

A polar whole

Dutch *heel* ‘whole’ as a special kind of negative polarity item

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In this paper,¹ I will discuss a peculiar polarity item from Dutch, ‘polar-*heel*’, whose properties have not been studied in the literature before. This incarnation of the adjective/quantifier *heel* ‘whole/all’ shows a highly restricted distribution. I argue that ‘polar-*heel*’ is a strictly *negative* polarity item which can be licensed in either of two ways: either (i) directly, under an overt-syntactically established *Spec-Head agreement* relationship with the negative head Neg⁰, or (ii) parasitically, via overt-syntactically established *connectedness* to the licensing chain of another negative polarity item. The discussion in this paper thus seeks to show that ‘polar-*heel*’ is a non-empty analogue to an A’-bound gap, which likewise can be ‘real’ or ‘parasitic’.

1 Introduction: The many faces of *heel*

Dutch *heel* ‘whole’ can be used in a variety of ways. In its purely adjectival incarnation (in which it shows adjectival agreement with the head noun when used attributively), it means ‘entire, undivided, intact’ — as in (1a,b), or in the copular sentence in (1c), in which the adjective *heel* shows up as the non-verbal predicate of the clause. This incarnation of *heel* is the only one that allows predicative construal: for the examples that follow, copular paraphrases are systematically impossible.

- (1) a. een heel ei
a whole egg
b. het hele ei
the whole-INF egg
c. deze is kapot, maar die is nog heel
this.one is broken but that.one is still whole/intact

I will not be interested in this ‘entire, undivided, intact’ sense of *heel*. But besides this variant, there are several more quantificational incarnations of *heel*. One of them (illustrated in (2)) is restricted to indefinite noun phrases; its contribution is that of degree modification, quite comparable to English *quite* (see the prose translation of (2a)).

- (2) a. een hele afstand
a whole-INF distance
‘quite a distance’
b. hele-INF afstanden
whole distances
‘substantial distances’

¹ This paper builds on observations made in a draft version of the chapter on noun phrases of *A Modern Grammar of Dutch*, which I had the honour of contributing to during my brief stay at Tilburg University in the spring of 1998. I thank the Netherlands Organisation for Scientific Research for its financial support during that period, and the Grammar Models community at Tilburg University for making my stay in their midst such a pleasure. I also thank my twenty-six informants for their help with many of the data discussed in this paper (though I stress that not all of the data were checked with all of these informants), and for Marc van Oostendorp for his comments and editorial guidance. Some of the conclusions reached herein were arrived at independently in unpublished notes on ‘polar-*heel*’ by Teun Hoekstra, Jenny Doetjes and Johan Rooryck, kindly made available to me by the last-mentioned scholar. I will give credit to these notes where credit is due. I am solely responsible for the errors contained in this paper.

A third variant of *heel* is in complementary distribution with the degree-*heel* illustrated in (2) in occurring only in definite noun phrases. Its semantic contribution is close to that of English *all* in pre-determiner position. Interestingly, this variant of *heel* can be placed in either pre- or post-determiner position; in the latter, it inflects like an adjective (cf. the *-e* in (3a)) while in the former it is uninflected, ‘plain’.

- (3) a. de hele wereld
the whole-INF world
b. heel de wereld
whole the world
‘the whole world, all the world’

And then there is a fourth incarnation of *heel*, the one that interests me in this paper. It shares with the *heel* of (3) the fact that it occurs in definite noun phrases only, but it is more restricted in that it strongly prefers the distal demonstratives *die/dat* ‘that’ — the definite determiners *de/het* and the proximal demonstratives *deze/dit* are generally awkward (much more so in (4b) than in (4a)), and of course the indefinite determiner *een* is entirely impossible.² With (3), the *heel* in the examples in (4) also has in common the property of being placeable either to the left or to the right of the demonstrative (with the concomitant inflectional difference),³ but unlike in (3), *heel* in (4) does not contribute the semantics of universal quantification⁴ — on the contrary, it is a negative polarity item, dependent on some form of negation, with the negation and *heel* together expressing something that finds alternate expression in the form of a combination of *niet* and *helemaal* (cf. (5)), the counterpart English *not ... at all* and itself featuring an instance of *heel*.⁵

2 Besides distal demonstratives, possessive pronouns are possible in noun phrases with polar-*heel* as well — cf. (6a) for an example. I will return to the restricted distribution of ‘D-domain’ elements in noun phrases with polar-*heel* in section 5.4, noting a parallel between these noun phrases and the so-called *N of a N* construction (cf. *that idiot of a doctor*).

3 To my ear, (4b) sounds somewhat worse than (4a), which is why I have assigned it a question mark. Speakers generally accept it alongside (4a), though; it is unquestionably grammatical. In the text below I will mainly concentrate on the pattern in (4a).

4 This implies that to the *heel* of (3) I do attribute the semantics of universal quantification, following Moltmann’s (1997) analysis of *whole* as a universal quantifier over parts. That analysis raises some questions, however (cf. Morzycki 2001 for recent discussion). One of them — the fact that Moltmann’s semantic representation has *whole* applying directly to a DP denotation while in syntax *whole* is below D — can be circumvented precisely with an appeal to the pre-determiner placement of *heel* in (3b); more problematic, however, is the fact that, unlike universal QPs, *whole*-DPs do introduce discourse referents and do not scopally interact with existentials. Morzycki (2001) presents an alternative account of the semantics of *whole* as a maximising modifier (à la Brisson 1998) which steers clear of the aforementioned problems while still correctly allowing for scopal interaction with negation, as in (i):

- (i) a. no one likes that whole subject
b. ‘no one likes all of that subject’ $\neg \rightarrow$ whole
c. ‘no one likes any of that subject’ *whole* > \neg

Morzycki’s paraphrase of the wide-scope reading of the *whole*-DP in terms of an *any*-NPI, as in (ib), may suggest an account of polar-*heel* as a wide-scope *whole*-DP, basically making the *heel* in (4) a scopal variant of the *heel* seen in (3) and eliminating the special ‘polar-*heel*’. It is immediately clear, however, that (4) cannot be reduced to a scopal variant of the *heel* in (3): while the latter does indeed involve a *Part* operator, there is no sense in which (ii), with polar-*heel*, involves quantification/maximisation over parts. I therefore continue to treat polar-*heel* as a separate entity, distinct from the incarnations of *heel* in (1)–(3).

- (ii) ik ben voor die/m’n hele dood niet bang
I am for that/my whole death not afraid

5 There tends to be a bit of a condescending tinge to the construction in (4), usually lacking from or less prominent in (5) or its English counterpart. I will not be concerned with this aspect of the construction here; but see section 5.4, below. The *helemaal* of (5), itself featuring polar-*heel*, is roughly the counterpart English *not ... at all* — though *at all* is more liberal in its distribution than *helemaal*: in particular, *at all* can be licensed across a full-clausal boundary by a negation in the matrix clause (*I don’t think she likes*

- (4) a. ik ken die/[?]de/^{??}deze/*een hele vent *(niet)
I know that/the/this/a whole-INF bloke not
b. [?]ik ken heel die/*de/*deze/*een vent *(niet)
I know whole that bloke not
'I don't know that bloke at all'
- (5) ik ken die vent helemaal *(niet)
I know that bloke at.all not
'I don't know that bloke at all'

Hereinafter, I will refer to this variant of *heel* as POLAR-HEEL. Its status as a negative polarity item is clear right at the outset from the obligatoriness of *niet* 'not' in (4)–(5) as well as from the fact that, even in the presence of a local negation, noun phrases featuring polar-*heel* cannot serve as predicate nominals (cf. the minimal pairs in (6) and (7), which phonologically differ only in the initial segment of the verb; the contrast between *ken(t)* 'know' and *ben(t)* 'am/are' is robust) — being a polarity item, polar-*heel* is quantificational, turning the noun phrase that harbours it into a QP; and as is well known, QPs are generally ineligible as predicate nominals (cf. **he is/they are every teacher*).

- (6) a. ik ken die hele vent niet
I know that whole bloke not
b. *ik ben die hele vent niet cf. *ik ben die vent niet*
I am that whole bloke not
- (7) a. je kent m'n hele vader niet eens
you know my whole father not even
'you don't even know my father at all'
b. *je bent m'n hele vader niet eens cf. *je bent m'n vader niet eens*
you are my whole father not even

What follows is a first investigation of the syntactic distribution of polar-*heel*, viewed from the perspective of its key feature: the fact that it is a negative polarity item. It will turn out that it is restricted in ways that no known Dutch polarity item is, and that its peculiar distribution can be accounted for on the assumption that it can be licensed in either of two ways: (i) directly, under overt-syntactically established *Spec-Head agreement* with the negation head Neg⁰, or (ii) parasitically, via overt-syntactically established *connectedness* to the licensing chain of another polarity item. The presentation will take the form of incremental development of the analysis via step-by-step introduction of the data, in order to avoid the effect of a barrage of unfamiliar data at the outset, followed eventually by an integrated analysis.

2 Polar-*heel* as a special negative polarity item

2.1 Polar-*heel* is dependent on sentential negation to its right

An important point to establish right at the outset of the discussion is that polar-*heel* is dependent on a *sentential* negation. To show this, I take my cue from Haegeman & Zanuttini's (1991) observation in (8), involving West-Flemish *en* (a marker of sentential negation).

him at all), while *helemaal*, like polar-*heel* in general, demands a clause-mate licenser. English *at all*, as far as its distribution goes, in fact seems to find a closer match in *überhaupt*, a German polarity item which Dutch has appropriated to express what in English is best rendered with the aid of *at all* (cf. *ik geloof niet dat zij hem {*helemaal/überhaupt} mag* 'I believe not that she him at all likes').

- (8) a. da Valère me niets ketent (*en*)-is
that Valère with nothing satisfied NEG is
b. da Valère ketent me niets (**en*)-is
that Valère satisfied with nothing NEG is

The sentential negation marker *en* is possible in (8a), with *me niets* ‘with nothing’ scrambled to the left of the adjective *ketent* ‘satisfied’ to which it serves as a complement, but impossible in (8b), where *me niets* stays to the right of the adjective, inside its maximal projection. Haegeman & Zanuttini observe that, along with the different distribution of *en*, (8a,b) also differ in interpretation: (8b) only has a constituent-negation reading, somewhat clumsily paraphrasable with the aid of a pseudo-cleft like *satisfied with nothing is what he is*.

From the West-Flemish facts in (8) we can conclude that an unscrambled negative PP-complement to an adjective receives a constituent-negation interpretation; a sentential negation interpretation is available only if the PP scrambles outside the AP. With this in mind, consider the facts in (9), involving polar-*heel*:

- (9) a. dat ik die (hele) vent met niets gelukkig kan maken
that I that whole bloke with nothing happy can make
b. dat ik die (**hele*) vent gelukkig met niets kan maken
that I that whole bloke happy with nothing can make
c. dat ik die (hele) vent gelukkig met niets kan raken
that I that whole bloke luckily with nothing can touch/hit

The contrast between (9a) and (9b) is robust: *hele* is absolutely impossible in (9b), while it is fine in (9a). That this is not a linear adjacency effect (as the reader might suspect) is shown by the fact that (9c) contrasts minimally (and once again, quite crisply) with (9b). The thing to note about (9b) vs (9c) is that they are identical except for the main verb. So nothing about linear order could differentiate between the two examples. The difference lies in the fact that in (9b), *met niets* is ‘trapped’ inside the AP of *gelukkig* ‘happy’ and therefore allowing a constituent-negation reading only, while in (9c) (where *gelukkig* is a VP-level adverb meaning ‘luckily’) *met niets* is a constituent of the VP of *raken* ‘touch/hit’, supporting a sentential negation interpretation.

Further confirmation for the claim that polar-*heel* is dependent on *sentential* negation, not merely on the presence of a negative element, comes from the ungrammaticality of (10), featuring a lexically negated adjective.

- (10) dit is [die (**hele*) vent/zaak onwaardig]
this is that whole bloke/business unworthy

There is solid initial evidence, therefore, for our claim that polar-*heel* is a negative polarity item. And we will encounter plenty more evidence as we go along.

2.2 *Polar-heel is licensed by the negative head Neg⁰*

The parallel between it and *any*-NPIs is less than perfect, however. It turns out that polar-*heel* is both more lenient and more strict than *any*-NPIs. We will come across cases of the latter type later in the discussion (cf. e.g. the discussion of the clause-mate condition in section 2.5, below). As for the former, let us consider the fact that polar-*heel* but not *any*-NPIs can be licensed by implicit negation. This manifests itself in the following way.

The lexical semantics of *vergeten* ‘forget’ or *passeren* ‘pass’ has an implicit negation component (‘not remember anymore’, ‘not be behind anymore’). This is apparently enough to license polar-*heel*: (11a) and (12a) are fine. Yet *any*-NPIs cannot be so licensed in Dutch, as the b-examples in (11)–(12) show.

