

## Spec-Head Agreement and the Syntax of Dressed Numerals

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### 1. Dressed and naked numerals

- Aim of the present talk: description and analysis of morphologically dressed numerals in dialectal variants of Dutch.
- Data drawn from the DiDDD-project (Diversity in Dutch DP Design), carried out at Utrecht University (Corver et al. 2005). 16/53 dialects of the DiDDD project display the phenomenon of “Dressed Numerals”; See Kranendonk (2009), Corver & Kranendonk (2008).
- Descriptive generalization: NUM must be followed by –e when it is followed by a gap

- (1) a. Teun heeft [vijf boeken] gekocht (Standard Dutch)  
Teun has five books bought  
‘Teun bought five books.’  
b. Teun heeft *er*<sub>i</sub> [vijf *t*<sub>i</sub>] gekocht  
Teun has of-them five – bought  
‘Teun bought five of them.’
- (2) a. Teun heet vuuf(\*-e) boeken ekocht (Ouddorp Dutch)  
Teun has five(-e) books bought  
‘Teun bought (the) five books.’  
b. Teun heet-er vuuf\*(-e) ekocht  
Teun has-there five(-e) bought  
‘Teun bought five of them.’
- (3) a. Jan liep 3 kilometer en ik liep vuuf(\*-e) kilometer (Ouddorp Dutch)  
Jan walked 3 kilometer and I walked five(-e) kilometer  
b. Jan liep 3 kilometer en ik liep-t-er vuuf\*(-e)  
Jan walked 3 kilometer and I walked-t-there five(-e)

- (4) ..... *er*<sub>i</sub>.....[vuufe *t*<sub>i</sub>]..... (vuufe followed by a gap)

- When the numeral is followed by an attributive adjective in an NP-ellipsis context, the schwa (-e) must be absent after the numeral:

- (5) (*He had five red apples*) en ik hè [vier/\*viere groene]  
and I have four/four-e green-e  
‘...and I have four green ones.’

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- Dressed and naked numerals in Middle Dutch: the numeral could be placed after the noun, especially in poetry. In that case, the numeral carries an inflection (Stoett 1923:67)
- (6) a. Tappula heeft [voete viere]  
Tappula has feet four-e  
'Tappula has four feet.'
- b. Si zochte.....of daer eneghe klavere stoet met [bladen viere]  
They searched ..whether there some clover stood with leaves four-e  
'They searched in order to see whether there was clover with four leaves.'
- (7) a. Kinderen, waer aff dat *de vive* leven (Stoett 1923:57)  
children, which of that them/those five live  
'children, of whom five are alive'
- b. Van tien orboren niet *die viere* onthout hi  
Of ten uses not them/those four remembers he  
'From ten uses, he does not even remember four (of them).'
- NUM(\*-e) + N
- (8) Uptie [vier hoeke] stonden [vier torre], ...  
At-the four corners stood four towers
- (9) ..... [PP met [bladen<sub>i</sub> viere t<sub>i</sub>]]..... (see (7b); *viere* followed by a gap)

## 2. On dressed and naked Ps in Hungarian

- A few remarks on being 'dressed' and being 'naked' → Hungarian adpositions (P) dressed and naked Ps (cf., Máracz 1989)
  - Dressed Ps: may be inflected for person-number agreement when they select a pronominal complement (cf. (6)); naked Ps may not be inflected for AGR (cf. (7)).
- |  |  |
|--|--|
| <p>(10) a. (én) mögött-<i>em</i><br/>I behind-AGR.1sg<br/>'behind me'</p> <p>b. (te) mögött-<i>ed</i><br/>(you) behind-AGR.2sg.<br/>'behind you'</p> <p>c. (ő) mögött-<i>e</i><br/>(he) behind-AGR.3sg.<br/>'behind him'</p> | <p>(11) a. át-<i>am</i><br/>over-AGR.1sg.<br/>'over me'</p> <p>b. át-<i>ad</i><br/>over-AGR.2sg.<br/>'over you'</p> <p>c. át-<i>a</i><br/>over-AGR.3sg.<br/>'over him'</p> |
|--|--|
- only agreement with a personal pronominal complement
- (12) a. a fiú mögött(\*-e)  
the boy behind(\*-AGR.3sg.)
- b. ki mögött(\*-e)

who behind(\*-AGR.3sg.)

