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 [*u*Loc]-feature that can be checked by the [*i*Loc]-feature on definite DPs/pronouns;
         ii)   indefinite DPs lack this feature;
         iii)   *er* is inserted as a Last Resort option to check [*u*Loc] on T.

Outline of the talk:

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

2. The data[1]

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?'

<u>Summarizing</u>:

	Transitive sentences		Intransitive sentences	
	Er present	*Er* absent	*Er* present	*Er* absent
Indefinite object	grammatical	??		
Definite object	?	grammatical	grammatical	??
Pronominal object	??	grammatical		

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 & Wiltschko (2009, 2014)):

Ritter & Wiltschko (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.   *English*
     b.   I walk**ed.**

→ Contrasts present and past tense

INFL Location-based language:

(9) a. **Lí**   qw'eyílex   tu-tl'ò.   *Halkomelem Salish*
         AUX_{distal} dance   he
         'He is/was dancing **there**.'

     b. **Í**   qw'eyílex   tu-tl'ò.
         AUX_{proximate} 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   *Blackfoot*
           2-see-1:2-LOCAL -2PL
           'I saw you (PL).'

     b. Ann-wa   pookaa-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.   *English*
     b. He walk**s.**

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

(12) a. I walk**ed**.   *English*
     b. He walk**ed**.

→ 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 [*u*Loc] feature.

3.3 [*i*Loc] on definite DPs and pronouns

❖ **Evidence for a [*i*Loc]-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):

	Accusative	expletive	locative adverb
1st person plural:	*ci*	yes	yes
2nd person plural:	*vi*	yes	yes
3rd person plural:	*li*	no	yes (distal)

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 gekommen.   *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 [*i*Loc] 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.   *Malagasy*
     not there at-house Rabe
     'Rabe isn't home.'

An marking a proper noun in Malagasy:

(17) Nanenjika   **an**-dRabe aho   *Malagasy*
     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 [*i*Loc]:

(18) Manao   (*an-) farafara mahafinaritraio   mpandrafitra io   *Malagasy*
     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   tojump
           '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 [*i*Loc]-feature, whereas indefinite DPs do not.

3.3 Declarative clauses: the subject checks [*u*Loc] 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 [*i*Loc] feature, and checks [*u*Loc] on T.

(21)
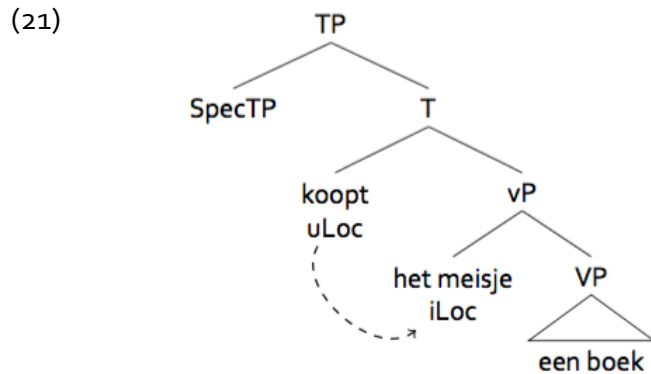
→ [*u*Loc] on T is checked by [*i*Loc] on definite DP *het meisje.*

3.4 Subject *wh*-extraction: the object checks [*u*Loc] 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 [*i*Loc]-feature → they cannot check [*u*Loc] on T.

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

(22)   a. ... dat   Eva gisteren <u>het boek</u> gekocht heeft.   *definite DP*
               that   Eva yesterday thebook   bought   has
          '... that Eva has bought the book yesterday.'

      b. ... dat Eva <u>het boek </u>gisteren __   gekocht heeft.
               that   Eva the book yesterday   bought   has
          '... that Eva has bought the book yesterday.'

(23)   a. ... dat Eva gisteren <u>een boek</u> gekocht heeft.   *indefinite DP*
               that Eva yesterday a book bought has
          '... that Eva has bought a book yesterday.'

      b. ... *dat Eva <u>een boek</u> gisteren __ gekocht heeft.
               that   Eva a book   yesterday   bought has

(24)   a. Wie   denk je   dat er   gisteren   <u>wat</u> gekocht heeft?   wh-*word*
           who   think you that there   yesterday what bought has
           'Who do you think has bought what yesterday?'

