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?'

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
- Supporting evidence
- Conclusions and implications

2. The data1

Starting point: observation that some speakers of Dutch need *er* in subject extraction

contexts, whereas others do not (Bennis 1986; 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?'

→ 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:

- (3) 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?'
- 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:

(4) a.??/*Wie denk je dat een boek koopt? who think you that a book buys 'Who do you think is buying a book?'

indefinite DP object

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.

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

c. Wie denk je dat hem plaagt? who think you that him teases 'Who do you think is teasing him?' transitive—pronominal object

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

Er present:

(5) Wie denk je dat **er** loopt? who think you that there walks 'Who do you think is walking?'

intransitive—no object

Er absent:

(6) ??/*Wie denk je dat loopt? who think you that walks 'Who do you think is walking?' intransitive—no object

Summarizing:

	Transit	ive sentences	
	<i>Er</i> present	<i>Er</i> absent	
Indefinite object	OK	??/*	
Definite object	??	OK	
Pronominal object	??/*	ОК	
	Intransi	tive sentences	
	<i>Er</i> present	<i>Er</i> absent	
no object	OK	??/*	

Judgments on subject wh-extraction sentences with and without er.

3. The analysis

3.1 Main points

- In Dutch, T bears an [uLoc]-feature;
- All definite DPs and pronouns bear a [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 [*u*Loc] on T in Dutch

♦ Assumption: there is an [*u*Loc] 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:

(7) a. I walk. English b. I walked.

→ Contrasts present and past tense

INFL Location-based language:

- (8) a. **Í** qw'eyílex tu-tl'ò. Halkomelem Salish

 AUX_{proximate} dance he

 'He is/was dancing **here**.'
 - b. **Lí** qw'eyílex tu-tl'ò.

 AUX_{distal} dance he

 'He is/was dancing **there**.' (Ritter & Wiltschko 2009: 155)
- → Contrasts proximal and distal location

INFL Person-based language:

(9) a. Kit-ino-o-**hp** — oaawa Blackfoot 2-see-1:2-LOCAL PARTICIPANT -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 PART.—PROX DEM -OBV dog-OBV 'The child saw the dog.' (Ritter & Witschko 2014: 1341)

 \rightarrow 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.

<u>For example:</u> English showing 3rd person agreement:

(10) a. I walk. English

b. He walks.

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

(11) a. I walked. English

b. He walk**ed**.

→ This can also be seen in INFL Tense based languages with much richer person agreement, such as Italian:

Italian showing person agreement in present tense:

(12) a. Capisco. Italian

Understand.1sg 'I understand.'

b. Capisc**e**.

Understand.3sq

'He understands.'

Italian not showing person agreement in past tense subjunctive:

(13) Spera che **abbia** capito. *Italian* Hopes.3sg that have.conj-1/2/3sg understood 'He/she hopes that I/you/he have understood (it).'

 \rightarrow 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 [ν Loc] feature.

3.3 [iLoc] on definite DPs and pronouns

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

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

	Object	expletive	locative adverb	
ci	yes (1.PL)	yes	yes (neutral)	
vi	yes (2.PL)	yes	yes (neutral)	
li	yes (3.PL)	no	yes (distal)	

Evidence in Dutch:

	Object	expletive	locative adverb	
Het	yes	yes	no	
Er	yes	yes	yes (neutral)	
Daar	no	yes	yes (distal)	
Hier	no	no	yes (proximal)	

• *Het* 'it' as expletive:

In West-Flemish dialects, the third person neuter pronoun is also used as an expletive:

(14) T zijn gisteren drie studenten gekommen. Lapscheure Dutch it are yesterday three students come
'Three students came yesterday.' (Grange & Haegeman 1989: 163)

- \rightarrow 'T' is a reduced form of the third person neuter pronoun het.
 - <u>Er 'there' as object:</u>

Prepositional *er* is used instead of the object:

- (15) 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.'
- (16) a. Denk je **er** aan? think you there PREP 'Please, don't forget (that).'

- b. *Denk je aan het/dat? Think you PREP it/that
- ❖ Evidence for [iLoc] on definite DP objects: in Hindi, Rumanian, Spanish (Nadris 1953) and Malgasy (Keenan 2008) the definite direct object or proper noun is marked with a locative marker:

For example:

Pe as a locative preposition in Rumanian:

(17) Cernăuțul e asezat **pe** malul Prutului. Rumanian Cernautsi is situated PREP bank.of.DEF Pruth

'Cernautsi is situated on the bank of the river Pruth.'

Pe marking a definite object DP in Rumanian:

(18) N'am văzut **pe**-cine căutam. Rumanian not.1sg see PREP-person sought.1sg
'I did not see the person I was looking for.' (Keenan 2008: 243)

An as a locative preposition in Malagasy:

(19) Tsy ao **an**-trano Rabe. *Malagasy* not there PREP-house Rabe 'Rabe isn't home.'