- (11) a. ik was die hele zaak allang vergeten
I was that whole business long forgotten
‘I had long forgotten about that whole business’
b. *ik was ook maar één ding vergeten
I was also but one thing forgotten
- (12) a. ik was die hele vent allang gepasseerd (toen ik me plotseling realiseerde dat ...)
I was that whole bloke long passed when I me suddenly realised that
‘I had long passed that bloke (when I suddenly realised that ...)’
b. *ik was ook maar één persoon gepasseerd
I was also but one person passed

The examples in (13)–(15), featuring the idiomatic expressions *door het hoofd schieten* ‘shoot through the head, i.e., forget’, *de keel uithangen* ‘hang out of the throat, i.e., be fed up with’ and *NP laten stikken* ‘let NP choke, i.e., stand NP up/forget about NP’, make the same point.⁶

- (13) a. die hele afspraak was hem door het hoofd geschoten
that whole appointment was him through the head shot
‘he had completely forgotten about that appointment’
b. *ook maar één afspraak was hem door het hoofd geschoten
also but one appointment was him through the head shot
- (14) a. die hele vent hangt me trouwens de keel uit
that whole bloke hangs me besides the throat out
‘I am sick and tired of that bloke, by the way’
b. *ook maar iemand hangt me de keel uit
also but anyone hangs me the throat out
- (15) a. laat die hele vent toch stikken!
let that whole bloke still choke
‘just dump/forget about that bloke!’
b. *laat ook maar iemand stikken!
let also but anyone choke

We can begin to make sense of the contrasts in (13)–(15) by hypothesising that there is a difference between *any*-NPIs and polar-*heel* with respect to their licensers. While they are all dependent on negation, it seems that *any*-NPIs pick negative *constituents* (like *not*, *nobody*, *deny*) as their licensers while polar-*heel* depends directly on the negation head, Neg⁰. On the further assumption that there is a syntactically projected NegP in sentences with an implicit negation, even though there clearly is no negative *constituent* present in them, we may then understand the difference in behaviour of *any*-NPIs and polar-*heel*.

6 Thanks to Ton van der Wouden for pointing out the cases in (13) and (14); the fact that the noun phrase harbouring polar-*heel* is in surface *subject* position in these examples will be addressed further below. Peter-Arno Coppen provided me with (i) alongside (15a); the added value of this particular example is that it shows that, apparently, polar-*heel* can be licensed in the special right-peripheral position of objects typical of Dutch imperatives (cf. Den Dikken 1992, 1999); cf. also (26/27c). (A minimal pair with an *any*-NPI can be constructed only for (15a); imperatives with right-peripheral NP-placement do not tolerate indefinite NPs.)

(i) (i) laat toch stikken die hele vent!
let still choke that whole bloke

That *any*-NPIs seem to depend on actual negative constituents rather than directly on Neg is shown particularly clearly by some observations due to Branigan (1992:54), concerning the licensing of *any*-NPIs in the complement of negative verbs like *deny* and *refuse*. Branigan points out that (contrary to what is often believed to be the case; cf. Laka 1990, Progovac 1994) an *any*-NPI can be licensed as the nominal complement of negative verbs *unless* it receives structural objective Case — thus, there is a difference between the direct and indirect objects in a double object construction with verbs like *deny*, *refuse* when it comes to the licensability of *any*-NPIs: it succeeds in the direct object (which does not check structural objective Case; cf. the fact that it cannot be promoted to subject in a passive) but it fails in the indirect object. This is illustrated in (16), adapted from Branigan’s work.

- (16) a. John denied his secretary any raise
 b. *John denied any employee a raise

Clearly, Neg c-commands both objects of the verb. The negative *verb*, however, c-commands only the direct object (which stays *in situ*); the indirect object leaves V’s c-command domain to check objective Case outside VP. So the fact that only the direct object can harbour an *any*-NPI in constructions with negative verbs is a clear indication that it is the negative verb *itself*, not an abstract sentential head Neg, that is responsible for the licensing of *any*-NPIs. This said, the absence of a negative *constituent* in the examples with implicit negations in the above explains why *any*-NPIs fail in these contexts.

Conversely, the grammaticality of polar-*heel* in such cases suggests that polar-*heel* is licensed directly by the negation head, Neg. And indeed, applying Branigan’s test to Dutch double object constructions confirms this strikingly. In Dutch double object constructions (in contradistinction to their English counterparts), both the direct object and the indirect object raise out of the VP (as is shown, on the assumption that Dutch is underlyingly SVO (cf. Kayne 1994, Zwart 1997), by the fact that they end up to the left of the verbal cluster). With this as background, consider first the examples in (17), with *any*-NPIs. Here we see, as expected in the light of Branigan’s discussion of (16), that in neither object can an *any*-NPI be licensed by the negative verb *onthouden* ‘deny’.

- (17) a. *dat Jan zijn secretaresse ook maar enige salarisverhoging heeft onthouden
 that Jan his secretary also but any raise has denied
 b. *dat Jan ook maar iemand een salarisverhoging heeft onthouden
 that Jan also but anyone a raise has denied

When we now look at the distribution of polar-*heel* in double object constructions with negative verbs like *onthouden* ‘deny’, we see a different pattern emerging, illustrated in (18). It is the grammaticality of (18a) that particularly interests me at this time — it is this which tells us that, unlike *any*-NPIs, polar-*heel* depends for its licensing, not on a c-commanding negative constituent (of which there is none in (10a)) but directly on the abstract negative head Neg⁰.⁷

7 The discussion assumes that inherently negative verbs like *deny* are associated with a projection of Neg in the functional layer of the clause. It is this abstract Neg⁰ which licenses polar-*heel* in (18a) (as for why licensing of polar-*heel* fails in (18b), see section 2.6, below). In the light of (13)–(15), I assume that in constructions featuring *implicit negation* we also find a NegP represented in the structure. (The fact that the overtly negated counterparts of such sentences are not semantically equivalent to their positive pendants — something to which Jack Hoeksema has drawn my attention — indicates that the negator *niet* ‘not’ by itself contributes negative semantics. On this view, then, a sentence like *ik was die (hele) vent niet vergeten* ‘I was that (whole) bloke not forgotten, i.e., I had not forgotten that bloke (at all)’ is a double negation construction: there is negative force in Neg⁰ and in *niet*.)

- (18) a. dat Jan zijn secretaresse die hele salarisverhoging heeft onthouden
that Jan his secretary that whole raise has denied
b. *dat Jan zijn hele secretaresse die salarisverhoging heeft onthouden
that Jan his whole secretary that raise has denied

This conclusion finds further confirmation in the following discussion of the way in which the licensing of polar-*heel* is sensitive to so-called *scope island effects*. For *any*-NPIs, we are familiar with such effects from Linebarger's (1980) seminal work: while examples like (19a) are fine, those in (19b), where there is a scope-bearing element intervening between the *any*-NPI and its licenser, are ill-formed.

- (19) a. he didn't give the beggar a red cent
b. *he didn't give {every/at most three/exactly three} beggars a red cent

Interestingly, the scope island effect seen with *any*-NPIs can be reproduced for polar-*heel*: while (20a) is fine, (20b) is substantially worse with *hele* than without it, even though (20c) is once again unobjectionable with polar-*heel*.⁸

- (20) a. ik zou mijn studenten dat (hele) boek niet laten lezen
I would my students that whole book not let read
'I wouldn't let/have my students read that book at all'
b. ik zou {hooguit/precies} drie studenten dat (*hele) boek niet laten lezen
I would at.most/exactly three students that whole book not let read
c. {hooguit/precies} drie studenten hebben dat (hele) boek niet gelezen
at.most/exactly three students have that whole book not read

These facts show us a number of things. First, they confirm once again that linear precedence clearly is not what is at issue: the constituent containing *heel* immediately precedes the sentential negator in all three examples in (20). Secondly, the contrast between (20b) and (20c) shows that 'intervention' is *not* about the linear relationship between polar-*heel* and *the negative constituent* (*niet* in (20)): after all, in neither of these examples does *hooguit/precies drie studenten* intervene between those two elements. Rather, 'intervention' should be defined with reference to polar-*heel* and *an abstract functional head, Neg⁰* — the contrast follows from the fact that *hooguit/precies drie studenten* in (20b) intervenes between polar-*heel* and its licensing head Neg⁰ while in (20c) this QP, which now functions as the matrix subject, does not intervene between the two.⁹ Let us lay this down in the form of statements which we can refer back to later in the discussion:

- (21) polar-*heel* is licensed by the abstract functional head Neg⁰
(22) intervention of certain scope-bearing elements between Neg⁰ and polar-*heel* blocks the latter's licensing

8 Of course, all of the examples in (20) are ambiguous in principle between a polar reading of *hele* and a regular adjectival interpretation ('whole, entire'); on the latter reading, (20) is systematically grammatical, but this is irrelevant — what matters is that the polar interpretation of *hele* (with its characteristic intonational contour, with a rise on *boek*) is unavailable only in (20b).

9 This will be made more precise further below. The set of 'certain scope-bearing elements' in (22) certainly includes negative, universal and modified numeral quantifiers.

2.3 Polar-heel must not be separated from Neg⁰ by a c-commanding negative element

This said, we can proceed to reducing a robust and *prima facie* baffling property of polar-heel to the restrictions on its licensing as laid down in (21) and (22). Even though, as we have seen in all of the examples discussed, polar-heel is unquestionably dependent on negation, it differs remarkably from familiar NPIs in not wanting to be c-commanded by a negative constituent. This is seen in the ungrammaticality of the a-examples in (23), (24) and (25), in which *noch* ‘neither’, *geen* ‘no’ and *zonder* ‘without’, the prospective licensors, c-command polar-heel but fail to license it (while they are all perfectly capable of licensing an *any*-NPI in their c-command domain, as the b-examples show).¹⁰

- (23) a. *ik ken noch die hele vent noch zijn dochters
I know neither that whole bloke nor his daughters
b. ik ken noch hem noch ook maar één van zijn dochters
I know neither him nor also but one of his daughters
- (24) a. *ik ken [geen vrienden van die hele vent]
I know no friends of that whole bloke
b. ik ken [geen vrienden van ook maar één van mijn collega's]
I know no friends of also but one of my colleagues
- (25) a. *zonder die hele vent in de verdediging winnen we die wedstrijd nooit
without that whole bloke in the defence win we that match never
b. zonder ook maar één van onze sterren in de verdediging winnen we die wedstrijd nooit
without also but one of our stars in the defence win we that match never

Particularly suggestive evidence for an apparent ban on c-command by a negative element comes from the following facts from PP-complement constructions. The unquestionably grammatical word order in (26a) has the NP containing polar-heel preceding the negative element, which may either be sentential *niet* ‘not’ or a negative noun phrase. When the PP follows the negation and is sentence-internal, the result is ill-formed; when it follows the negation but finds itself in a position to the right of the main verb, as in the PP-over-V example in (26c), speakers vary to some degree, but the majority view seems to be that the output is noticeably better than the b-example.¹¹

10 I found some speaker variation here, regarding (23a) and (24a). The former, four speakers find acceptable, three others finding it marginal; and while none of my informants has volunteered to judge (24a) as grammatical, four find it marginally acceptable to varying degrees (‘?’ or ‘??’). The overwhelming majority of speakers asked reject all a-examples, though.

11 All speakers agree with the relative contrasts reported in (26): (26a) is almost uniformly found perfect, (26b) is rejected practically without exception, and though speakers vary quite a bit on (26c), the PP-over-V case, with judgements ranging from ‘entirely impossible’ via ‘marginally acceptable’ to ‘basically fine’, they all agree that it is relatively worse than (26a) and relatively better than (26b). I stress that the ungrammatical examples in (26) are bad purely because of the presence of polar-heel: once *heel* is removed from these examples, the sentences are all well-formed. Dutch complement PPs generally have great freedom of placement; but when PP contains polar-heel, placement possibilities are significantly curtailed.

In their unpublished and unfinished notes on polar-heel, Hoekstra, Doetjes & Rooryck report a sentence of the b-type which they find perfect. And indeed, a sentence like (i) (not Hoekstra *et al.*’s actual example but one which, I believe, is an improvement over theirs) seems markedly better than (26b); but (ii) is once again poor. What exactly makes (i) so much better than the sentences in (26b) and (ii) is not entirely clear to me. It cannot be that there is a contrast between negative adverbs and negative QPs: (ii) patterns with (26b) rather than with (i), as far as the judgement goes. Prosody may be a factor: the idiomatic construction *niets met X te maken willen hebben* ‘nothing with X to make want have, i.e., to want to have nothing to do with X’ has heavy stress on the negative quantifier *niets* and a slight rise on *maken*, a prosodic contour that de-emphasises the PP; this may be conducive to the licensing of polar-heel, though the effect of prosody on the distribution of polar-heel is a many-splendoured question that I cannot address here (see also the second paragraph of fn. 17, below).
(continued overleaf...)

- | | | | |
|------|----|--|-----------------------|
| (26) | a. | ik wil met die hele vent niet praten
I want with that whole bloke not talk | <i>heelPP</i> -Neg-V |
| | b. | *ik wil niet met die hele vent praten
I want not with that whole bloke talk | Neg- <i>heelPP</i> -V |
| | c. | [?] ik wil niet praten met die hele vent
I want not talk with that whole bloke | Neg-V- <i>heelPP</i> |

Let us take this to be the pattern, then: (26a) is perfect, (26c) is passable though not brilliant, and (26b) is impossible. This confirms a generalisation to the effect that polar-*heel*, though clearly dependent on negation, must not be c-commanded by a negative element. In (26b), where the PP is *in situ*, polar-*heel* is c-commanded by *niet*, while in (26a) and (26c) c-command is lifted thanks to scrambling and extraposition ('PP-over-V') of the PP, respectively.¹² That the c-command relationship between the negative element *niet* and the PP is indeed destroyed in the a- and c-examples is confirmed by the behaviour of *any*-NPIs in these kinds of sentences. Recall that we established in the foregoing that, while polar-*heel* is dependent on Neg⁰, *any*-NPIs are dependent on a c-commanding negative *element*. This, together with what I just said about the facts in (26), leads us to expect that we should find exactly the opposite pattern emerging from this triplet when we replace polar-*heel* with an *any*-NPI. And indeed, this is what the facts show (though, once again, the exact judgement on the c-example is somewhat hazy):

- | | | |
|------|----|--|
| (27) | a. | *ik wil met ook maar één van hen niet praten
I want with also but one of them not talk |
| | b. | ik wil niet met ook maar één van hen praten
I want not with also but one of them talk |
| | c. | ^{??} ik wil niet praten met ook maar één van hen
I want not talk with also but one of them |

I conclude, then, that unlike *any*-NPIs, polar-*heel* strongly resists being c-commanded by a negative element. This is no doubt one of the most striking contrasts between the two types of polarity item.