- The pattern P+noun phrase is possible when the PP is naked and when it bears stress (see Marác 1989:362; note 8) → in other words, Hungarian allows the word order P DP only with non-agreeing prepositions (NB: see also Navajo; Kayne 1994:49, Ken Hale p.c.).

- (13) a. \*MÖGÖTT a ház (dressed P)  
BEHIND the house  
b. ÁT a hídon (naked P)  
OVER the bridge-SUPER

- The noun phrase of a dressed P displays nominative case (a default case, according to Marác 1989). Naked Ps assign a lexical case (instrumental, allative, superessive, ablative, et cetera).

- (14) a. János mögött (dressed P)  
John-NOM behind  
'behind John'  
b. János-on át (naked P)  
John-SUPER over  
'over John'

- Dressed possessum-nouns in Hungarian:

- (15) [<sub>DP</sub> Spec [<sub>D</sub>' D [<sub>FP</sub> [POSS]<sub>i</sub> [<sub>F</sub>' F [ N t<sub>i</sub>]]]]]

- (16) a. a te kalap-ja-i-d (Hungarian: Szabolcsi 1994)  
the you hat-POSS-PL-2SG  
'your hats'  
b. a Mari kalap-ja-I-Ø  
the Mary hat-POSS-PL-3SG  
'Mary's hats'

- Question: could 'being dressed' be the reflex of a Spec-head configuration? → SHAGR

### 3. On the nature of -e: Getting dressed via SHAGR

Question: What kind of element is -e?

- HYP 1: -e is an inflectional marker licensing an ellipsis site (say, pro).

- (17) a. Jan heeft [een *zwart*(\*-e) konijn] gekocht.  
Jan has a black(-e) rabbit bought  
b. Jan heeft [een *wit* konijn] gekocht en Marie heeft [een *zwarte* —] gekocht.  
Jan has a white rabbit bought and Marie has a black-e — bought  
'John bought a white rabbit and Mary bought a black one.'

(18) [DP een [FP zwart-e [NP pro]]] (Kester 1996, Sleeman 1996)

- Potential problem: The morpheme that follows the adjectival remnant in NPE-contexts sometimes has a different form (viz., -en) than the morpheme that follows the numeral remnant in quantitative 'er' contexts (viz., -e). In NPE-contexts involving adjectival remnants, the adjectival remnant can be followed by *-en* if the antecedent is plural. The numeral, on the contrary, is always followed by *-e*.

(19) a. Ik heb een wit knien en ieje *een zwarte* (Giethoorn Dutch)

I have a white-Ø rabbit and you a black-e

'I have a white rabbit and you have a black one.'

b. Ik heb vier zwarte kipm en ie hef *tien wit'n*

I have four black-e chickens and you have ten white-n

'I have four black chickens and you have ten white ones.'

(20) Ik heb vier kipm en ie hef er *tiene/\*tinen*

I have four chicken and he have of-them ten

'I have got four chicken and you have got ten.'

- HYP 2: *-e* is a marker of *plurality* realized on the numeral
- Problem for this hypothesis: Numerals in ellipsis always have schwa, whether singular or plural. Thus, 'one' is also followed by *-e* (cf., also Kranendonk 2009); NB. there are dialects with dressed numerals that do not permit dressed 'one'; e.g. Ouddorp Dutch.

(21) a. Ik he **ien boek** elezen

I have one-Ø book read

en Jacob het'r ok **iene** elezen.

and Jacob has-PRT also one-e read

'I have read one book, and Jacob has read one too.'

b. Ik he **vier boek'n** elezen

I have four-Ø books read

...en Jacob het'r ok **viere** elezen.

...and Jacob has-PRT also four-e read

'I have read four books, and Jacob has read four too.'

- Hyp 3: *-e* as 'numerical/number agreement'. More specifically, *-e* as a morphological reflex of a spec-head agreement relationship between 'er' in Spec,NumP and the numeral head.

(22) a. [NumP [Num vuuf] [NP boeken]] (Ouddorp Dutch)

b. ...er... [NumP ~~er~~ [Num vuuf+-e] [NP ~~er~~]] ....

c. [PP met [NumP bladen<sub>i</sub> [Num vier+-e [NP ~~bladen~~]]]] (Middle Dutch)

- Empirical phenomena displaying different morphosyntactic behavior depending on Spec-head agreement or head-complement relationship in the clausal system: (i) past participle agreement; (ii) subject-finite verb agreement; (iii) agreeing complementizers
- past participle agreement in Romance languages (Kayne 1989), originally formulated in terms of the notion of government but later reinterpreted as a consequence of a nominal

element (typically a direct object) passing through the spec-position of the past participle projection.

