs do not.
3.3 Declarative clauses: the subject checks [uLoc] on INFL

- In declarative sentences, the definite DP subject is the closest Goal for Probe T to agree with. The definite DP subject bears a [iLoc] feature, and checks [uLoc] on T.

(21)

→ [uLoc] on T is checked by [iLoc] on definite DP het meisje.

3.4 Subject wh-extraction: the object checks [uLoc] on T

- Dutch wh-words are indefinite (see for example Postma (1994) on indefinite properties of wh-words and Haida (2007) for indefiniteness of wh-words cross-linguistically).

→ Dutch wh-words do not bear an [iLoc]-feature → they cannot check [uLoc] on T.

For example: Dutch wh-words cannot be scrambled, like indefinite DPs and unlike definite DPs:

(22) a. ... dat Eva gisteren het boek gekocht heeft. \[definite DP\]
    that Eva yesterday the book bought has
    ‘... that Eva has bought the book yesterday.’

    b. ... dat Eva het boek gisteren \[\_\_\_] gekocht heeft.
    that Eva the book yesterday bought has
    ‘... that Eva has bought the book yesterday.’

(23) a. ... dat Eva gisteren een boek gekocht heeft. \[indefinite DP\]
    that Eva yesterday a book bought has
    ‘... that Eva has bought a book yesterday.’

    b. ... *dat Eva een boek gisteren \[\_\_\_] gekocht heeft.
    that Eva a book yesterday bought has

\[\_\_\_]
a. Wie denk je dat er gisteren wat gekocht heeft?  
   *Who do you think has bought what yesterday?*

b. *Wie denk je dat er wat gisteren __ gekocht heeft?  
   *Who do you think has bought what yesterday?*

   The *wh*-word is thus not a Goal for Probe T, but the definite object is:

   \[ [uLoc] \text{ on T is checked by } [iLoc] \text{ on definite DP object } \text{het boek}. \]

   Indefinite objects do not have a [iLoc] feature; no Goal for T:
\( \rightarrow \) T fails to get its \([u\text{Loc}]\) checked: the derivation crashes.

- When T probes down and does not find a definite object to check its \([u\text{Loc}]\) feature, \(\text{er}\) is inserted in Spec,TP as a Last Resort option^2:

\[ (27) \]

\[ \rightarrow [u\text{Loc}] \text{ on T is checked by } [i\text{Loc}] \text{ on } \text{er}. \]

**Note:** The Last Resort \(\text{er}\) insertion is also what we see in declarative sentences with an indefinite subject – thus lacking a \([i\text{Loc}]\)-feature:

\[ (28) \] Het meisje zingt.  
\hspace{1cm} The girl  
\hspace{1cm} sings  
\hspace{1cm} ‘The girl is singing.’

\[ (29) \] Een meisje zingt.  
\hspace{1cm} A girl  
\hspace{1cm} sings  
\hspace{1cm} ‘A girl is singing.’

\[ (30) \] Er zingt een meisje.  
\hspace{1cm} There sings a girl.  
\hspace{1cm} ‘A girl is singing.’

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^2 I follow Bošković (2002) in assuming that expletives are directly merged in Spec,TP. \(\text{Er}\) also bears a \([i\text{Loc}]\) feature (it is locative in nature).

^ I follow Béjar & Řezáč (2009) in assuming Probe T can expand its search space to Spec,TP when there is no adequate Goal in its first search space to Agree with.
Summarizing: this analysis explains why:

I. subject wh-extraction sentences with an indefinite DP object require er-insertion: the indefinite DP cannot check [iLoc]

(31) a. Wie denk je dat *er* een boek koopt?  
   *transitive—indefinite object*  
   who think you that there a book buys  
   ‘Who do you think is buying a book?’

   b. ??Wie denk je dat een boek koopt?  
      who think you that a book buys  
      ‘Who do you think is buying a book?’

II. intransitive wh-subject sentences require er-insertion: there is no definite object/pronominal object to check [iLoc]

(32) a.Wie denk je dat *er* loopt?  
   *intransitive—no object*  
   who think you that there walks  
   ‘Who do you think is walking?’

   b. ??Wie denk je dat loopt?  
      who think you that walks  
      ‘Who do you think is walking?’

III. subject wh-extraction sentences with a definite DP object/pronominal object are dispreferred with er: the definite DP object/pronominal object checks [uLoc], so inserting er would violate its Last Resort-nature

(33) ??Wie denk je dat *er* het boek koopt?  
   *definite DP object*  
   who think you that there the book buys  
   ‘Who do you think is buying the book?’

(34) ??Wie denk je dat *er* hem plaagt?  
      *pronominal object*  
      who think you that there him teases  
      ‘Who do you think is teasing him?’

4. Some predictions and issues

The current analysis makes certain predictions:

**Prediction 1):** locative adverbs should also be able to check the [uLoc] feature on T (cf. also Zwart (1992)).

→ Is borne out in the case of existential sentences (van Urk et al 2015):
Existential sentence with er:

(35) Wordt er gedanst?
    is.being there danced
    ‘Are there people dancing?’

Existential sentence without er:

(36) Wordt gedanst?
    is.being danced

Existential sentence with locative proform:

(37) Wordt daar gedanst?
    is.being there danced
    ‘Are there people dancing over there?’

Existential sentence with adverbial phrase:

(38) Wordt op het feest gedanst?
    is.being on the party danced
    ‘Are there people dancing at the party?’