From the perspective of the approach to the licensing of polar-*heel* laid out in (21) and (22), this state of affairs is actually precisely what we expect. Recall that polar-*heel* is licensed by the abstract functional head Neg⁰, which finds itself relatively high in the structure of the clause. Recall also that the licensing of polar-*heel* is sensitive to intervention effects: intervening quantificational elements form a scope island blocking the licensing of polar-*heel* by Neg. Adding these earlier conclusions up to the fact that negative elements are obviously quantificational and count as harmful interveners (cf. Ross's 1984 original 'inner island' cases: *how strongly do(*n't) you think inflation will rebound?*), we may now understand the ban on c-commanding negative elements between Neg and polar-*heel* as an instance of the same intervention effects discussed in the previous subsection. So the fact that polar-*heel* is dependent on c-commanding negation but must not be c-commanded by negative elements is not a paradox or contradiction: the licenser is Neg⁰, and any intervening c-commanding negative element brings in a scope island blocking licensing.

- | | |
|------|---|
| (i) | (i)ik wil niets met die hele vent te maken hebben
I want nothing with that whole bloke to make (i.e., do) have
'I don't want to have anything to do with that bloke at all' |
| (ii) | *ik wil niemand aan die hele vent voorstellen
I want nobody to that whole bloke introduce |

¹² I will not address here the question of how these movement operations performed on PP should be analysed. Any analysis will do, so long as it ensures that the result obliterates the c-command relationship between the negative element, *niet*, and PP.

2.4 Polar-heel entertains an A'-movement dependency with Neg⁰

Scope island effects of the type just discussed are characteristic of A'-movement dependencies — in particular, they are not exhibited by (A'-)binding relationships, whether they involve bound variable binding, as in (28), or the binding relationship between a *wh*-constituent and a null resumptive (*pro*) in the former's θ -position (cf. Cinque 1990). The facts in (29) (with the famous *wat voor*-split case in (29b) adapted from Honcoop 1998, who made the original observation about *wat voor*-split and scope island effects; his analysis differs from mine) illustrate the latter point. The gap in the embedded object position in (29a) is represented as *pro*, following Cinque (1990) (see also Obenauer 1984 for a precursor of Cinque's approach, and Postal 1998 for a recent follow-up): it is *pro*-binding which allows referential *wh*-expressions to escape from nodes which would otherwise constitute islands on the movement path.¹³ The grammaticality of (29a) and of the examples in (28) shows that binding is not sensitive to scope islands; but unambiguous cases of movement like (29b) (where the *pro*-binding strategy is unavailable: *wat* is clearly not referential here) indicate that A'-movement *is*.

- (28) a. nobody_i would give every charity the same percentage of his_i income
 b. niemand_i zou {hooguit/precies} drie studenten zijn_i boek laten lezen
 nobody would at.most/exactly three students his book let read
 'nobody_i would let/have at most/exactly three students read his_i book'
- (29) a. [welk boek]_i heb je {hooguit/precies} drie studenten *pro*_i laten lezen?
 which book have you at.most/exactly three students let read
 'which book did you let/have at most/exactly three students read?'
 b. **wat*_i heb je {hooguit/precies} drie studenten [_i voor boek] laten lezen?
 what have you at.most/exactly three students for book let read

Returning now to our observations concerning polar-heel in sections 2.2 and 2.3, we may conclude that the relationship between polar-heel and its licenser (the head Neg⁰) is not established via binding; it must be an A'-movement dependency instead — one which leaves a trace rather than an A'-bound *pro*.

That A'-movement of polar-heel leaves a trace behind, not an A'-bound *pro*, is potentially supported further by a striking difference between two types of left-dislocation with respect to the licensability of polar-heel. Let me set this case up by first of all introducing, side by side, the two cases of left-dislocation that I am referring to — the two examples in (30) share the fact that they both feature a left-dislocated noun phrase at the front, but one involves a so-called *d*-pronoun at the left edge of the root, immediately preceded by the left-dislocated constituent, while the other features a regular pronoun *in situ*.

- (30) a. die vent, *die* ken ik niet
 that bloke that know I not
 b. die vent, ik ken 'm niet
 that bloke I know him not

Interestingly, now, left-dislocation of noun phrases containing polar-heel is possible (in the presence of a licenser, obviously) *only* via the strategy exemplified in (30a):

13 See Szabolcsi & Den Dikken (1999) for discussion of approaches to scope islands, and a critique of the *pro*-binding approach; I will follow it (rather than the semantic approaches by Honcoop and Szabolcsi & Zwarts) for expository convenience.

- (31) a. ?die hele vent, die ken ik niet
 that whole bloke that know I not
 b. *die hele vent, ik ken 'm niet
 that whole bloke I know him not

This contrast may show us, once again, that phrases containing polar-*heel* in A'–positions cannot bind *pro*. We know independently that *d*-*pro*-‘nouns’ can resume non-nominal constituents (*aantrekkelijk, dat was ze niet* ‘attractive, that she wasn’t’), but for real pronouns it is strictly impossible to resume non-nominal left-dislocates (**aantrekkelijk, ze was 't niet*). The real pronoun thus counts as the overt incarnation of Cinque’s A'–bound *pro*, which likewise is strictly nominal. And with precisely the real pronoun being impossible in (31), we may then conclude that it is impossible for polar-*heel* to bind *pro*.¹⁴

It will be useful at this point to complete the spectrum of constructions featuring polar-*heel* in a left-peripheral A'–position by adding the example in (32):

- (32) die hele vent ken ik niet
 that whole bloke know I not

This is the simple topicalisation counterpart of *d*-word left-dislocation; and as the absence of diacritics in front of the example indicates, it is perfectly acceptable. So what we see is that phrases containing polar-*heel* are topicalisable — and in this respect, of course, polar-*heel* is strikingly different from *any*-NPIs, which resist topicalisation (arguably because of their quantificational properties).

We can derive from the topicalisability of polar-*heel* another clue as to the derivation of sentences containing it — a clue that at the same time tells us that constructions with polar-*heel* feature category movement to SpecNegP. What I would like to claim is that the container of polar-*heel* actually checks a feature in SpecNegP, a feature contributed by polar-*heel* and matching a feature possessed by Neg. It is polar-*heel*'s task to get this feature checked; but once the feature is checked, and polar-*heel* and Neg are thus licensed, the container of polar-*heel* will be free to engage in further syntactic movement, such as topicalisation. I will return to the idea that polar-*heel* undergoes feature-checking movement (pied-piping its container to SpecNegP) in section 3, where some of the details of this account will be brought up in a comparison with the ‘parasitic’ licensing strategy for polar-*heel*.

2.5 Polar-heel pied-pipes its container to SpecNegP in overt syntax (I): The clause-mate condition¹⁵

That the A'–movement dependency between polar-*heel* and its trace is one which is established in overt syntax, via category movement — polar-*heel* pied-piping its entire container to SpecNegP — is confirmed most directly by the fact that polar-*heel*, unlike *any*-NPIs, resists embedding inside a full-CP complement (finite and non-finite alike) below a matrix negation: the examples in (33a–c) are all ungrammatical, while the corresponding examples with *ook maar iemand* ‘anyone’ are all perfect (cf. (34); the counterparts to (33d,e) with *ook maar iemand* are grammatical as well, but for reasons of space this will go unillustrated).

14 This is not the only conclusion compatible with the data in (31). One might also argue that (31) shows that there is a difference between left-dislocation with *d*-pronouns and left-dislocation with real pronouns with respect to whether the left-dislocate binds a position inside the clause (or is moved from out of the clause) at all: if left-dislocation with real pronouns is negative in this regard, there will be no way of licensing negatively polar *heel* at any point in the derivation.

15 The ban on licensing polar-*heel* inside the CP complement of a neg-raising verb was also noted in the unpublished notes on polar-*heel* by Teun Hoekstra, Jenny Doetjes and Johan Rooryck. They do not mention the role played by clause union, however. I forewarn the reader that there is a way of lifting the ban on licensing polar-*heel* in CP complements: parasitic licensing is possible in such a context. I will address parasitism in a separate section (section 3), first establishing the ‘pure’, direct licensing pattern.

- (33) a. *ik geloof niet dat die hele vent me kent
I believe not that that whole bloke me knows
'I don't believe that bloke knows me at all'
- b. *ik geloof niet dat ik die hele vent ken
I believe not that I that whole bloke know
'I don't believe I know that bloke at all'
- c. *ik heb nooit geprobeerd (om) die hele vent te ontmoeten
I have never tried (COMP) that whole bloke to meet
'I have never tried to meet that bloke at all'
- d. ik heb die hele vent nooit proberen/geprobeerd te ontmoeten
I have that whole bloke never try(IPP)/tried to meet
'I have never tried to meet that bloke at all'
- e. ik wil die hele vent niet eens kennen
I want that whole bloke not even know
'I don't even want to know that bloke at all'
- (34) a. ik geloof niet dat ook maar iemand me kent
I believe not that also but anyone me knows
'I don't believe anyone knows me'
- b. ik geloof niet dat ik hier ook maar iemand ken
I believe not that I here also but anyone know
'I don't believe I know anyone here'
- c. ik heb nooit geprobeerd (om) ook maar iemand te ontmoeten
I have never tried (COMP) also but anyone to meet
'I have never tried to meet anyone'

The clause-mate condition on the licensing of polar-*heel* is illustrated in a particularly interesting way by the contrast between (33c) and (33d). While (33c) is what is usually referred to as a 'CP-extraposition' construction (the entire infinitival CP, which is free to have or lack an overt complementiser, *om*, occurs in right-peripheral position), (33d) instantiates a higher degree of integration of the two clauses. The integration ('clause union') is particularly close in the variant of (33d) with the infinitive *proberen* — this construction instantiates the so-called 'Infinitivus pro Participio' (IPP) effect, typical of Dutch 'Verb Raising', of which (33e) is a classic example. But in the variant with participial *geprobeerd* (which Den Besten & Rutten 1989 refer to as the 'third construction', to distinguish it from run-of-the-mill Verb Raising and CP-extraposition) we also see a higher degree of integration than in the extraposition construction in (33c). No matter whether we use the IPP-infinitive or the participle in (33d), the use of polar-*heel* in this example is grammatical, in marked contrast to what we found in (33c).

This clause-mate condition on the licensing of polar-*heel* can readily be made to follow from the analysis if we assume that the container of polar-*heel* raises to SpecNegP in the course of the overt-syntactic derivation. While SpecNegP is an A'-position, movement into it cannot proceed via SpecCP (as in (35a)) — SpecCP arguably serves as an escape hatch only for movement to higher positions in the (possibly extended, Rizian) C-domain (cf. Müller & Sternefeld 1993), and NegP is not a member of that domain. The net result is that movement to the matrix SpecNegP from out of an embedded clause must proceed in one fell swoop (as in (35b)) — and such movement will minimally give rise to a Subjacency effect (which in Dutch is generally severe, much more so than in English). In fact, since (as we saw already in section 2.4 and will find further confirmed in section 2.6) the container of polar-*heel* can only bind a trace, not *pro*, we expect to find a strong degradation as a result of extraction out of the embedded clause.

- (35) a. *... [_{NegP} [... *heel* ...]_i ... [_{CP} *t*'_i *dat* [_{IP} ... *t*_i ...]]]
 b. *... [_{NegP} [... *heel* ...]_i ... [_{CP} *dat* [_{IP} ... *t*_i ...]]]

So the clause-mate condition on the licensing of polar-*heel* follows directly on the hypothesis that there is overt-syntactic category movement to SpecNegP involved in the derivation of constructions with this polarity item.¹⁶

2.6 Polar-heel pied-pipes its container to SpecNegP in overt syntax (II): Double object restrictions

The claim that polar-*heel* takes its container to SpecNegP is corroborated further by the behaviour of indirect objects in double object constructions with respect to the licensing of polar-*heel*. This factors out into two sub-issues. The first concerns the blocking effect of a ‘harmfully quantificational’ indirect object on the licensing of a polar-*heel* direct object. This is illustrated in (36), (36b) being rejected outright or considered highly dubious by the vast majority of speakers.

- (36) a. ik zou mijn vrouw die hele vent niet voorstellen
 I would my wife that whole bloke not introduce
 ‘I wouldn’t introduce that bloke to my wife at all’
 b. ?*ik zou niemand die hele vent voorstellen
 I would nobody that whole bloke introduce

The ungrammaticality of (36b) shows once again something which sets polar-*heel* squarely apart from *any*-NPIs: while *any*-NPIs are perfectly licit when c-commanded by a negative quantifier (in fact, this is one of their canonical licensing contexts), the licensing of polar-*heel* is actually blocked by a c-commanding negative quantifier. As we saw above, the contrast follows from the fact that, while polar-*heel* is dependent on Neg⁰, *any*-NPIs are actually dependent for their licensing on negative constituents themselves, not on Neg⁰ (or in any event, not directly).

More relevant to the point of this section, however, is what happens when the indirect object itself harbours polar-*heel*. Here we find that licensing polar-*heel* by a simple negation is not successful — (37a) is poor. It can be improved up to the level of full acceptability, however, by introducing another negative polarity item in conjunction with the negation, as in (37b,c), where *überhaupt* (a German word which has firmly established itself as a member of the set of polarity items in Dutch) and *een moer* (amalgamating with *g-*, the affixal negation used in combination with indefinite noun phrases) are the polarity items.