- (23) a. Jean a repeint les tables  
John has repainted the tables  
b. Jean *les*<sub>FEM+PL</sub> a repeintes<sub>FEM+PL</sub>  
John them has repainted  
'John has repainted them.'

- subject-finite verb agreement in Standard Arabic (see Aoun et al (1994), Benmamoun 2000)).

- (24) a. Naama l-?awlaad-u (person agrt; no nr.-agrt)  
slept.3MS the-children-NOM  
'The children slept.'  
b. ?al-?awlaad-u naamu (pers agrt; nr.-agrt)  
the-children-NOM slept.3MP  
'The children slept.'

- Morphological modification of Comp when a wh-element is moved to its Spec. See e.g. Kinande/Bantu (Schneider-Zioga 1987); see also Chung & McCloskey (1987) for formal changes of Welsh complementizers in constructions involving movement through Spec,CP (i.e. *aL* instead of *go*)

- (25) IyondI y0 kambale alangIra  
Who(cl.1) that (cl.1) Kambale saw  
'Who did Kambale see?'

- Interim conclusions: (i) *-e* typically occurs in a structural contexts featuring a (movement derived) gap after the numeral; (ii) *-e* is a reflex of a spec-head agreement configuration and functions as a marker of number agreement.

#### 4. More dressed numerals: numeric universal quantifiers

- Floating universal numeric quantifiers (Cirillo 2009; chapter 4)

- (26) a. *Alle drie de studenten* hebben het boek gelezen (Dutch)  
all three the students have the book read  
b. *De studenten* hebben *alle drie* het boek gelezen

- Cirillo's analysis:

- (27) a. UNQ is base-generated in Q in its entirety; thus, it is not derived by head movement of NUM to Q.  
b. The UNQ is created by a lexical rule. It behaves as a 'syntactic word' in the sense of Di Sciullo and Williams (1987).

- (28) a. [<sub>QP</sub> [<sub>Q</sub> alle drie] [<sub>DP</sub> de [<sub>CardP</sub> Ø [<sub>NP</sub> studenten]]]]  
b. [<sub>QP</sub> [<sub>Q</sub> al] [<sub>DP</sub> de [<sub>CardP</sub> Ø [<sub>NP</sub> studenten]]]]

- My claim: *alle drie* is a phrasal constituent → evidence: ‘dressed universal numeric quantifiers’
- Pattern A: all + five + the + sisters

- (29) a. Ik heb bij [alle vijf de zusjes van Pien] op school gezeten (Std. Du)  
 I have with all five the sisters of Pien at school been  
 ‘I was in the same class as all five sisters of Pien’s.’  
 b. Ik ha bij [alle vijf de suskes fan Pien] op skoalle sitten (Bergum)

Pattern B: all + five-*e* + the + sisters (also found in Oosteklo, Poelkapelle, Ieper, Meilegem, Deinze, Merelbeke, Kooigem, Ronse, Ovendegem)

- (30) a. ik he bie [alle vuufe de zusjes van Jen] op school ezeten (Ouddorp)  
 I have with all five-*e* the sisters of Jen at school been  
 b. alle vuufe de zusjes van Pien (Zierikzee)

Pattern C: all + five + sisters (= English pattern)

- (31) a. Ik hab bie [alle fief suskes van Pien] op school sitten. (W-Terschelling)  
 I have with all five sisters of Pien at school been  
 b. alle vijf zusjes van Pien (Beekbergen)

Pattern D: all + five-*e* + sisters (not attested)

- Questions: What is the –*e* after the numeral in Pattern B? What is the internal structure of *alle vuufe*?
- If *vuufe* is a complex phrase (i.e. a NumP in which the Num-head is followed by a gap/trace), then *alle vuufe* in *alle vuufe de zussen* (all five the sisters) should also be a complex phrase; i.e. [*alle vuufe* --] *de zussen*
- More specifically, *alle vuufe* precedes a covert (i.e. phonologically empty) NP; see (8). This implies that the universal numeric quantifier in *alle vuufe de zusjes van Jan* cannot simply be analyzed as a complex word (i.e. a Q-head) taking a DP as its complement. This may also raise the question as to whether the UNQ in the other patterns has phrasal status.