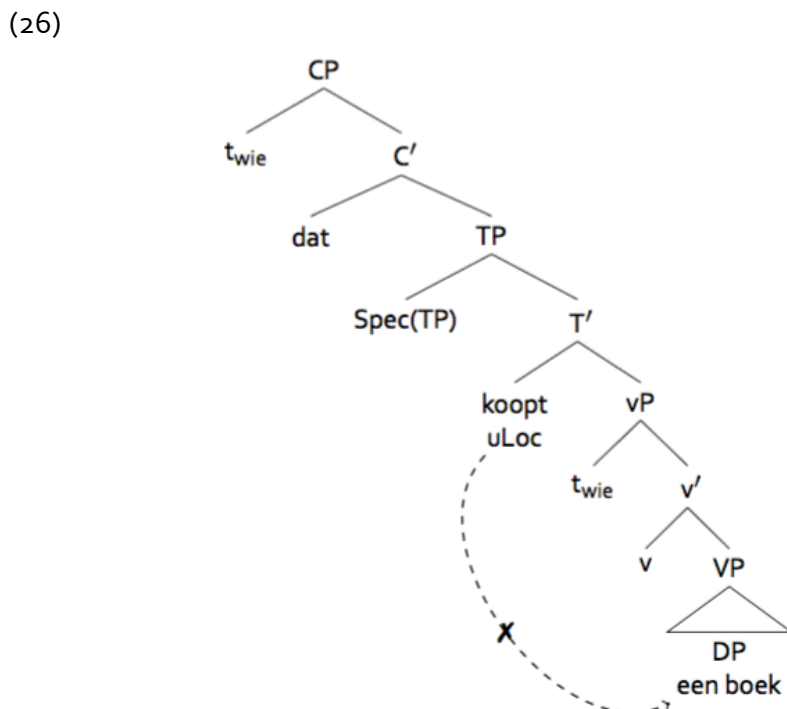   b. *Wie denk je   dat er   <u>wat</u> gisteren __   gekocht heeft?
           who think you that there what yesterday   bought has

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

(25)
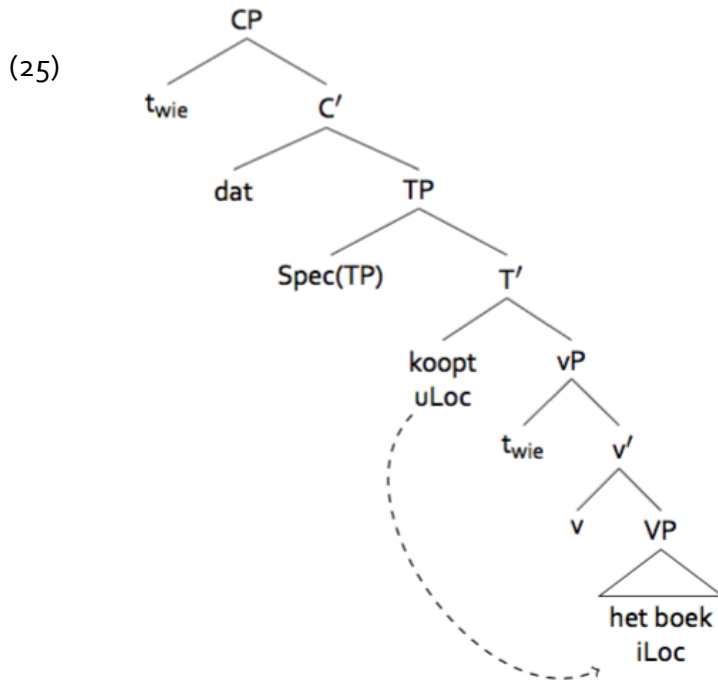
→ [*u*Loc] on T is checked by [*i*Loc] on definite DP object *het boek*.

❖ Indefinite objects do not have a [*i*Loc] feature; no Goal for T:

(26)

→ T fails to get its [uLoc] checked: the derivation crashes.

❖ When T probes down and does not find a definite object to check its [uLoc] feature, *er* is inserted in Spec,TP as a Last Resort option[2]:

(27)
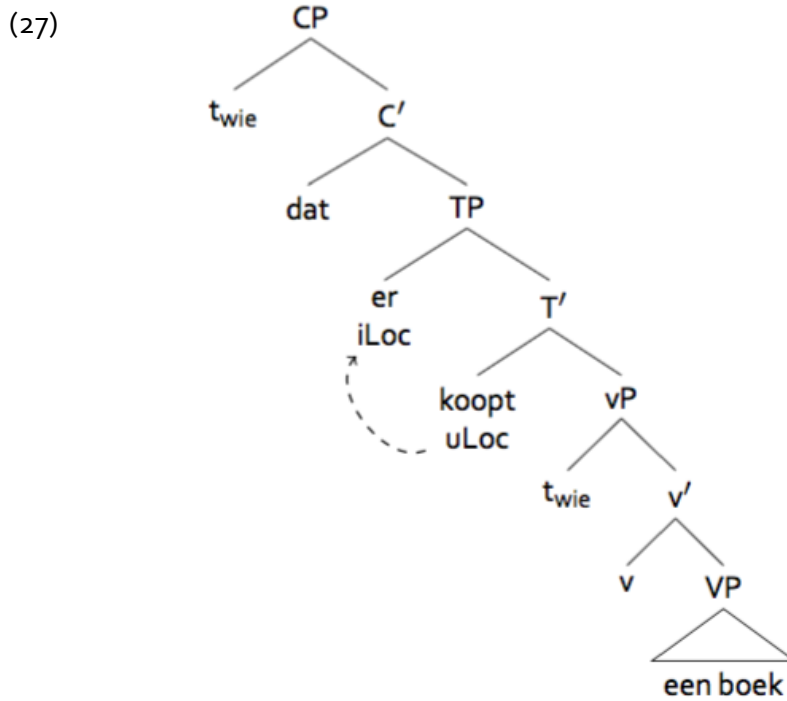
→ [uLoc] on T is checked by [iLoc] on *er*.