16 In being subject to a clause-mate condition on its licensing, polar-*heel* is reminiscent of the polar auxiliary *need*, or its Dutch counterpart *hoeven* (cf. *I needn’t do this* vs. **I don’t think I need do this*). But all hopes of establishing a parallel between *need/hoeven* and polar-*heel* are crushed by (i). While *hoeven* ‘need_{Aux}’ can perfectly well be licensed by a negative subject, polar-*heel* is rejected by the overwhelming majority of speakers in (ib) (out of my twenty-six informants, only four accept (ib) without question, four others finding it marginal and all others rejecting it outright). In section 4, I will return briefly to the cause of the ungrammaticality of (ib) (cf. esp. fn. 27, below). For now, what matters is that it shows that the parallel with *hoeven/need* is clearly spurious — we need not belabour the point: it will not help us explain the clause-mate condition on the licensing of polar-*heel*.

- (i) a. niemand/*iemand hoeft dat te doen
 nobody/somebody needs that to do
 b. ?*niemand kent die hele vent
 nobody knows that whole bloke

- (37) a. ^{??}ik zou die hele vent mijn boek niet geven
I would that whole bloke my book not give
b. ik zou die hele vent mijn boek überhaupt niet geven
I would that whole bloke my book at.all not give
'I wouldn't give that bloke my book at all'
c. ik zou die hele vent { überhaupt niets/geen moer } geven
I would that whole bloke anyway nothing/no nut give
'I wouldn't give that bloke anything at all'

For now, I will concentrate just on the deviance of the example in (37a), which I take to be an indication that polar-*heel* is not, in and of itself, licensable in indirect object position. (I will return to the grammaticality of (37b,c) in section 3; it will turn out that polar-*heel* is licensed here via the second licensing strategy, 'parasitism'.)

To further establish the fact that there is something amiss with examples of the type in (37a), I provide below a variety of minimal triplets of double object constructions in which the a-examples systematically feature polar-*heel* in the direct object, the b-examples have it contained in the indirect object, and the c-examples add to the b-cases a polarity item to aid the licensing of polar-*heel*.¹⁷

- (38) a. hij heeft die vent die (hele) aanpak niet voorgesteld
he has that bloke that whole approach not proposed
b. hij heeft die (^{??}hele) vent die aanpak niet voorgesteld
c. hij heeft die (hele) vent die aanpak überhaupt niet voorgesteld
(39) a. hij zou zijn vrouw die (hele) vent niet voorstellen
he would his wife that whole bloke not introduce
b. hij zou die (^{?*}hele) vent zijn vrouw niet voorstellen
c. hij zou die (hele) vent zijn vrouw überhaupt niet voorstellen
(40) a. hij wil die student die (hele) constructie niet uitleggen
he wants that student that whole construction not explain
b. hij wil die (^{?*}hele) student die constructie niet uitleggen
c. hij wil die (hele) student die hele constructie niet uitleggen

In these triplets, the b-examples are consistently worse than the other two when *hele* is included. Let us take it to be impossible, therefore, for an indirect object to contain polar-*heel*, unless 'parasitic licensing' is possible (about which I will have much more to say in section 3, below).¹⁸

17 Notice that in (40c) that additional polarity item is in fact another instance of polar-*heel* itself — this further enhances the status of polar-*heel* as a polarity item, in the light of the discussion in section 3, below.

Uli Sauerland (personal communication) has raised the question of the role of prosody in (37a) and the b-examples in (38)–(40). And indeed, for those speakers for whom the head-noun of the noun phrase containing polar-*heel* must receive main stress, this seems to be an important factor: in double object constructions, main stress falls on the direct object, not the indirect object. However, for most speakers the container of polar-*heel* does not have to attract main stress; but even for those speakers, (37a) and the b-examples in (38)–(40) (with their regular prosodic contour) remain bad with *hele*. A purely prosodic account would thus be insufficient.

18 There is one other escape clause that should be mentioned: it seems that 'light verb' or idiomatic constructions involving triadic verbs are quite acceptable with polar-*heel* in the indirect object; likewise, when the direct object is a bare, determinerless noun phrase, the indirect object restrictions tend to be lifted as well (cf. the examples in (i)). These observations are not specific to polar-*heel* — they are in fact of the exact same type as the cases reported in Den Dikken (1995:184, fn. 4) involving null operator movement of the indirect object (the significance of which will become clear in the main text below); cf. the example in (ii), adapted from the aforementioned source.

From English, we are familiar with restrictions on indirect objects in the domain of A'–movement. In particular, while for many speakers local *wh*-extraction of the indirect object is possible (though even here there is variation in English), A'–extraction of the indirect object under relativisation or via empty operator movement, as in *tough*-movement and parasitic gap constructions, is systematically deemed impossible — not just by English speakers: the Dutch examples corresponding to (41c–e) are unacceptable as well (cf. Den Dikken 1995:Chapter 4 and references cited there for detailed discussion).

- (41) a. *who did you give *ec* this book?
 b. *this is the man [that I gave *ec* this book]
 c. *this is the man [*Op* to give *ec* this book]
 d. *who did you say good-bye to [after *Op* giving *ec* this book]?
 e. *little children are tough/not nice [*Op* to give *ec* this book]

Let us hypothesise that what unites the cases in (41b–d) is that '*ec*' in these contexts can only be a trace, not an A'–bound *pro*.¹⁹ Then we derive the generalisation (cf. Baker's 1988 Non-Oblique Trace Filter) that literal A'–extraction of the indirect object under overt-syntactic category movement is impossible (while construal of an indirect object in a surface A'–position with a *pro* in the corresponding θ -position is possible, for many speakers of English and for all speakers of Dutch). And with this generalisation in hand, we may then return to the ungrammatical cases of polar-*heel* inside the indirect object presented above. These will now follow along the same lines as the examples in (41b–e), if we assume, as before, that the container of polar-*heel* raises to SpecNegP in overt syntax, via a case of category movement that leaves a trace, not an A'–bound *pro*.

This then essentially completes the account of the direct licensing of polar-*heel*: the container of polar-*heel* (*a*) undergoes overt-syntactic category movement (cf. (42)), and (*b*) leaves a trace rather than a *pro* behind, which explains both the scope island effects and the ban on polar-*heel* in indirect objects (and potentially also the facts in (32)).

- (42) a. ... [_{NegP} [... *heel* ...]_{DO} [_{Neg'} Neg [... IO *t*_{DO}]]]
 b. *... [_{NegP} [... *heel* ...]_{IO} [_{Neg'} Neg [... *t*_{IO} DO]]]

This concludes my discussion of those properties of polar-*heel* which it has *in cases in which it is licensed directly by Neg⁰*. But as was noted above, there are contexts in which, even though direct licensing by Neg⁰ fails, polar-*heel* is nonetheless grammatical. Those cases involve *parasitic* licensing of polar-*heel*. In the next section, I will compare the two licensing strategies for polar-*heel* in detail.

- (i) ⁽²⁾ik heb die (hele) vent geen kus/cadeautjes gegeven
 I have that whole bloke no kiss/presents given
 (ii) ⁽²⁾kleine kinderen zijn leuk om een kus/cadeautjes te geven
 little children are nice COMP a kiss/presents to give

In more than one respect, therefore, triadic constructions of these types behave uncharacteristically, more like monotransitives. I will not address the details of the analysis of these cases here; the point of this note is merely to point out that the apparent counterevidence to the text claims in fact confirms it, in the light of the parallel between polar-*heel* and null operator movement constructions.

19 On Kayne's (1994) analysis of *that*-relative clauses, where the moved constituent is an *NP*, not a *DP*, this will be an automatic result for (39b). (39b) with *who* involves a *DP*, and seems better; similarly, the Dutch counterpart of (39b) is good. One may also try to construe the fact that empty operator constructions, as a class, seem to resist extraction from the subject position of an embedded finite clause (*even* in the absence of the complementiser *that*; cf. (i)) as evidence in favour of the text assumption.

- (i) *John is not easy [*Op* to believe [(that) *ec* could have done such a thing]]

3 The parasitic licensing of polar-*heel*

In section 2.6, above, we saw that polar-*heel* cannot normally be licensed as a subpart of the indirect object in a double object construction, and I provided an explanation for that fact in terms of the category movement to SpecNegP analysis of the direct licensing of polar-*heel*. But I also noted in passing in that section that polar-*heel* does seem to be grammatical inside the indirect object if it can ‘parasitise’ on some other negative polarity item in the sentence. The minimal contrast between the b- and c-examples in (38)–(40) (of which (40) is repeated below) illustrated this.

- (40) a. hij wil die student die (hele) constructie niet uitleggen
 he wants that student that whole construction not explain
 b. hij wil die ([?]*hele) student die constructie niet uitleggen
 c. hij wil die (hele) student die hele constructie niet uitleggen

The presence of an additional polarity item also helps lifting the ban on licensing polar-*heel* inside an embedded CP, which was discussed in section 2.5 — the examples in (33a,b), repeated here, contrast minimally with (43).

- (33) a. *ik geloof niet dat die hele vent me kent
 I believe not that that whole bloke me knows
 ‘I don’t believe that bloke knows me at all’
 b. *ik geloof niet dat ik die hele vent ken
 I believe not that I that whole bloke know
 ‘I don’t believe I know that bloke at all’
 (43) a. ik geloof niet dat die hele vent ook maar één van ons kent
 I believe not that that whole bloke also but one of us knows
 b. ik geloof niet dat ik die hele vent ooit gezien heb
 I believe not that I that whole bloke ever seen have

So we see that the ban on licensing polar-*heel* in indirect objects and in embedded CPs evaporates whenever polar-*heel* can be parasitic on another polarity item, including (in the double object case) another instance of polar-*heel* itself (cf. (40c)). In this section, I will survey the properties of this ‘parasitic licensing’ strategy, showing that it has all the properties which one would expect of parasitism (given what we know about parasitic gap constructions) — including the anti-c-command condition, the connectedness requirement, and the need for parasitic licensing to be established prior to Spell-Out. In the course of investigating these hallmarks of parasitic licensing of polar-*heel*, we will come across additional evidence that parasitic and direct licensing are really two distinct licensing strategies for polar-*heel*; the two cannot be collapsed into one overarching licensing procedure.²⁰

20 The important discovery that polar-*heel* can be licensed parasitically was made originally in unpublished notes by Teun Hoekstra, Jenny Doetjes and Johan Rooryck. Those notes claimed that polar-*heel* is *always* parasitic on some other polarity item; as the discussion in the foregoing has shown, such a conclusion cannot be maintained — and besides, there is no reason to expect some item to be licensable *only* as a parasite: we know from parasitic gap constructions that parasitism exists in syntax, but from the study of those cases we know that things which can be licensed parasitically can be licensed directly in other contexts (that is, A’-bound gaps can be either parasitic or real, depending on the context).

3.1 Anti-c-command

From the literature on parasitic gap constructions, we are familiar with the fact that a parasitic gap must not be c-commanded by the ‘real’ gap — the so-called anti-c-command condition on parasitic gap licensing:

- (44) a. which article did you file *t* [without reading *pg*]?
 b. *which article *t* was filed [without reading *pg*]?

In (44b), the ‘real’ gap of *wh*-extraction finds itself in subject position, c-commanding the adjunct harbouring the parasitic gap. (Of course there is a gap following *filed* in (44b) as well; but this is not a variable, so it will not help the parasitic gap out.)

In the domain of polar-*heel* licensing, we likewise find that the additional polarity item that is supposed to license polar-*heel* parasitically must not find itself in a position c-commanding polar-*heel*. To see this, contrast the grammatical examples in (43) with the sentence in (45), where the extra polarity item sits in subject position, c-commanding the direct object containing polar-*heel* — the grammaticality contrast is robust; and it hinges on *heel*: as the placement of the asterisk within the brackets shows, (45) is perfect once polar-*heel* is dropped.

- (45) ik geloof niet dat ook maar iemand die (*hele) vent kent
 I believe not that also but anyone that whole bloke knows

The anti-c-command restriction on parasitic licensing could be blamed on Principle C of the Binding Theory in the case of (44) (cf. Mulder & Den Dikken 1992): the parasitic gap is a variable which must not be A-bound, which it is in (44b). In (45), however, no obvious binding-theoretic account presents itself. An overarching restriction which encapsulates both (44b) and (45) is Kayne’s (1984) *connectedness* condition: in both examples, the real and parasitic chains fail to connect, as (46) tries to make clear.

- (46) a. *which article *t* || was filed [without *Op* reading *pg*]
 b. *ik geloof niet dat ook maar iemand || [die hele vent kent]_{VP}
 (47) a. which article did you file *t* [without *Op* reading *pg*]
 b. ik geloof niet dat ik [die hele vent ooit gezien heb]_{VP}

While in (47) the paths of the real and parasitic dependents are connected (the single and double underscores, for the real and parasitic chains respectively, meet up), they are not in (46). Connectedness thus generalises over the familiar parasitic gap cases and the examples involving parasitic licensing of polar-*heel*. In the next subsection, we will come across a second context in which connectedness plays a crucial role in the domain of parasitic licensing of polar-*heel*.

3.2 Connectedness

To set this case up, we should first return to cases of non-parasitic licensing of polar-*heel*, considering examples not addressed in section 2 (because they are more naturally at home in the present section, for presentational purposes) — examples of direct licensing of polar-*heel* embedded in a complex possessed noun phrase, as the possessor. In a Dutch possessed noun phrase, a full-NP possessor can show up either in a *van* ‘of’ PP at the right edge of the possessed NP, or (in the spoken language) on the left edge immediately followed by a reduced possessive pronoun. But for many speakers, including myself, there is a clear difference between the two options when the possessor contains polar-*heel*:

- (48) a. %ik ken [de vrienden van die hele vent] niet²¹
 I know the friends of that whole bloke not
 b. ik ken [die hele vent z'n vrienden] niet
 I know that whole bloke his friends not

Embedding polar-*heel* in a *van*-PP on the right edge of the possessed noun phrase is impossible for many speakers; placing the possessor containing polar-*heel* in a left-peripheral position, as in (48b), delivers a fine result for all those who accept complex left-peripheral possessors to begin with. One interesting thing from the perspective of the licensing restrictions on polar-*heel* is that in (48a) *heel* is actually *linearly* closer to *niet* than it is in (48b); yet (48b) is acceptable while for many speakers (48a) is impossible. This shows, once again, that any attempt at characterising the restrictions on polar-*heel* licensing in linear order terms is doomed to failure. But there is more to be said about these examples, as becomes clear when we widen our scope to include parasitic licensing of polar-*heel*.