- (32) [alle vuufe *ec*] de zusjes van Jen (ec = empty category)

Questions:

- What is the internal syntax of *alle vuufe de zusters*?
- do bare NUM-patterns (i.e. *alle vier de zusjes*) also have a phrasal syntax? That is, do the differences relate to morphophonological spell-out?
- How are the floating Q-patterns derived?

## 5. Internal syntax

### 5.1 Some word order facts

- Word order variation

- (33) a. alle vijfde de vrouwen (herkende hij van vroeger) (Oosteklo Dutch)  
all five the women (recognized he from earlier  
'He recognized all five women from former times.'  
b. de vrouwen alle vijfde (herkende hij van vroeger)  
the women all five

NB: de vrouwen alle vijf/vijve (Schellebelle Dutch)

- Variants of Dutch that do not display –e on NUM only permit the order 'alle vijf de vrouwen'.

- (34) a. alle vijf de vrouwen (herkende hij van vroeger) (Standard Dutch)  
b. \*de vrouwen alle vijf (herkende hij van vroeger)

- Allemaal + det + N; det + N + allemaal

- (35) a. amaal de beesten (South-eastern Flanders Dutch, Teirlinck 1924:174)  
all the animals  
b. de beesten amaale  
the animals all-e

- (36) a. ik heb [PP bij [DP *allemaal* annelien's vijf zusjes]] op school gezeten  
I have with all Annelien's five sisters at school been  
'I was in the same school as Annelien's five sisters.'  
(Onstwedde Dutch)  
b. kem [PP bij [DP *allemaal* de zuskes van Trien]] op school gezeten  
I-have with all the sisters of Trien at school been  
(Dilbeek Dutch)

## 5.2 Towards an analysis of the phrasal syntax

- Cirillo's (2009) analysis applied to Dutch dialects displaying *vijve*.

- (37) a. [QP [Q alle vijfde] [DP de [CardP Ø [NP vrouwen]]]]  
b. [QP [DP de vrouwen] [Q' [Q alle vijfde] [DP ~~de vrouwen~~]]]

- But if the constituent *alle vijfde* is a complex phrase containing a gap, then *alle vijfde* cannot have the structure in (37a).
- Recall from section 4 that the –e shows up in contexts in which movement of the NP-complement of Num has taken place. More specifically, -e is a morphological reflex of a spec-head agreement configuration. If so, then movement should also have taken place in the structure *alle vijfde de zussen*.

- (38) a. de vrouwen alle vijfve (= (33b))  
 b. [NumP [alle vijf] [NP vrouwen]] (base representation)  
 c. [NumP [NP vrouwen]<sub>i</sub> [NumP [alle vijfv+-e] t<sub>i</sub>]] (mvt. to Spec,NumP & SHagr)  
 d. [DP de [NumP [NP vrouwen]<sub>i</sub> [NumP [alle vijfve] t<sub>i</sub>]]] (merger of D)
- (39) a. alle vijfve de vrouwen (= (33a))  
 b. [NumP [alle vijf] [NP vrouwen]] (base representation)  
 c. [NumP [NP vrouwen]<sub>i</sub> [NumP [alle vijfv+-e] t<sub>i</sub>]] (mvt to Spec,NumP & SHagr)  
 d. [DP de [NumP [NP vrouwen]<sub>i</sub> [NumP [alle vijfve] t<sub>i</sub>]]] (merger of D)  
 e. [DP [NumP [alle vijfve] t<sub>i</sub>]]<sub>j</sub> [DP de [NumP [NP vrouwen] [NumP t<sub>j</sub>]]]  
 (phrasal mvt of NumP to Spec,DP)

- Standard Dutch minimally differs from Ouddorp Dutch: there is no morphological reflex of the Spec-head agreement relationship. That is, in step (39c), there is no morphological marking of the numeral.
- Onstwedde Dutch also minimally differs from Ouddorp Dutch (and Standard Dutch): Doubly filled DP effect.