Note: The Last Resort *er* insertion is also what we see in declarative sentences with an indefinite subject – thus lacking a [iLoc]-feature:

(28)   Het meisje zingt.
       The girl   sings
       'The girl is singing.'

(29) ??Een meisje zingt.
       A   girl   sings
       'A girl is singing.'

(30)   ***Er***   zingt   een meisje.
      There sings   a   girl.
       'A girl is singing.'

❖ [2] I follow Bošković (2002) in assuming that expletives are directly merged in Spec,TP. *Er* also bears a [iLoc] 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.

<u>Summarizing</u>: this analysis explains why:

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

(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 [*i*Loc]

(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 [*u*Loc], 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 [*u*Loc] 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) ??Werd   **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 [*i*Loc]-feature – checks [*u*Loc] 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 [*i*Loc] 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 [*u*Loc] 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 [*u*Loc]-feature) on T in Dutch (in line with Van Urk et al 2015; Ritter & Wiltschko 2009, 2014;

   → This [*u*Loc] 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

Béjar, S. & M. Řezáč. 2009. Cyclic Agree. *Linguistic Inquiry, 40(1),* 35-73

Boeckx, C. 2000. EPP eliminated. Ms., University of Connecticut, Storrs.

Bošković, Ž. A-Movement and the EPP. *Syntax, 5(3),* 167-218

Den Dikken, Marcel. 2007. "Questionnaire Study on Dutch that-trace effect: Stimuli and results". Unpublished questionnaire.

Epstein, S.D. & T.D. Seely. 1999. SPEC-ifying the GF "subject": Eliminating A-chains and the EPP within a derivational modal. Ms., University of Michigan and Eastern Michigan State University.

Epstein, S.D., A. Pirec & T.D. Seely. 2005. EPP in T: More controversial subjects. *Syntax, 8(1),* 65-80

Ferrazzano, L.R. 2003. The morphology of ci and its "distal" relative, vi. Manuscript, City University of New York Graduate Center.

Grange, C. & L. Haegeman. 1989. Subordinate clauses: adjuncts or arguments: the status of *het* in Dutch. D. Jaspers, W. Klooster, Y. Putseys & P. Seuren (eds.). *Sentential complementation and the lexicon. Studies in honour of Wim de Geest.* Dordrecht: Foris Publications. 155-171

Grohmann, K., J. Drury & C. Castillo. 2000. No more EPP. In *Proceedings of WCCFL 9,* 205-218. Stanford, California: CSLI Publications.

Grondelaers, S., D. Speelman & D. Geeraerts. 2008. National variation in the use of er "there": regional and diachronic constraints on cognitive explanations*.* In *Cognitive sociolinguistics: language variation, cultural models, social systems*. Kristiansen, G. & R. Dirven (Eds.)*.* 153-204

Gruber, B. 2013 The spatiotemporal dimensions of person: A morphosyntactic account of indexical pronouns. Doctoral dissertation. Utrecht: LOT Publications.

Haida, A. 2007. The indefiniteness and focusing of *wh*-words. Doctoral dissertation. Humbold University of Berlin.

Keenan, E.L. 2008. The definiteness of subjects and objects in Malagasy. In *Case and grammatical relations: Studies in honour of Bernard Comrie.* Corbett, G.G. & M. Noonan (Eds.). 241- 262

Nandris, G. 1953. *Colloquial Rumanian*. London: Routledge & Kegan Paul.

Postma, G. 1994. The indefinite reading of WH. In *Linguistics in the Netherlands*. Bok-Benema, R. & C. Cremers (Eds.). 1887-198

Ritter, E. & M. Wiltschko. 2014. The composition of INFL: An exploration of tense, tenseless languages, and tenseless constructions. *Natural Language & Linguistic Inquiry, 32,* 1331-1386

Ritter, E. & M. Wiltschko. 2009. Varieties of INFL: Tense, Location, and Person. In *Alternatives to cartography*, Jeroen van Craenenbroeck (ed.), 153–202. Berlin: Walter de Gruyter.

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.

Wesseling, F. & H. Klockmann. 2015. Variation in the distribution of *er* in present-day Dutch *wh*-questions. Paper presented at the Norwegian Graduate student conference in linguistics and philology, Tromsø, Norway. 22-23 January.

Zwart, J.-W.. 1992. Dutch expletives and small clause predicate raising. In *Proceedings of the 22nd Meeting of the North East Linguistic Society*, Kimberley Broderick (ed.), 477-491. Amherst, MA: GLSA, University of Massachusetts.

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:

	Transitive sentences with *er*		Transitive sentences without *er*	
	Mean	**SD**	**Mean**	**SD**
Indefinite	3.53	1.6	2.96	1.6
Definite	2.80	1.6	3.46	1.6
Pronoun	1.87	1.3	3.44	1.6

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:

	Intransitive with *er*	Intransitive without *er*
Mean	3.86	2.95
SD	1.5	1.6

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)