Recall that polar-*heel* cannot be licensed directly when it is in the indirect object of a double object construction, or when it is embedded inside a CP. Recall also that adding an additional negative polarity item in a non-c-commanding position often has a beneficial effect on the licensing of polar-*heel* — it makes parasitic licensing possible. But interestingly, even when we set everything up such that there is indeed an additional negative polarity item and it is in a non-c-commanding position, polar-*heel* still fails to be licensed in the examples in (49)–(51), where polar-*heel* is a subconstituent of the possessor of a complex possessed noun phrase.

- (49) a. ik denk niet dat [de vrienden van die (*hele) vent] ook maar iets zinnigs kunnen bedenken
 I think not that the friends of that whole bloke also but anything sensible can think.up
 b. ik denk niet dat [die (*hele) vent z'n vrienden] ook maar iets zinnigs kunnen bedenken
 I think not that that whole bloke his friends also but anything sensible can think.up
 (50) a. ik geloof niet dat hij [de broer van die (*hele) vent] ooit heeft gekend
 I believe not that he the brother of that whole bloke ever has known
 b. ik geloof niet dat hij [die (*hele) vent z'n broer] ooit heeft gekend
 I believe not that he that whole bloke his brother ever has known
 (51) a. niemand wil [de vrienden van die (*hele) vent] ook maar iets geven
 nobody wants the friends of that whole bloke also but anything give
 b. niemand wil [die (*hele) vent z'n vrienden] ook maar iets geven
 nobody wants that whole bloke his friends also but anything give

It is important to be absolutely clear here on what the root of the problem is in these examples. They are all fine when *hele* is left out, so the licensing of the additional polarity item is not at issue. Also, they all become good when the complex possessed noun phrase is dismantled such that just the noun phrase directly containing *hele* remains:

- (49') ik denk niet dat die hele vent ook maar iets zinnigs zal kunnen bedenken
 (50') ik geloof niet dat hij die hele vent ooit heeft gekend
 (51') niemand wil die hele vent ook maar iets geven

21 The '%' judgement on (48a) reflects the fifty-fifty result that came out of my questionnaire: just about as many of my informants reject and accept the example; five find it marginal. The important point is, however, that for many informants there is a noticeable or even robust difference between (48a) and (48b), the latter almost uniformly accepted by my informants.

So the problem really lies with polar-*heel* and the fact that it is embedded inside a complex possessed noun phrase, as the possessor.

Notice that in the examples in (49)–(51) there is no contrast between the a- and b-examples — they are all bad with polar-*heel*. In this regard, these attempted cases of parasitic licensing of polar-*heel* contrast markedly with the examples of direct licensing given in (48), where there *is* a difference between the pre- and postnominal placement of the possessor, at least for many speakers. There are two things that we need to account for, therefore: (a) the total failure of parasitic licensing in (49)–(51), and (b) the partial failure of direct licensing in (48).

Let me start with the latter question. Recall that my analysis of direct licensing of polar-*heel* involves movement of the container of polar-*heel* to SpecNegP via overt-syntactic category movement, resulting (if successful) in a feature-checking relationship between *heel* and a feature of Neg⁰. The result of movement to SpecNegP, for the cases in (48), is depicted in (52), where (52b) assumes — as is likely on independent grounds; cf. the fact that the possessor precedes the possessive pronoun *z'n*, which arguably occupies D — that the phrasal prenominal possessor occupies SpecDP.

- (52) a. *... [_{NegP} [_{DP1} de [_{NP} vrienden [_{PP} van [_{DP2} die hele vent]]]]]_i [_{Neg'} Neg [... t_i ...]]]
 b. ... [_{NegP} [_{DP1} [_{DP2} die hele vent]_j [*z'n* [_{NP} vrienden t_j]]]]]_i [_{Neg'} Neg [... t_i ...]]]

In the structure in (52b), a feature-checking relationship between polar-*heel* and Neg can be established, on the assumption that (a) the specifier of the specifier of Neg is in the checking-domain of Neg (cf. Chomsky 1993), and (b) polar-*heel* itself is the head of the phrase that it is a part of (an assumption which I will return to in section 5.4, where this claim will be supported empirically; for the time being, let us simply assume this). In the structure in (52a), on the other hand, feature-checking fails: DP2, the noun phrase harbouring polar-*heel*, is not the specifier of the specifier of Neg, at least not at Spell-Out (and since there is movement to SpecNegP in overt syntax, we can conclude that checking is needed at that point in the derivation).

This will take care of the contrast between (48a,b), for those speakers (the majority of my informants, myself included) for whom there is indeed a contrast. A question that comes up at this point is why, for some speakers, (48a) is acceptable (either marginally or fully). We may conjecture that, for those speakers for whom (48a) is good, the feature which polar-*heel* checks against Neg can percolate from polar-*heel* all the way up to the complex noun phrase that contains it, and be visible on that complex noun phrase as a result. But I will leave the question of how best to account for speaker variation in the domain of (48a) for future investigation. Here, I will concentrate on those speakers for whom there is a contrast in (48), which falls out along the lines sketched in (52).

Now let us move on to the examples in (49)–(51), which are all ungrammatical. Here, direct licensing is impossible, for reasons which should be clear from the discussion in section 2; but apparently parasitic licensing fails as well — and the question is why. The answer lies in the fact that, under parasitic licensing of polar-*heel*, there is no movement of the container of polar-*heel* to SpecNegP — instead, that phrase stays *in situ* and tries to link up with the licensing chain of another polarity item, via connectedness. And it is ultimately in the failure of connectedness that lies beneath the ungrammaticality of the examples in (49)–(51). But we need to do a little bit of work before that conclusion will emerge.

Let us start off with the a-examples, featuring a *van*-PP harbouring polar-*heel*. From the literature on parasitic gap constructions, we know that parasitic gaps *can* in fact be licensed as the complement of *of*, in English examples such as (53).²²

22 I illustrate this for English; as a matter of fact, it does not seem very easy to construct grammatical examples of this type for Dutch — an example like (i), which is of the relevant type, does not strike me as particularly acceptable, though perhaps it is not quite irremediable.

(53) who_i do [friends of pg_i] admire t_i ?

But we also know from that same body of literature that parasitic gaps are not just *in situ* gaps somehow hooking up (via g-projections, à la Kayne 1984) to the real gap's chain — they are variables left behind by null operator movement (cf. the island effects to which parasitic gaps are sensitive; Chomsky 1986). So what is really going on in (53) is that there is a null operator raising to a position on the edge of the noun phrase in subject position, as depicted in (54). (I will return momentarily to the nature of *Op*'s position.)

(54) who_i do [*Op*_{*i*} friends of pg_i] admire t_i ?

That means that, though superficially similar to the a-examples in (49)–(51), the parasitic gap construction in (53) in fact does not resemble these examples at all. We can conclude that there is no connectedness between the object of *of/van* and the real chain, which explains the deviance of the a-sentences. But though the example in (53), as analysed in (54), is not of the same type as the a-examples in (49)–(51), it does actually come very close in structure to the b-sentences. So here is the key question: how come (53)/(54) is grammatical while the b-examples in (49)–(51) are ill-formed?

The difference, I suggest, lies in the nature of the position which the operator in (54) and the pronominal possessor in the b-sentences in (49)–(51) raise to. In the latter, we are arguably dealing with a specifier position; in the former, however, we cannot assume that *Op* has raised to the specifier position otherwise reserved for pronominal possessors, for the simple reason that the two are not mutually exclusive — it is possible to fill the specifier position of the subject noun phrase with a genitive like *yesterday's* or even a possessor like *our* while still licensing a parasitic gap in the adnominal *of*-PP:

(55) a. who_i did [yesterday's pictures of pg_i] depict t_i in such an unflattering way?
 b. who_i did [our pictures of pg_i] anger t_i the most?

Accommodating a null operator inside the bracketed constituents in (55) is tantamount to having the null operator *adjoin* to the complex noun phrase; and since adjuncts are not dominated by their hosts, they c-command out of the projection that they are adjoined to. This way, connectedness can be established in case like (53) and (55) — the null operator in the structure in (54) is adjoined to the noun phrase in subject position, and can thus link up to the real chain. In the b-examples of (49)–(51), by contrast, the pronominal possessor is arguably not in an adjunction position at Spell-Out, but in the SpecDP position instead. On the assumption (*contra* Kayne 1994 but in line with Chomsky 1995) that there is an X-bar theoretic distinction between adjuncts and specifiers, with the latter dominated by the projection which they are the specifier of, no c-command outside the complex noun phrase will therefore be possible at Spell-Out for the pronominal possessor in the b-examples in (49)–(51).

The lack of outside c-command is supported by the fact that it is impossible for the pronominal possessor to bind an anaphor outside the possessed noun phrase:

(56) **[die kinderen hun moeder] keek naar elkaar*
 those children their mother looked at each.other

(i) ??*dat is een vrouw waar [(alle) vrienden pg van] dol t op zijn*
 that is a woman where all friends of fond of are
 'that is a woman who (all) friends of are fond of'

If indeed Dutch has no counterparts of (53), that will simplify the account of the a-examples in (49)–(51) since we do not need to worry about apparently similar yet grammatical cases of parasitic licensing.

From Kayne's (1994) work we know, though, that certain operators in prenominal possessor position do manage to c-command out of the containing noun phrase, as is evident from the grammaticality of variable binding and polarity item licensing in sentences of the type in (57). I conclude from this that those quantificational possessors can adjoin to the possessed noun phrase as a result of Quantifier Raising, *at LF*.

- (57) a. *nobody's* articles *ever* come out on time
 b. *every girl's* father thinks *she's* a genius

The establishment of a c-command relationship at LF is sufficient as far as polarity item licensing and variable pronoun binding is concerned (on the former, see Uribe-Etxebarria 1994, and also the next subsection; on the latter, see Chomsky 1993). But LF is too late for the licensing of parasitic dependencies — parasitic dependencies must be licensed at Spell-Out, an issue which I take up in the next subsection.

To conclude the discussion of connectedness effects with possessors, let me reiterate that all of the examples in (49)–(51) are correctly ruled out by the grammar — the same grammar which does allow for (48b). The difference is that in the latter, polar-*heel* is licensed directly, via overt-syntactic movement to SpecNegP, establishing a feature-checking relationship between Neg and the specifier of its specifier (à la Chomsky 1993); in the former, on the other hand, direct licensing is impossible, and parasitic licensing fails as well, owing to the absence of connectedness between 'parasitic' polar-*heel* and the licensing chain of the 'real' negative polarity item.

Notice that the facts reviewed in this subsection show clearly that there is a difference between direct licensing and parasitic licensing of polar-*heel* — though more restrictive in barring any c-commanding negative element (for reasons discussed in section 2), direct licensing is actually more lenient in allowing a prenominal possessor (though not, for most speakers, a possessor in an adnominal *van*-PP) to check Neg's feature under pied-piping movement of the possessed noun phrase to SpecNegP.²³ What this discussion also shows is that there is an empirical difference between Chomsky's (1993) feature checking against a specifier of a specifier, and a Hornstein (1995) type of 'almost c-command' — what I have shown is that the specifier of a possessed noun phrase can check a feature at Spell-Out against an outside head but does not c-command outside the possessed noun phrase at that point in the derivation. The vague notion of 'almost c-command' that Hornstein (1995) proposes to account, among other things, for facts of the type in (57) should be abandoned; a constituent either does or does not c-command outside its container (it does if it is adjoined to its container, it does not otherwise), it never 'almost c-commands' out. The discussion of polar-*heel* allows us to make this point because of the neat division of labour between the pre- and post-Spell-Out stages in the derivation — in particular, the fact that parasitic licensing is necessarily a pre-Spell-Out affair. This point is made most emphatically by the facts in section 3.3, to which I now turn.

23 Direct and parasitic licensing do not differ, empirically, when it comes to polar-*heel* embedded inside a prepositional phrase — the examples in (i) and (ii) are both grammatical. Apparently, then, a head can check a feature against the complement of the P heading its specifier; and the complement of P can c-command out of the PP it is contained in even at S-structure. As for the latter point, it is well known that there are many contexts in which the complement of P can bind an anaphor outside PP, in apparent defiance of c-command (cf. (iii)): it is as though P 'just isn't there' when it comes to the determination of c-command. Though I do not have any particularly deep thoughts to offer with regard to this classic problem, (iii) does tally nicely with (i)–(ii).

- (i) ik wil met die (hele) vent niets te maken hebben (cf. (26a) in the main text)
 I want with that whole bloke nothing to make have
 (ii) niemand wil met die (hele) vent ooit meer iets te maken hebben
 nobody wants with that whole bloke ever anymore something to do have
 (iii) ik heb met de jongens over elkaar gesproken
 I have with the boys about each other spoken (i.e., I talked to the boys about each other)

3.3 *Licensing of parasitic dependencies at Spell-Out*

A robust, albeit poorly understood and theoretically annoying property of parasitic gaps is that they must be licensed at Spell-Out (or ‘at S-structure’, in pre-minimalist terms). That this is so is evident from the difference between (58) and (59) — the latter is an attempt at having a parasitic gap licensed by a *wh-in-situ*, which, on assumptions standard in the literature within which most studies of parasitic gaps were embedded (i.e., the generative literature up to and including *Barriers*), undergoes movement into the C-domain at LF.

- (58) *what* did you file [without reading *pg*]?
 (59) *when did you file *what* [without reading *pg*]?