An marking a proper noun in Malagasy:

(20) Nanenjika **an**-dRabe aho *Malagasy* chase.PAST.AF PREP-Rabe I
'I chased Rabe' (Keenan 2008: 245)

<u>Crucially:</u> Malagasy indefinite DP objects cannot combine with $\alpha n \rightarrow 0$ only definite DPs bear [*i*Loc]:

(21) Manao (*an-) farafara mahafinaritraio mpandrafitra io *Malagasy* make.pres.af (ACC-) bed.indef pleasing carpenter that 'That carpenter makes pleasing beds.'

Evidence in Dutch:

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

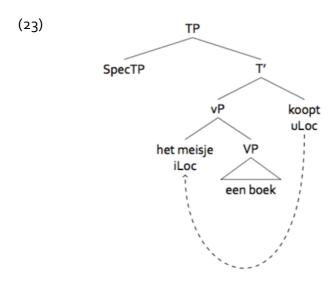
- (22) a. Geef me het boek *daar*.

 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 T

❖ 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.



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

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

Dutch wh-pronouns (wie 'who' and wat 'what') are indefinite (Boef 2012; see Haida (2007) for indefiniteness of wh-words cross-linguistically).

Dutch wat is both a wh-word and an indefinite DP:

- (24) a. **Wat** heb je gedaan? what have you done 'What did you do?'
 - b. Jan heeft wat gedaan. Jan has what done. 'Jan has done something.'

(Postma 1994: 187)

Dutch wh-words behave like indefinite DPs regarding scrambling:

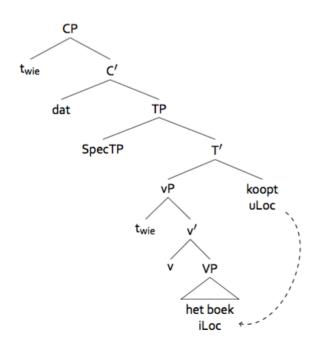
(25) a. ... dat Eva gisteren <u>het boek</u> gekocht heeft. that Eva yesterday thebook bought has '... that Eva has bought the book yesterday.' definite DP

- b. ... dat Eva het boek gisteren __ gekocht heeft.
 that Eva the book yesterday bought has
 '... that Eva has bought the book yesterday.'
- (26) a. ... dat Eva gisteren <u>een boek</u> gekocht heeft. that Eva yesterday a book bought has '... that Eva has bought a book yesterday.'

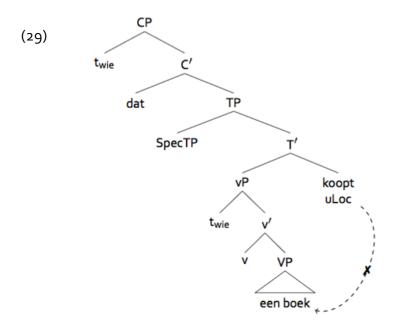
indefinite DP

- b. ... *dat Eva <u>een boek</u> gisteren <u>gekocht heeft.</u> that Eva a book yesterday bought has
- (27) 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 <u>gekocht heeft?</u>
 who think you that there what yesterday bought has
- \rightarrow Dutch wh-words are indefinite and do not bear an [iLoc]-feature \rightarrow they cannot check [uLoc] on T.
- ❖ The wh-word is thus not a Goal for Probe T, but the definite object is:

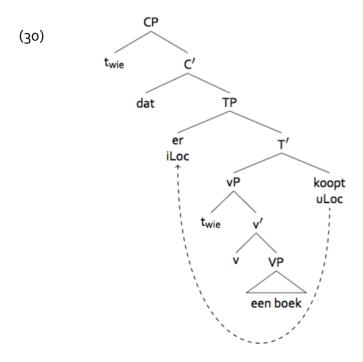
(28)



- \rightarrow [uLoc] on T is checked by [iLoc] on definite DP object het boek.
 - ❖ Indefinite objects do not have a [iLoc] feature; no Goal for T:



- \rightarrow 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:



 \rightarrow [*u*Loc] on T is checked by [*i*Loc] on *er*.

- ❖ 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>Note:</u> The Last Resort *er* insertion is also what we see in declarative sentences with an indefinite subject – thus lacking a [*i*Loc]-feature:

- (31) Het meisje zingt. The girl sings 'The girl is singing.'
- (32) ??Een meisje zingt.

 A girl sings
 'A girl is singing.'
- (33) Er zingt een meisje.There sings a girl.'A girl is singing.'

Summarizing: this analysis explains why:

- I. subject wh-extraction sentences with an indefinite DP object require er-insertion: the indefinite DP cannot check [uLoc]:
 - (34) 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 [uLoc]:
 - (35) a. Wie denk je dat **er** loopt? who think you that there walks 'Who do you think is walking?'

intransitive—no object

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:
 - (36) ??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?'
 - (37) ??/*Wie denk je dat **er** hem plaagt? pronominal object who think you that there him teases 'Who do you think is teasing him?'