- (40) a. [DP [NumP [alle vijf] t<sub>i</sub>]]<sub>j</sub> [DP de [NumP [NP vrouwen] [NumP t<sub>j</sub>]]]  
 b. [DP [NumP [alle vijf] t<sub>i</sub>]]<sub>j</sub> [DP D<sub>ø</sub> [NumP [NP vrouwen] [NumP t<sub>j</sub>]]]

- There are dialects which have an inflected numeral *viijve* in combination with quantitative ‘er’ but do not display *alle viijfe* in the pattern *alle viijve de vrouwen* (e.g. Laarne Dutch, Wezep Dutch, Wijhe Dutch) → possibly the SHAGR relationship is only morphologically reflected when the pro-form *er* occupies [Spec,NumP].

- (41) a. Ij ee vijf abbels en ik ei d’er viere. (Laarne Dutch)  
 He has five apples and I have there four-e  
 ‘He has five apples and I have four.’  
 b. *Alle vier de vrâan* en zuën schadd’n van kinders  
 Alle four the women have such darlings of children  
 ‘All four women have such sweet children’

## 6. Quantifier-floating

- Q-float of ‘alle NUM’

- (42) Hie heit [ze] [*alle vuufve*] ekocht (Ouddorp Dutch)  
 He has them all five-e bought  
 ‘He bought all five of them.’

- (43) [Ze] verstoan ‘t [*allemoalle*] (Nieuwpoort Dutch)  
 They understand it all-e  
 ‘They all understand it.’

- Q-float is fronting of the lower DP-segment (Compare VP-topicalization; Den Besten & Webelhuth 1990)

- (44) a. [DP [NumP [alle vuufe] t<sub>i</sub>]]<sub>j</sub> [DP de [NumP [NP vrouwen] [NumP t<sub>j</sub>]] (= 35e)  
 b. [DP de [NumP [NP vrouwen] [NumP t<sub>j</sub>]]]<sub>k</sub> .... [DP [NumP [alle vuufe] t<sub>i</sub>]]<sub>j</sub> [DP t<sub>k</sub>]] ...

## 7. al de vrouwen & alle vrouwen

- (46) a. al de vrouwen  
 all the women  
 b. alle vrouwen  
 all-e women  
 c. \*alle de vrouwen  
 all-e the women
- (47) a. alle die prochiane (Middle Dutch; De Vooy 1967:321)  
 all-e the parishioners  
 ‘all parishioners’  
 b. met sinen lieden al  
 with his men/friends all  
 ‘with all his men’

- Question: Could the form *alle* be somehow related to a form like *vuufe* (five+-e)? That is, could -e on *alle* also be a morphophonological reflex of a SHagr-configuration.

- (48) a. [NumP [al] [NP vrouwen]]  
 b. [NumP [NP vrouwen]<sub>i</sub> [NumP [al+-e] t<sub>i</sub>]]  
 c. [DP D [NumP [NP vrouwen] [NumP [alle] t<sub>i</sub>]]]  
 d. [DP [NumP [alle] t<sub>i</sub>]]<sub>j</sub> [DP D [NumP [NP vrouwen] [NumP t<sub>j</sub>]]]

- Middle Dutch: Num(-e) + def. art. + superlative adjective + N

- (49) a. achte die starcste ridders (Middle Dutch, Stoett 1923:69)  
 eight-e the strongest knights  
 ‘the strongest eight knights’  
 b. viere die beste  
 four-e the best  
 ‘the four best (ones)’
- (50) a. [NumP [acht] [NP starcste ridders]]  
 b. [NumP [NP starcste ridders]<sub>i</sub> [NumP [acht+-e] t<sub>i</sub>]]  
 c. [DP die [NumP [NP starcste ridders]<sub>j</sub> [NumP [achte] t<sub>i</sub>]]]  
 d. [DP [NumP [achte] t<sub>i</sub>]]<sub>j</sub> [DP die [NumP [NP starcste ridders] [NumP t<sub>j</sub>]]]
- (51) a. [NumP [al] [NP prochiane]]  
 b. [NumP [NP prochiane]<sub>i</sub> [NumP [al+-e] t<sub>i</sub>]]  
 c. [DP die [NumP [NP prochiane]<sub>j</sub> [NumP [alle] t<sub>i</sub>]]]  
 d. [DP [NumP [alle] t<sub>i</sub>]]<sub>j</sub> [DP die [NumP [NP parochianen] [NumP t<sub>j</sub>]]]

- Also in present-day dialects (see Kranendonk 2006). Importantly: not a partitive reading.