Let us (for lack of deeper insight) assume this condition on parasitic gap licensing as a given, and let us assume that it applies to the licensing of parasitic dependencies *in general* — clearly, this is the null hypothesis. And with this in mind, let us then turn to cases of parasitic licensing of polar-*heel* and see what we find.

To find out, we need to set up a case in which licensing the ‘real’ negative polarity item cannot possibly be established prior to Spell-Out. There are not many such cases around in the literature, but Uribe-Etxebarria (1994) (following up on seminal work by Linebarger 1980) presents two contexts in which licensing negative polarity items succeeds despite the clear lack of c-command by a negative element at Spell-Out. These cases are illustrated in (60) and (61).

- (60) [a doctor who knew anything about acupuncture] wasn’t available
 (61) [that anyone would leave the company] wasn’t mentioned in the meeting

In order to find out, then, whether parasitic licensing of polar-*heel* is possible *beyond Spell-Out*, what we need to do is construct examples of the type in (60) and (61) in which, inside the bracketed constituents, there is a phrase harbouring polar-*heel* in a position in which connectedness is respected. If the output is grammatical, that shows that polar-*heel* can be licensed parasitically at LF; if it crashes, it indicates that parasitic licensing of polar-*heel* behaves just like parasitic licensing of gaps in being an ‘S-structure phenomenon’.

First, let us check whether Dutch behaves like English in examples of the type in (60) and (61):

- (62) [een dokter die ook maar iets afwist van acupunctuur] was niet te vinden
 a doctor who also but anything off.knew of acupuncture was not to find
 (63) [dat er ook maar iemand zou worden ontslagen] was tijdens de vergadering niet besproken
 that there also but anyone would be fired was during the meeting not discussed

The answer is affirmative: these examples are well-formed. Now let us make these examples a little more complicated by including instances of polar-*heel*. Here are two sentences of the relevant type:²⁴

24 The ungrammaticality of (64) is particularly striking, in view of the acceptability of the simpler case in (i), which is of a type that I will address in more detail in section 4. For (65), no such minimal pair is constructible: (iia), which should be compared to (iib), fails. What this seems to show is that Koster (1978) was right in concluding that subject sentences do not exist.

- (i) die hele vent was niet te vinden
 that whole bloke was not to find
 ‘that bloke was nowhere to be found’
 (ii) a. [dat die (*hele) analyse werkt] is niet erg plausibel
 that that whole analysis works is not very plausible
 b. die (hele) analyse is niet erg plausibel
 that whole analysis is not very plausible

- (64) [een dokter die die (*hele) vent ook maar enigszins kon helpen] was niet te vinden
a doctor who that whole bloke also but in.any.way could help was not to find
- (65) [dat ze die (*hele) vent ook maar een cent meer salaris zouden geven] was tijdens de
that they that whole bloke also but a penny more salary would give was during the
vergadering niet besproken
meeting not discussed

To my ear, without *hele*, these sentences are acceptable (just as good as the ones in (62) and (63)), but once *hele* is added, ungrammaticality results. This shows that polar-*heel* apparently cannot be licensed parasitically in cases in which the additional polarity item on which it depends cannot itself be licensed before LF.

Further confirmation of this conclusion comes from examples which build on the outcome of the discussion in the preceding subsection — in particular, on the conclusion that the prenominal possessor of a possessed noun phrase cannot c-command out of the possessed noun phrase prior to LF. What this leads us to expect is that a negative polarity item licensed by a negative prenominal possessor should be unable to parasitically license polar-*heel*. This is indeed borne out: the examples in (66) are unacceptable with *hele*, and there is a crisp contrast between examples of the type in (66) and the successful parasitic licensing case in (67), where *niets* ‘nothing’ c-commands the ‘real’ negative polarity item *ooit* ‘ever’ already at S-structure.

- (66) a. niemands artikelen hebben die ([?]*hele) vent ooit geïnteresseerd
nobody’s articles have that whole bloke ever interested
- b. artikelen van geen enkele linguïst hebben die ([?]*hele) vent ooit geïnteresseerd
articles of no single linguist have that whole bloke ever interested
- (67) niets heeft die (hele) vent ooit geïnteresseerd

All of this is as expected, given the account of parasitic licensing of polar-*heel* laid out in the above. In particular, the data in (66) at once confirm the need of *S-structure* ‘parasitism’ and my earlier conclusion (cf. section 3.2) that prenominal possessors c-command out of their containing possessed noun phrases no earlier than at LF. The effect in (66) is particularly striking since there is no difference between these examples and the grammatical case in (67) with respect to the immediate vicinity of polar-*heel* — in all three cases, polar-*heel* is linearly followed by the ‘real’ polarity item, its intended licenser. This is further confirmation, therefore, of the conclusion that the licensing of polar-*heel* is highly sensitive to *structural* factors, not to ‘flat’ surface order — this conclusion turns out to hold not just for the cases of direct licensing discussed in section 2, but also for the parasitic licensing strategy. Throughout, it is syntactic hierarchical structure (at the point of Spell-Out, in the case of parasitic licensing) that counts.

3.4 Conclusion

So we see that parasitic licensing of polar-*heel* is real, *and* that it has properties which match perfectly those of the familiar case of parasitic licensing — the parasitic gap construction. In particular, it obeys the anti-c-command condition, which is an instance of connectedness, something which, in other contexts as well, parasitic licensing of polar-*heel* is strictly sensitive to; and it also patterns with parasitic licensing of gaps in the need to be accomplished prior to Spell-Out.²⁵

25 What I mean by this is that there must be a copy of the constituent harbouring ‘parasitic’ polar-*heel* such that polar-*heel* can be licensed at Spell-Out. That copy apparently does not need to be the *overt* copy — overt movement of the container of polar-*heel* to topic position seems to be possible not just in cases in which polar-*heel* is licensed directly (cf. section 2) but also in contexts of parasitic licensing; that is, the left-hand variant of (ic) is acceptable. For now, I will leave this issue pending; the outcome of the investigation on this point clearly does not affect the thrust of the main text discussion.

All of these parallels clearly establish parasitic licensing of *polar-heel*, and also show that parasitic gaps are not the only parasites in syntax — a conclusion that is of great interest, especially from the perspective of the importance of parasitism in the context of acquisition and innateness considerations. The significance of parasitic gaps is tremendous in this context; yet the impact of the innateness argument built on parasitic gaps has always been hampered by quibbles about their acceptability. It is here that the importance of *polar-heel* as an overt parasite asserts itself most emphatically: the parasitic licensing of *polar-heel* shows just the same intricacies as that of gaps (hence is just as powerful in the innateness discussion), yet gives rise entirely ‘normal’, ‘natural’ sentences like (43), which nobody could dismiss as far-fetched, artificial or even unacceptable.

With these conclusions drawn, the basic account of the two ways of licensing *polar-heel* is in place. What now remains to be done is to pinpoint the position in the tree of the licenser of *polar-heel* in the direct licensing scenario, the functional head Neg^0 . I take up this task in the next section, in the context of a study of a question which may have lingered in the back of the reader’s mind for quite a while now: what happens when the noun phrase harbouring *polar-heel* is a *subject*?

4 Polar-heel in subjects

From the literature on negative polarity items, we know that these elements tend not to be subjects, unless there is a c-commanding negation in a higher clause which can license them. Thus, (68a) is ill-formed but (68b), with the negation in the matrix clause c-commanding the polarity item in the embedded subject position, is fine. Notice that the fact that *come* is an unaccusative verb (hence, that *anybody* originates in a position c-commanded by negation in both examples in (68)) is immaterial.

- (68) a. *I think that anybody didn’t come
 b. I don’t think that anybody came

For *polar-heel*, in the light of the foregoing, we expect a somewhat different picture. We have established in the preceding sections that, on the direct licensing scenario, *polar-heel* must be c-commanded by a clause-mate Neg^0 and must not be separated from its licensing Neg -head by any scope-bearing element (including negative constituents); and that, in the case of parasitic licensing, *polar-heel* must be connected to a well-formed licensing chain of another negative polarity item. As far as parasitic licensing is concerned, we therefore expect to find no particular difficulty when *polar-heel* is a subject of an embedded clause as long as that clause contains another polarity item which is licensed from upstairs, while parasitic licensing should systematically fail when *polar-heel* is the clause-initial subject of a root declarative clause since the ‘real’ polarity chain will never connect to the ‘parasite’. In direct licensing contexts, on the other hand, a lot depends on the precise location of Neg^0 in the functional structure of the clause.

In what follows, I will first sort out the restrictions on direct licensing of *polar-heel* in subjects, pinpointing the position of $NegP$ *en route*. This is the topic of section 4.1. In section 4.2, I will then discuss the vicissitudes of parasitic licensing of *polar-heel* subjects.

- | | | | | |
|-----|----|--|-----|--|
| (i) | a. | die hele analyse vertrouw ik niet
that whole bloke that trust I not | cf. | ik vertrouw die hele analyse niet
I trust that whole analysis not |
| | b. | *die hele analyse vertrouwt niemand
that whole bloke that trusts nobody | cf. | *niemand vertrouwt die hele analyse
nobody trusts that whole analysis |
| | c. | die hele analyse heeft niemand ooit vertrouwd
that whole analysis has nobody ever trusted | cf. | niemand heeft die hele analyse ooit vertrouwd
nobody has that whole analysis ever trusted |

4.1 Polar-heel subjects and direct licensing

Let us start by focusing on the examples in (69). The judgements reported in (69b,c) sail a steady course between the extremes (once again robustly setting polar-*heel* aside from *any*-NPIs, which would be bad in all of the contexts illustrated in (69): they are never subjects of declarative root clauses). A consistent pattern is not very easy to distill here: some speakers find (69b) (relatively) bad, many find (69c) quite acceptable; in any case, (69a) is systematically worse than (69b,c), which in turn are worse than the grammatical example in (69d).²⁶

- (69) a. *die hele vent is niet intelligent
that whole bloke is not intelligent
b. ^{?(?)}die hele vent was niet thuis
that whole bloke was not at-home
c. [?]die hele film werd niet eens voorgedragen voor een Oscar
that whole movie was not even nominated for an Oscar
d. die hele discussie bevalt/interesseert me niet
that whole discussion pleases/interests me not

What all these examples share is that the polar-*heel* phrase precedes the negation, and that its grammatical function is that of subject of a finite clause. What is clear once again, therefore, is that no simple statement to the effect that polar-*heel* must precede the licensing negation will suffice; and also that one cannot generalise that polar-*heel* must not be a surface subject. The account of the distribution of polar-*heel* must be quite a bit subtler than this. Reference will need to be made to the kind of predicate that the phrase harbouring polar-*heel* is the surface subject of: in (69a) we are dealing with an individual-level predicate, in (69b) with a stage-level adjectival predicate, in (69c) with a verbal passive, and in (69d) with an experiencer predicate.

The basic split in the paradigm in (69) seems to lie between (69a) and the rest, with the former being practically systematically rejected. With reference to the contrast between (69a) and (69b), let us follow Diesing's (1990) claim that the subject of individual-level predicates is base-generated outside the projection of the predicate — specifically, Diesing assumes that the subject of copular sentences with individual-level predicates originates in SpecIP, controlling a PRO inside the predicate's projection but crucially not being raised into SpecIP. The subject of stage-level predicates, by contrast, is born lower in the structure, in the specifier position of the predicate's projection, and is raised to SpecIP. This said, the hypothesis that polar-*heel* must be licensed by a c-commanding Neg⁰ can account for the strong deviance of (69a) straightforwardly: in the core structure in (70a), for individual-level predicates, no member of the chain of polar-*heel*'s container is c-commanded by Neg⁰. There will be no way, therefore, for polar-*heel*'s container to ever raise to SpecNegP in the course of the derivation — such movement would necessarily be downgrading in (70a), and downward movement is illegitimate (since it leaves an unlicensable trace).

- (70) a. *_{[IP [die hele vent] [I [_{NegP} Neg [BE [_{AP} PRO intelligent]]]]]}
b. _{[IP — [I [_{NegP} Neg [BE [_{AP} [die hele vent] thuis]]]]]}
c. _{[IP — [I [_{NegP} Neg [BE [_{VP} voorgedragen [die hele film] voor een Oscar]]]]]}
d. _{[IP — [I [_{NegP} Neg [_{VP} bevalt/interesseert me [die hele discussie]]]]]}

26 The grammaticality of examples like (69d) was also noted by Hoekstra, Doetjes and Rooryck in their notes on polar-*heel*.

In (69b), on the other hand, we are dealing with a stage-level predicate, so the surface subject originates within the c-command domain of Neg⁰. It seems, then, that all we need to do to make the desired distinction between (69a) and (69b) is to assume that the container of polar-*heel* must originate in the c-command domain of Neg⁰. This will then carry over straightforwardly to the verbal passive case in (69c) and the experiencer construction in (69d), on reasonably standard assumptions about passive and psych-verb constructions; cf. the structures in (70b–d).

This takes care of the four example types presented in (69). But while we had a few problems there sorting out the speaker judgements, things get really complicated when we consider stage-level verbal predications of the type in (71). For most speakers, these are appreciably worse than (69b) — but judgements here are highly variable, in ways that remain largely unclear.²⁷

- (71) a. [?]*die hele vent antwoordde niet
that whole bloke answered not
b. [?]*die hele vent heeft dat boek niet gelezen
that whole bloke has that book not read

On the standard assumption that NegP originates outside vP, the projection introducing the external argument of unergative and transitive verbs, the structure of (71a) should read as in (72); an entirely similar structure can be drawn up for (71b) (but to avoid entirely irrelevant questions concerning the base position of the object *vis-à-vis* the verb in Dutch, and concerning Object Shift, I will not spell it out here).