Important: temporal adverbs do not have this effect:

(39) Wordt gisteren gedanst?
    is.being yesterday danced

Neither do other types of adverbs/adverbial phrases, e.g. cause/reason-adverbials:

(40) Wordt dankzij de band gedanst?
    is.being because-of the band danced

Prediction 2): Topicalization of an embedded definite subject is more acceptable without er than with er

The embedded definite subject – bearing a [iLoc]-feature – checks [uLoc] on the embedded T when it successive cyclically moves to Spec,TP of the matrix clause.

Therefore, insertion of er would violate its Last Resort-nature; the sentence with er is less acceptable.

This prediction seems be borne out (but needs still to be investigated in more detail):
(41) De jongen denk ik [dat __ een boek leest].
The boy think I that a book reads
‘The boy, I think is reading a book.’

(42) ??De jongen denk ik [dat er een boek leest].
The boy think I that there a book reads

Open issue 1: It is known that Flemish speakers of Dutch allow *er* to be present in much more contexts than Netherlandic Dutch speakers (see for example Grondelaers, Speelman & Geeraerts (2008). Why?

→ Within the current analysis, we could for example try to find out whether Flemish Dutch definite DPs/pronouns do not bear a [ILoc] feature.

→ In this study, only Netherlandic Dutch speakers were tested. Data collection on Flemish Dutch subject *wh*-extraction contexts and DPs/pronouns is needed to be able to extend the analysis to Flemish Dutch.

Open issue 2: Do all *INFL* Tense based languages have a [uLoc] feature on T?

→ More research is needed to answer this.

→ As a starting point, it would be interesting to investigate *INFL* Tense based languages that also have locative expletives.

5. Conclusions and implications

(i) General conclusions

• The previously observed optionality of *er* in Dutch subject extraction contexts is explained by the object definiteness effect on the presence and absence of *er*;

• This object definiteness effect on the presence/absence of *er* is explained by stating that there is a [uLoc]-feature) on T in Dutch (in line with Van Urk et al 2015; Ritter & Wiltschko 2009, 2014;

→ This [uLoc] can be checked by definite DPs/pronouns; otherwise *er* is inserted as Last Resort option.

• More research on Flemish Dutch and other *INFL* Tense based languages with locative expletives is needed to extend the current analysis to other languages.
(ii) Implications

- This analysis has shown that zooming in on definiteness effects of the object – which tends to be overlooked compared to the subject – can give us valuable insight into syntactic phenomena;
- In addition, this analysis is free of stipulation of an EPP-feature on T in Dutch;
- It thus adds to a generative framework that can do without such a feature, which nature is unclear and stipulatory, and which is often argued against (see amongst others Epstein, Pires & Seely (2005), Bošković (2002), Boekcx (2000), Grohmann, Drury & Castillo (2000), Epstein & Seely (1999)).

6. References

Bošković, Ž. A-Movement and the EPP. Syntax, 5(3), 167-218
Van Urk, C., F. Wesseling & H. Klockmann. 2015. Agree is fallible, EPP is not: Investigating EPP effects in Dutch. Talk presented at Syntax-Interface Lectures, Utrecht University/UIL-OTS.

7. Appendix

7.1 Methodology

7.1.1 Questionnaire design

The Dutch data were gathered by Klockmann & Wesseling (2015).

Their questionnaire included 42 sentences with wh-subject extractions out of embedded clauses. In addition, two wh-object extraction sentences were used as filler sentences.

There were three sentences for each set of conditions, in which different lexical items were used. Klockmann & Wesseling (2015) controlled for the following factors:

- Transitivity (30 transitive vs. 12 intransitive)
- Definiteness of the object (6 pronoun, 12 definite DP, 12 indefinite DP, 12 no object)
- The presence of er (21 er vs. 21 no er)
- The presence of an adverb (18 adverb vs. 24 no adverb)

7.1.2 Informants

427 informants completed the Dutch questionnaire. Six informants were excluded due to not having Dutch as their native language and two informants because they did not provide information about their native language.

63% of the informants are female and 37% are male. The mean age of the informants is 53 years old (SD: 15.8). The ages of the informants range from 19 to 88.
The informants were recruited via social media and ‘De Taalpost’, a newsletter from the society called ‘Onze Taal’, which has 22,000 subscribers.

### 7.1.3 Procedure

The questionnaires were presented in the form of a judgment-task, via the online platform SurveyMonkey®.

The informants were asked to judge the test sentences using a 5-point Likert scale. On this scale, 1 meant ‘I would never say it (the sentence) like this’ and 5 meant ‘I would say it exactly like this’.

### 7.2 Results

#### 7.2.1 Transitive sentences

The means and standard deviations of the transitive test sentences with wh-extraction organized by object type:

<table>
<thead>
<tr>
<th>Transitive sentences with er</th>
<th>Transitive sentences without er</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>Indefinite</td>
<td>3.53</td>
</tr>
<tr>
<td>Definite</td>
<td>2.80</td>
</tr>
<tr>
<td>Pronoun</td>
<td>1.87</td>
</tr>
</tbody>
</table>

*Table 1. Ratings of subject extraction out of transitive clauses with and without er organized by object type*

Univariate ANOVA’s revealed (all p-values > .001) that there was a significant difference between:

1) all types of sentences with er
2) between on the one hand the sentences without er and an indefinite object, and on the other hand the sentences without er

#### 7.2.2 Intransitive sentences

The means and standard deviations of the intransitive test sentences with wh-extraction:

<table>
<thead>
<tr>
<th>Intransitive with er</th>
<th>Intransitive without er</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Mean</strong></td>
<td><strong>SD</strong></td>
</tr>
<tr>
<td>3.86</td>
<td>1.5</td>
</tr>
</tbody>
</table>

*Table 2. Ratings subject extraction out of intransitive clauses with and without er*

A Univariate ANOVA revealed a significant difference between intransitive sentences with er and without er (p-value > 0.001)