- (52) a. drie de duurste boeken (Asten Dutch)  
 three the expensive-SUPERL. Books  
 ‘the most expensive three books’  
 NOT: ‘three (books) of the most expensive books’  
 b. drie de grootste kalveren (Lage Mierde Dutch)  
 three the big-SUPERL. Calves  
 ‘the biggest three calves’  
 NOT: ‘three (calves) of the biggest calves’  
 c. Twee z’n audste dōchter ging me’ne politieagānt  
 Two his oldest daughters went with a policeman  
 ‘His two oldest daughters had an affair with a policeman.’  
 (Kempeland Dutch; De Bont 1958:398)

(53) [DP [NumP [drie] t<sub>i</sub>]]<sub>j</sub> [DP de [NumP [NP duurste boeken] [NumP t<sub>j</sub>]]]

## 8. alle vier(e)

- Thus far, I have analyzed *alle viere* as a NUM-head, with the –e on *viere* as a morphophonological reflex of the SHagr-configuration.
  - In section 7, we saw that the –e on *alle*, as in *alle vrouwen*, might possibly also be a reflex of the SHagr-configuration.
  - Question 1: What about the forms *alle vuufe*, in which we find both a –e on *al* and a –e on the numeral *vuuf*?
  - Question 2: What about the –e on *alle vijf* in standard Dutch?
  - (Tentative) proposal: (i) *alle vijf/alle vuufe* constitute an (asyndetic) coordinate structure; (ii) the SHagr-configuration can have a morphological effect on both conjoined elements (*alle vuufe*), or only on the first conjunct (*alle vijf*).
  - Evidence for coordination: (i) Italian (Cirillo 2009:181); (ii) Dutch coordinate patterns involving ‘al’
- (54) a. [*Tutti e tre* gli studenti] hanno letto il libro  
 All and three the students have read the book  
 b. Gli studenti hanno leto *tutti e tre* il libro
- (55) a. Het is daar [[een en al] modder]  
 It is there one and all mud  
 ‘It’s all mud out there.’  
 b. De toegang is [[geheel en al] gratis]  
 The entrance/access is entire and all free  
 ‘The entrance is entirely free.’
- (56) a. alle vuufe de zusjes (Ouddorp)  
 b. [alle [& vuufe]] (= [NUM-e [& NUM-e]])

- First conjunct agreement

- (57) a. alle vijf de zusjes (Standard Dutch)  
 b. [alle [& vijf]] (= [NUM-e [& NUM]])

- FCA on the complementizer in Waubach Dutch (see Van Koppen 2005)

- (58) a. de-s **doe** kum-s (Waubach Dutch; Van Koppen 2005: 63)  
 that-2p.sg you<sub>sg</sub> come-2p.sg  
 ‘...that you will come.’  
 b. de-s [**doe** en Marie] uch ken-t  
 that-2p.sg [you<sub>sg</sub> and Marie]<sub>2p.pl</sub> each.other know-2pl  
 ‘...that you and Marie know each other.’

## 9. Conclusion

- The *-e* on NUM is a morphophonological reflex of a SHagr-configuration between a numeral head and a displaced nominal (phrasal) constituent in Spec,NumP.
- The numeric universal quantifier *alle drie* in *alle drie de studenten* is not a X-zero constituent but a phrasal one. (contra Cirillo 2009)
- The morphophonological reflex *-e* is still visible in standard Dutch (and other variants) on the numerical universal quantifier *alle drie* under the assumption that this is a coordinate structure displaying first conjunct agreement.

## Appendix: A slightly different perspective on dressed numerals: ‘Getting a resumptive dress’

- A subject-object asymmetry (see Van Kranendonk to appear)

- (59) a. [Viere van de stoeln] bin rood (Giethoorn Dutch)  
 Four-e of the chairs are red  
 ‘Four of the chairs are red.’  
 b. Ik heb [vier van mien koen] verkocht

- Parallelism with the *wat voor*-split phenomenon (cf. Den Besten 1981, Hoekstra 1984, Koster 1987, Corver 1990) → *-e* shows up in Giethoorn Dutch noun phrases, where split *wat voor* in Standard Dutch is excluded!.
- Den Besten (1981:239): ‘Subextraction of *wat/was* is permitted on the condition that the pertinent NP be strictly governed.’ → V is able to strictly (= properly) govern the gap (trace) of the displaced *wat* which originates from within a direct object noun phrase. The other positions (IO, SU) are not strictly governed.
- *-e* shows up in structural contexts in which the presence of a gap is blocked (SU, IO) → This behavior hints at a last resort strategy:

- (60) a. \**Wat* hebben voor mensen je moeder bezocht? SU  
 What have for people your mother visited  
 ‘What sort of people have visited your mother?’