- (72) [IP — [I [NegP Neg [vP [die hele vent] v [vP antwoordde]]]]]

This structure looks just like (70b), but apparently, while the container of polar-*heel* can be launched up to SpecNegP without much difficulty in (70b), it cannot, for many speakers, in (72).

What might the contrast between adjectival and verbal stage-level predicates be related to? A possibility that seems worth exploring is the link between the contrast in (69b) *vs* (71) and the one in (73a) *vs* (73b,c) in the domain of (transitive) expletive constructions:

- (73) a. er werd langzaam iemand wakker
there became slowly someone awake
b. *er antwoordde langzaam iemand
there answered slowly someone
c. *er heeft langzaam iemand dat boek gelezen
there has slowly someone that book read

The associate of *er* ‘there’ can show up following the manner adverb *langzaam* ‘slowly’ in (73a) but not in (73b,c). The thing to conclude from this contrast, I suggest, is that the associate of *er* can be Case-licensed *in situ* in (73a) but not in (73b,c). To be more precise, it seems that *die hele vent* in the SpecvP position in (72), because it is on the edge of the vP phase (in the sense of Chomsky 1999), cannot be Case-licensed within that phase (via an Agree relationship with I; cf. Chomsky 1999). The idea here is that constituents on the edge of a strong phase generally are not licensable within the phase on whose edge they find themselves;

27 Jonathan Bobaljik (personal communication) points out correctly that there should be a connection between speakers’ judgements on (71) and (ib) from fn. 16: those speakers for whom subjects of transitive/unergative verbs can harbour polar-*heel* (hence, for whom (71a,b) are good) seem to interpret a copy of the containing noun phrase which finds itself low enough in the structure to be raisable to SpecNegP; if so, those same speakers should reject (ib) as a case of intervention. The link should extend further to (20c) from section 2.2. Whether this is indeed the case remains to be investigated.

they can only be licensed outside that strong phase.²⁸ On the further assumption that only constituents which are Case-licensed can be launched up to SpecNegP (cf. the standard assumption that variables must have (checked) Case), it then follows that (72) delivers an ungrammatical output: *polar-heel* cannot be licensed, since direct licensing (via movement to SpecNegP) fails, and there is nothing for *polar-heel* to parasitise on.

When we now return to (69b), which is found better than (71) by most speakers, we see that in its structure (given in (70b)) the base position of *polar-heel*'s container is not on the edge of a strong phase (AP is not a strong phase in the sense of Chomsky 1999; it is not a 'bounding node' or 'barrier', in more traditional terms); the same is true for the examples in (69c,d), whose structures were given in (70c,d). In all these cases, since the container of *polar-heel* is not on a phase-edge, Case-licensing of this constituent (under Agree from I) is possible, and consequently, launching the container of *polar-heel* up to SpecNegP (resulting in the direct licensing of *polar-heel*) is possible as well.

So let me sum up the results of this subsection by saying that what I have tried to show is that the pattern of judgements in (69) and (71) (which is not completely stable) receives a possible explanation on the following assumptions: (i) direct licensing of *polar-heel* involves A' category movement to SpecNegP; (ii) the variable left behind by this movement must be Case-licensed; (iii) constituents on the vP phase-edge must raise out of vP for Case-licensing to succeed; (iv) NegP finds itself between Infl and vP.²⁹ This picture hangs together reasonably well; I stress, though, that some of the ideas here are tentative and deserve much further thought.³⁰

28 In essence, this turns Chomsky's (1999) hypothesis about phases and attraction into a biconditional: if you want to be attracted by a head outside the strong phase, you have to be on the edge of that phase (*dixit* Chomsky); and if you are on the edge of a strong phase, you cannot fail to be attracted (in the event of a feature match).

29 Whether, after raising to SpecNegP, the container of *polar-heel* raises on to SpecIP (for EPP purposes) is a question whose answer depends on what is considered to be 'proper' and 'improper' movement. SpecNegP is an A'-position; on standard assumptions, movement from an A-position to an A'-position back to an A-position is not allowed. If *polar-heel*'s container does not raise to SpecIP, the question is how the EPP is met in examples with subject *polar-heel*. I will tentatively assume that the container of *polar-heel* does indeed raise to SpecIP; one possibility that would allow one to steer clear of an 'improper movement' effect would be to say that movement to SpecNegP and movement to SpecIP form two separate chains, each terminating in the same position. I leave questions of execution open here.

30 The facts need much more careful study as well — especially in the domain of experiencer constructions. For it turns out that the picture that these present is quite a challenge. The facts in (i) and (ii) give the basic picture. In both triplets, only the first two are experiencer constructions 'proper', involving the psych-verb *opvallen* 'strike'; the c-examples are provided for comparison: they involve a semantically almost equivalent simple transitive verb, *opmerken* 'notice'. I will leave the analysis of these kinds of sentences for a later occasion.

- | | | |
|------|----|---|
| (i) | a. | niemand was die (*hele) fout opgevallen
nobody was that whole mistake struck |
| | b. | die (ʔhele) fout was niemand opgevallen
that whole mistake was nobody struck |
| | c. | niemand had die (*hele) fout opgemerkt
nobody had that whole mistake noticed |
| (ii) | a. | die (hele) vent was geen fout opgevallen
that whole bloke was no mistake struck |
| | b. | geen fout was die (*hele) vent opgevallen
no mistake was that whole bloke struck |
| | c. | die (*hele) vent had geen fout opgemerkt
that whole bloke had no mistake noticed |

4.2 *Polar-heel subjects and parasitic licensing*

Direct licensing of polar-*heel* subjects is subject to severe limitations: polar-*heel*'s container must be Case-licensed (by I under Agree) in a position which is c-commanded by Neg⁰ and is not separated from Neg⁰ by a 'harmful intervener', including negative quantifiers. One of the consequences of these limitations is that direct licensing of polar-*heel* subjects of individual-level predicates and unergative sentences is impossible, for lack of c-command by Neg of a Case-licensed copy of polar-*heel*'s container. Parasitic licensing of such subjects is expected to be possible, however, provided that there is a licensing chain of a 'real' negative polarity item which polar-*heel* can parasitise on. This expectation is fulfilled:

- (74) a. ik geloof niet dat die hele vent ook maar enigszins intelligent is
I believe not that that whole bloke also but in.any.way intelligent is
b. ik geloof niet dat die hele vent ooit heeft geantwoord
I believe not that that whole bloke ever has answered

Parasitic licensing can even 'help out' subjects of individual-level/unergative predicates in *root* clauses. This is what we find in rhetorical questions of the type in (75) and (76), where, in the grammatical b-sentences, polar-*heel* hooks up to the negative polarity item *überhaupt*, which is licensed by the C-head of the rhetorical question.

- (75) a. is die (*hele) vent intelligent?
is that whole bloke intelligent
b. is die (hele) vent überhaupt intelligent?
is that whole bloke at.all intelligent
(76) a. leeft die (*hele) vent nog?
lives that whole bloke still
b. leeft die (hele) vent überhaupt nog (wel)?
lives that whole bloke at.all still yes

The b-examples contrast predictably with the corresponding a-sentences, which lack a negative polarity item on which *heel* could parasitise. Of course, this should be true not just for polar-*heel* subjects of individual-level/unergative predicates but for any instance of polar-*heel* in questions, which is true: we find the same pattern for the polar-*heel* stage-level subject in (77) and for the object in (78). Throughout, what we find is that direct licensing fails in questions — for reasons which should be perfectly obvious: there is no Neg-projection present in the structure of these questions.³¹ Parasitic licensing is successful, on the other hand — polar-*heel* can connect to the licensing chain of the additional polarity item, which is licensed from the C-domain (by either the Q-operator or an A-not-A operator; the choice is immaterial).

- (77) a. is die (*hele) vent aanwezig?
is that whole bloke present
b. is die (hele) vent überhaupt ooit aanwezig?
is that whole bloke at.all ever present

31 There may well be an 'A-not-A' operator (cf. Huang 1982) in the C-domain; but that operator will not help to license polar-*heel* via direct licensing: as I argued above, direct licensing of polar-*heel* is strictly dependent on Neg, not on just anything negative. Lee (1994) assumes that there is a NegP present in the syntax of rhetorical questions, but this assumption cannot be maintained, as Den Dikken & Giannakidou (to appear) point out: the negative answer of rhetorical questions is *presupposed*, not *asserted*.

- (78) a. ken jij die (*hele) vent?
know you that whole bloke
b. ken jij die (hele) vent überhaupt (wel)?
know you that whole bloke at.all yes

The pattern we just observed for yes/no-questions can be replicated for *wh*-questions as well. I will not illustrate this in as much detail as I did for yes/no-questions; the following examples should suffice to create the general picture:

- (79) a. waarom is die (*hele) vent tot president gekozen?
why is that whole bloke to president elected
b. waarom is die (hele) vent überhaupt ooit tot president gekozen?
why is that whole bloke at.all ever to president elected
(80) a. waarom wil je die (*hele) vent ontmoeten?
why want you that whole bloke meet
b. waarom wil je die (hele) vent überhaupt ontmoeten?
why want you that whole bloke at.all meet

The contrasts in the examples in (75)–(80) are all robust and once again emphasise the importance of parasitic licensing of polar-*heel*.

All in all, we find that parasitic licensing helps out pretty much precisely in contexts in which it is expected to help out — including, most robustly, the context of questions, where direct licensing fails absolutely (due to the absence of a Neg-phrase) but parasitic licensing succeeds.³² This concludes my discussion of the licensing of polar-*heel* subjects (which, as I continue to emphasise, is still tentative in a number of ways, and needs further thought, both with respect to the vagaries of the empirical facts and as regards certain aspects of the analysis thereof). In the final section of this paper, I will take a look at a number of left-over issues, including the restrictions on the determiner in polar-*heel* phrases.

32 Of course, parasitic licensing is predicted to fail in constructions in which polar-*heel*'s container is the subject of an individual-level predicate in subject-initial root clauses: in such contexts, polar-*heel* should have no chance to connect to the licensing chain of the additional negative polarity item, which is below polar-*heel*'s base position in its entirety:

- (i) die (°*hele) vent is überhaupt niet intelligent
that whole bloke is at.all not intelligent

This prediction is supported reasonably well by the empirical facts — though perhaps slightly better than (69a), I find (i) with *hele* still very poor (though I add that not all speakers agree, some finding (i) fine while they reject (69a)). For subjects which originate lower down in the tree, we expect to find an improvement due to parasitic licensing in contexts in which direct licensing would be impossible — and to my ear, this is indeed the case: (ii) with *hele* strikes me as appreciably better than (71a).

- (ii) die (°hele) vent heeft überhaupt niet geantwoord
that whole bloke has at.all not answered

Recall from section 4.1, though, that I have found speakers for whom even (71a) as it stands is not unacceptable. I myself find (71a) as it stands quite bad; but with *überhaupt* added, as in (ii), there is a marked improvement. I sense no such improvement in (i) in comparison to (69a), but stress once again that speakers seem to vary here as well.

5 Concluding remarks and residual issues

5.1 *Summary so far*

Now that we are essentially at the end of the road (with just some residual issues to be dealt with in the subsections to follow), let me summarise what we have seen so far. *Polar-heel* is a peculiar polarity item — a strictly negative one, in that its direct licensing is strictly tied to Neg^0 : the container of *polar-heel* must be raised to SpecNegP in overt syntax. The raising of *polar-heel* to SpecNegP is subject to intervention effects: even a negative quantifier is not allowed to intervene between Neg^0 and *polar-heel*'s A-position.

Direct licensing via Neg^0 is an option only for instances of *polar-heel* whose containers are licensable in a position c-commanded by clausemate Neg^0 (a condition which filters out cases in which *polar-heel* is included in the subject of individual-level and unergative predicates; cf. section 4.1) in which a variable can be left by raising to SpecNegP (failure of which is responsible for the fact that *polar-heel* cannot be directly licensed in indirect object positions, as we saw in section 2.6).

Direct licensing is only one of the two ways in which *polar-heel* can survive. As an alternative, it can piggy-back on the licensing chain of some other polarity item, with the familiar restrictions from 'parasitic licensing' being in effect here as well: the parasite must be connected at Spell-Out to the licensing chain, and it must not be c-commanded by the 'real' polarity item.

5.2 *Licensing and checking*

Throughout, what we have found is that *polar-heel* must systematically be licensed at Spell-Out. For parasitic licensing, this is apparently due to the same condition which forces parasitic gaps to be licensed at that point in the derivation. For direct licensing, the need for overt-syntactic execution is less straightforward. One thing is clear: the fact that, when direct licensing is the only option, the container of *polar-heel* must raise to SpecNegP in overt syntax cannot be the consequence of some strong feature on *polar-heel* or its container. After all, it is not a property of *polar-heel* or its container *per se* that it must raise to SpecNegP in overt syntax: in cases of parasitic licensing, neither *polar-heel* nor its container undergoes overt-syntactic operator movement. A 'Greed' type approach is thereby discredited — something which in and of itself is good news in the light of the shift from Greed to 'suicidal Greed' in Chomsky's more recent minimalist writings.

How a 'suicidal Greed'/attract approach — or, more generally, a feature-checking analysis — handles the two ways of licensing *polar-heel* is not very clear, however. I have argued that in cases of direct licensing, *polar-heel* checks a feature against a match in Neg^0 — the latter apparently being strong or equipped with the 'EPP property', thereby bringing overt displacement about. But in cases of parasitic licensing, nothing raises to SpecNegP, while *polar-heel* still manages to get licensed. It is of course perfectly conceivable that Neg^0 lacks the 'EPP property' in cases of parasitic licensing, with feature checking being the result of an Agree relationship between Neg and *polar-heel* in such contexts. The question that presents itself, though, is why it is apparently necessary for Neg^0 to possess this property whenever *polar-heel* is licensed directly by it. This, at bottom, is the question to ask when it comes to the overt-syntactic direct licensing of *polar-heel*.