4. Supporting evidence

- 4.1. Locative adverbs can also check the [uLoc] feature on T (cf. also Zwart (1992)).
 - \rightarrow Is borne out in the case of existential sentences (van Urk et al 2015):
 - **Existential sentence with er:**
 - (38) Wordt **er** gedanst? Is being there danced 'Are there people dancing?'
 - **Existential sentence without er:**
 - (39) ??Wordt gedanst? is.being danced
 - **Existential sentence with locative proform:**
 - (40) Wordt daar gedanst?
 is.being there danced
 'Are there people dancing over there?'
 - Existential sentence with locative adverbial phrase:
 - (41) 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:

(42) ??/*Werd **gisteren** gedanst? is.being yesterday danced

- Neither do other types of adverbs/adverbial phrases, e.g. cause/reason-adverbials:
 - (43)??/*Wordt dankzij de band gedanst? Is.being because-of the band danced
- → I am assuming Late Adjunction (amongst others Lebeaux 1988, 1991; Bošković 1999; Bošković and Lasnik 1999; Fox and Nissenbaum 1999; Ochi 1999; Stepanov 2001).
- 4.2 Topicalization of an embedded definite subject is more acceptable without er than wit er
 - ❖ The embedded definite subject bearing a [iLoc]-feature checks [uLoc] on the embedded T when it successive cyclically moves to Spec, CP of the matrix clause.
 - ❖ Therefore, insertion of *er* would violate its Last Resort-nature; the sentence with *er* is less acceptable:
 - (44) De jongen denk ik [dat __een boek leest]. think I The boy that a book reads 'The boy, I think is reading a book.'
 - (45)??/*De jongen denk ik [dat **er** een boek leest]. The boy think I that there a book reads

4.3 In (long-distance) relative clauses, er should not appear when the antecedent is definite but should appear when it is indefinite:

- De ruzie [die ik denk [dat (*er) gisteren begonnen is]], ... (46) the fight that I think that there yesterday started is 'The fight that I think started yesterday, isn't my business.'
- (47)lets [wat ik denk [dat??/*(er) gisteren gebeurd is]] something what I think that there yesterday happened is 'Something that I think happened yesterday...'

4.4 In wh-subject extractions in which the definite direct object is inside a PP (and therefore isn't visible as a Goal for Probe T) *er* has to be present:

(48) Wie denk je dat *(*er*) [PP naar een /de film] kijkt? a.INDEF/the.DEF movie watches whothink you that there to 'Who do you think is watching a/the movie?'

5. Conclusions

(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);
 - \rightarrow This [*u*Loc] can be checked by definite DPs/pronouns; otherwise *er* is inserted as Last Resort option.

(ii) Implications

- This analysis has shown that zooming in on definiteness effects of the object which tends to be overlooked compared to the subject in expletive constructions can give us valuable insight into these kind of constructions;
- In addition, this analysis is free of stipulation of an EPP-feature on T in Dutch regarding the appearance of the expletive *er*;
- 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)).

(iii) Issues for future research

Open issue 1: It seems to be the case that the definiteness effect on the presence/absence of *er* is too strict. Rather, it could be the case that the effect we see is actually a strong (versus weak) determiner effect (in line with Milsark (1974)).

For example:

Weak determiners like cardinal numbers:

(49) Drie jongens denk ik [dat ??/*(er) een boek gelezen hebben]. three boys think I that there a book read have 'Three boys, I think have read a book.'

→ Grammatical with er

Strong determiners like universals quantifiers:

(50) Elke jongen denk ik [dat (??/*er) een boek gelezen heeft]. Every boy think I that there a book read have 'Every boy, I think has read a book.'

→ Not grammatical with *er*

Interestingly, this seems to pattern with the possibility to add *daar* 'there' (see 3.3) to the DP:

- (51) *Drie jongens *daar* eten een broodje. three boys over.there eat a sandwich
- (52) Elke jongen **daar** eet een broodje. Every boy over there eats a sandwich 'Every boy over there, eats a sandwich.'
 - → In this study, differences between strong versus weak determiners were not tested. Future research will have to include this difference in the data collection.
 - → This would also explain the difference between specific and non-specific indefinite DPs in the contexts under discussion: specific indefinite DPs seem to be better without *er*:
- (53) Wie denk je dat ??/*(*er*) een boek koopt]? *non-specific indefinite DP* who think you that there a book buys
 'Who do you think is buying a (non-specific) book?'
- (54) Wie denk je dat (??*er*) één boek koopt]? specific indefinite DP who think you that there a book buys 'Who do you think is buying a (specific) book?'
- Open issue 2: Flemish speakers of Dutch allow *er* to be present in many more contexts than Netherlandic Dutch speakers (see for example Grondelaers, Speelman & Geeraerts (2008). Why?
- → Within the current analysis, we would want to find out whether or not Flemish Dutch definite DPs/pronouns 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 3: Do all INFL Tense based languages have a [ν 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.

Furthermore: it would be interesting to investigate what types of agreement we find in INFL Location and INFL Person languages:

- Do these languages all show agreement for Tense and/or Person and Location and/or Tense respectively?
- Or are there certain restrictions?
- How can we account for this uniformity/variation?

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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:

Transit	tive sentences with <i>er</i>	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 <i>er</i>	
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)