- b. *\*(?)Wat heb jij voor mensen je stuk gestuurd?* IO  
What have you for people your paper sent  
'What kind of people have you sent your paper to?'
- c. *\*Wat denk je dat voor mensen het boek lezen* embedded SU  
What think you that for people the book read?  
'What kind of people do you think read the book?'
- d. *Wat heb jij in Italië voor musea bezocht?* DO  
What have you in Italy for museums visited  
'What sort of museums did you visit in Italy?'
- Giethoorn Dutch (cf. Van Kranendonk to appear)
- (61) a. *Viere van mien kôen bin uut't land ontsnapt* (SU)  
Four-e of my cows are out-of-the meadow escaped  
'Four of my cows have escaped the meadow.'
- b. *De koster gaf viere van de stoel 'n 'n sticker* (IO)  
The usher gave four-e of the chairs a sticker  
'The usher put a sticker on four of the chairs.'
- c. *Ik denke dat viere van mien kôen ontsnapt bin.* Embedded subject  
I think that four-e of my cows escaped are  
'I think that four of my cows have escaped.'
- c. *Ik heb vier van mien koên verkocht* (DO)  
I have four of my cows sold  
'I have sold four of my cows.'
- (62) a. [TP [[vier *ec* (= -e)] [van mien kôen]] [T' T ....  
b. ...[VP [[vier *ec*] [van mien koên]] V]
- Parallel phenomena in the clausal domain: resumptive pronouns in Swedish and Vata (see also Rizzi 1990)
- Engdahl (1985:8, 40): the use of subject resumptive pronouns is fully grammaticized in Swedish in structures in which an ECP violation would otherwise arise, e.g. in subject position of indirect questions (see (63a)) → Swedish has a language specific rule that spells out a nominative trace as a pronoun → last resort strategy (compare the language-specific rule of do-support).
- Engdahl: resumptive pronouns are marginal or impossible in other positions, including the subject position of embedded clauses with a null C, where a trace is allowed (see (63b)).
- (63) a. [*Vilket ord*]<sub>i</sub> visste ingen hur *det*<sub>i</sub> / \**t*<sub>i</sub> stavas?  
'Which word knew noone how it is-spelled?'
- b. [*Kalle*]<sub>i</sub> kan jag slå vad om *t*<sub>i</sub> / *han*<sub>i</sub> kommer att klara sig  
'Kalle can I bet about t / he is-going-to succeed.'
- Engdahl: these resumptive pronouns have the full behavior of syntactic variables, in that they can license parasitic gaps.
- (64) *Ik heb [acht(\*-e) van mien koên] verkocht* (DO)  
I have four of my cows sold  
'I have sold four of my cows.'
- (65) *ik heb er<sub>i</sub> [achte 'pg' [t<sub>i</sub> van]] elezen*

I have of-them eight-e – of read  
 ‘I have read eight of them.’

- Koopman (1984): The spell out strategy applies to all positions that are not properly governed. E.g. the language has no device to turn C into a proper governor; hence the trace spell-out is the only option when the subject is wh-moved. In object position, the trace need not be spelled out, as the object trace is governed by the verb.

- (66) a. àló \*(ò) le saká la?  
 Who he eat rice WH  
 ‘Who ate rice?’  
 b. Yi Kòfí le (\*mí) la?  
 What Kofi eat it WH  
 ‘What did Kofi eat?’

- quantitative *er* construction versus partitive construction: an asymmetry in object behavior.

- (67) a. Ik heb zes koen; hie hef er [*viere*] (Giethoorn Dutch)  
 I have ix cows ; he has of-them four-e  
 ‘I have six cows and he has four.’  
 b. Ik heb [*vier* van mien koen] verkocht  
 I have four of my cows sold  
 ‘I sold four of my cows.’

- Question: why should –e be present in quantitative ‘er’ contexts but not in partitives?

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