At this time, I do not have a satisfactory answer to this question. The best I can do right now is make the case for overt-syntactic direct and parasitic licensing of *polar-heel* and shed light on an otherwise bewildering array of facts this way. Why it is that parasitic licensing must take place before Spell-Out is ultimately just as (un)clear as why parasitic gaps must be licensed at that point; but at least in that case, there is an accomplice. Why it is that direct licensing is necessarily done in overt syntax is a much trickier issue.

For the time being I can do nothing more than relegate the question to future research. At least the analysis has put the question squarely on the agenda.³³

5.3 Dialect variation and Negative Concord

Another question that comes up (and which is of a more empirical nature) is how come there is such variation among speakers of Dutch when it comes to constructions featuring polar-*heel*. To some extent this is a matter of low-level idiolectal variation; but it seems that there may be a significant geographical split as well. One thing that stands out is that it seems that Flemish and Afrikaans speakers do not have polar-*heel*.³⁴

I suspect — although more careful follow-up research is definitely called for here — that the absence of polar-*heel* is related to another way in which Flemish differs from northern Dutch: the fact that it has Negative Concord (cf. Haegeman & Zanuttini 1991, Haegeman 1995). The following examples, from West Flemish, were taken from Haegeman & Zanuttini (1991):

- (81) a. da Valère niemand kent
that Valère nobody knows
b. da Valère niemand nie kent
that Valère nobody not knows
c. da Valère niemand en kent
that Valère nobody NEG knows
d. da Valère niemand nie en kent
that Valère nobody not NEG knows

33 Another question that deserves to be on the agenda (and to which Marc van Oostendorp has drawn my attention) is how we can formally register the difference between polarity items which are licensed under c-command by a negative constituent (such as *any*) and polarity items (like polar-*heel*) which are licensed under Spec-Head agreement with Neg. This turns out to be a difficult question as well. One might want to put this down to lexical properties of the polarity items in question — though even then, it remains difficult to see how the difference can be coded. But even if we manage to overcome that difficulty, we still need to grapple with the behaviour of polarity items like Basque *ezer* ‘anything’. As Ortiz de Urbina (2001) points out, Basque NPIs of this type have the option of being licensed *either* under c-command *or* under Spec-Head agreement in NegP: cf. (i). Just as in the case of Spec-Head licensing of polar-*heel* (recall section 2.5), the licensing of Basque NPIs under Spec-Head agreement in NegP is subject to stringent locality constraints: the NPI and its licensing Neg⁰ have to start out as clause-mates. It looks like *ezer* in (ia) behaves like polar-*heel*, therefore; but it doubles as a ‘regular’ polarity item licensed under c-command by a negative constituent, as in (ib). How to deal with polarity items of this sort is a difficult question to answer; double lexical listing would of course be a last resort. While I do not have an answer to the question with which I started this footnote, Basque (i) should definitely figure prominently in the search for one.

- (i) a. *ezer ez dut hartu*
anything not have taken
b. *ez dut ezer hartu*
not have anything taken
both: ‘I haven’t taken anything’

34 Thanks to Johan Rooryck and Jeroen Van Craenenbroeck for their Flemish judgements, and Simone Conradie for her feedback on Afrikaans. An important exception must be made for adverbial *helemaal/heeltemaal* ‘at all’ (cf. (5)), which does show up as a polarity item in these languages. In the light of the discussion to follow, I am led to suspect that adverbial polar-*heel* can be licensed by Neg *in situ*, without the need to raise to SpecNegP. The phrase-structural position of adverbial polar-*heel* would arguably facilitate such direct licensing without movement: on the assumption that adverbial polar-*heel* is adjoined to the complement of Neg, and on the further assumption that an adjunct to the complement of X is in the checking domain of X, this will indeed follow. Further work is needed to establish these points. Likewise, a more thorough investigation of Flemish dialects is called for to confirm the main text conjecture that the absence of (non-adverbial) polar-*heel* is related to the presence of Negative Concord.

All four examples in (81) are grammatical, and they all mean the same: ‘that Valère does not know anybody’. Sentences (81b–d) are all instances of so-called *Negative Concord*.

Haegeman & Zanuttini (1991) analyse Negative Concord in terms of movement of the negative quantifier into the NegP domain. More specifically, they assume that the Neg Criterion in (82) holds, and forces the establishment, in overt syntax, of a Spec–Head relationship between negative constituents and the negative head Neg⁰.

- (82) *Neg Criterion*
- a. each Neg X⁰ must be in a Spec–Head relation with a Negative operator
 - b. each negative operator must be in a Spec–Head relation with a Neg X⁰

Let us assume that Haegeman & Zanuttini (1991) (see also Haegeman 1995) are right for West Flemish. In particular, let us assume that there is always some negative operator in SpecNegP in the overt syntax of a West Flemish negative sentence. If that is indeed the case, then we predict straightforwardly that *polar-heel* cannot be licensed directly in West Flemish. After all, I have argued that direct licensing of *polar-heel* involves movement of *polar-heel*’s container to SpecNegP; but if SpecNegP specialises for *negative* operators in Negative Concord dialects, direct licensing of *polar-heel* will fail in such dialects.

The impossibility of direct licensing of *polar-heel* in dialects satisfying the Neg Criterion in overt syntax, like West Flemish and also Afrikaans, drastically narrows down the chances of survival of *polar-heel*. Parasitic licensing could still be an option in Negative Concord dialects. Determining whether that succeeds or not depends on a better understanding of the syntax of negative polarity items in those dialects, however. I cannot undertake this enterprise here, but reiterate that the interaction of the Neg Criterion and the licensing of *polar-heel* substantially reduces the chances of survival of *polar-heel* in Negative Concord dialects.

This is an interesting finding. Theoretically, because it may further vindicate the analysis of *polar-heel* licensing presented above; and empirically, because it does indeed appear to be the case that Flemish and Afrikaans speakers do not have (non-adverbial) *polar-heel*. Further research should assess the viability of these suggestions.

5.4 *Determiner restrictions and the structural position of polar-heel*

Let us return now to *polar-heel* in complex noun phrases, and recall the facts in (48), repeated below:

- (48) a. %ik ken [de vrienden van die hele vent] niet
I know the friends of that whole bloke not
- b. ik ken [die hele vent z’n vrienden] niet
I know that whole bloke his friends not

In the discussion in section 3, where these facts were first brought up, I focused on the contrast between (48a) and (48b). Here, however, I will compare (48a) with a particular kind of complex noun phrase which has recently attracted some attention in the generative literature: the *N of a N* construction, illustrated by English *that idiot of a doctor* or its word-for-word Dutch counterpart *die idioot van een dokter* (cf. Aarts 1994, Den Dikken 1998, Bennis, Corver & Den Dikken 1997). It is interesting to observe that *polar-heel*, while perfect when placed on the complex *N of a N* noun phrase as a whole, cannot be embedded inside it, as a constituent of the second noun phrase, at all — (83b) is entirely impossible.

- (83) a. ik ken die hele etter van een vent niet
I know that whole jerk of a bloke not

- b. *ik ken die etter van een hele vent niet
I know that jerk of a whole bloke not

Strikingly, that (83b) is bad is not due to some general ban on *heel* (or, even more generally, any modifier) inside the second noun phrase of the *N of a N* construction: both variants of (84) are good. The *heel* used in (84) is of a different type than the polar-*heel* seen in (83), though: in (84) we are dealing with what in section 1 I called the ‘purely adjectival’ incarnation of *heel* — the adjective that means ‘entire, undivided, intact’.

- (84) a. ik heb zo’n honger, ik kan makkelijk een hele knoert van een kalkoen opeten
I have such-a hunger I can that whole giant of a turkey up-eat
‘I’m so hungry I can easily eat a whole giant of a turkey’
b. ik heb zo’n honger, ik kan makkelijk een knoert van een hele kalkoen opeten
I have such-a hunger I can easily a giant of a whole turkey up-eat

What we are dealing with in (83), then, is a restriction specific to polar-*heel* — one which seems to confirm Den Dikken’s (1998) claim that polarity items are not legitimate inside the second noun phrase of *N of a N* constructions.³⁵ That restriction is apparently of a different nature than the one we saw at work in (48a) — while (48a) gives rise to variation among speakers, all speakers reject (83b) categorically.

There is in fact a straightforward account of the ungrammaticality of (83b) that capitalises on (the amount of) syntactic structure. The key here is the observation that ‘purely adjectival’ *heel* and polar-*heel* can be combined in a simple noun phrase (cf. (85a)), and that, when they are so combined, it is always the latter which comes first. That this is so can be gleaned particularly clearly from the contrast in (85b,c): *heel* to the right of the numeral (as in (85b)) is the purely adjectival one, while *heel* to the left of the numeral (as in (85c)) is polar-*heel*; the two examples are unambiguous.

- (85) a. ?ik heb die hele hele kalkoen niet gezien
I have that whole_{polar} whole_{pure} turkey not seen
‘I haven’t seen that whole/entire turkey at all’
b. ik heb die twee hele kalkoenen niet gezien
I have those two whole_{pure} turkeys not seen
‘I haven’t seen those two entire turkeys’
c. ik heb die hele_{polar} twee kalkoenen niet gezien
I have those whole two turkeys not seen
‘I haven’t seen those turkeys at all’

This said, the fact that polar-*heel* cannot be included in the second noun phrase of the *N of a N* construction (cf. (83b)) can be related, via (85c), to the ungrammaticality of (86b): the second noun phrase of the *N of a N* construction has a strongly reduced functional structure; it does not even allow numeral quantifiers, and since polar-*heel*, when occurring in a numerically quantified noun phrase, must occur to the left of the numeral, it is clear that it will be banned from all those noun phrases which independently bar numerals.

- (86) a. ik ken die twee etters van (een) kerels niet
I know those two jerks of a guys not
b. *ik ken die etters van (een) twee kerels niet
I know those jerks of a two guys not

35 But see Heycock & Kroch (1999:372, fn. 5) for a critique of Den Dikken’s (1998) claim.

If, as we saw in (85c), *polar-heel* is higher in the structure of the noun phrase than numeral quantifiers, where is it located? The D-head position seems to be a reasonable conjecture here — a conjecture which will shed light not just on the word order fact in (85c) but also on the fact that *polar-heel*, while fine in demonstrative noun phrases, is difficult to embed in DPs with the definite article. This is particularly true for the uninflected incarnation of *polar-heel* which precedes the D-domain: while (87a') is fine, (87b') is entirely impossible. Judgements on (87b) vary quite a bit — it is clearly not nearly as bad as (87b'), but it is considered marked in comparison with (87a) by many speakers. I suspect that the fact that (87b) is reasonably good has something to do with the special anaphoric function of the definite article in such noun phrases as (87c), which function as epithets.³⁶

- | | | | | |
|------|----|--|-----|--|
| (87) | a. | ik ken die hele vent niet
I know that whole bloke not | a'. | ik ken heel die vent niet
I know whole that bloke not |
| | b. | ^{?(?)} ik ken de hele vent niet
I know the whole bloke not | b'. | *ik ken heel de vent niet
I know whole the bloke not |
| | c. | ik ken de goede man niet
I know the good man not | | |

Polar-heel cannot be buried inside indefinite noun phrases either, be they singular (featuring *een*) or plural (featuring no overt article), as seen in (88).

- | | | |
|------|----|--|
| (88) | a. | ik wil met die hele student niets te maken hebben
I want with that whole student nothing to make have
'I don't want to have anything to do with that student at all' |
| | b. | ik wil met <*heel> een <*heel> taalkundestudent niets te maken hebben
I want with whole a whole linguistics.student nothing to make have |
| | c. | ik wil met (*hele) taalkundestudenten niets te maken hebben
I want with whole linguistics.students nothing to make have |

Moreover, *polar-heel* is also impossible in indefinite noun phrase objects of negative clauses, in which Dutch contracts the indefinite article *een* with the negator *niet* into the negative determiner *geen*:

- | | | |
|------|----|---|
| (89) | a. | ik begrijp geen moer van taalkunde
I understand no nut of linguistics
'I don't understand a thing/shit/... about linguistics' |
| | b. | *ik begrijp geen hele moer van taalkunde
I understand no whole nut of linguistics |
| | c. | ik begrijp geen ene moer van taalkunde
I understand no a/one-INF nut of linguistics
'I don't understand a single thing about linguistics (at all)' |
| | d. | ik geloof niet dat ik ook maar ene/*een moer van taalkunde begrijp
I believe not that I also but a/one-INF/a nut of linguistics understand
'I don't think I understand anything about linguistics (at all)' |

36 I will not comment here on the location of pre-determiner uninflected *heel* in the examples in the right-hand column of (87). It is likely that this 'bare' *heel* occupies the same structural position as 'bare' *al* in *al die mensen* 'all those people', but it is far from clear what this position would be. In any event, **heel de vent* is categorically impossible — it cannot be used epithetically.

Instead of *geen hele N* (which is bad on a polar reading; it does have a ‘purely’ adjectival interpretation, of course, in something like *geen hele eieren (maar halve)* ‘no whole eggs (but half ones)’), *geen ene N* is used, featuring a schwa-inflected form of the numeral/indefinite article *een* ‘one/a’. As the example in (89d) shows, *ene* (but not uninflected *een*) is also a polarity item, like polar-*heel* — and apparently, they serve essentially the same purpose, dividing labour amongst themselves: *ene* inside noun phrases marked with *geen* (the negative indefinite article), and polar-*heel* in all other contexts.

While the ungrammaticality of (89b) could be blamed on an intervention (or scope island) effect, with *geen* functioning as a harmful intervener between Neg⁰ and polar-*heel*, that of the relevant examples in (87) and (88) is not easily explained in those terms — especially since definite and indefinite articles do not otherwise seem to induce scope island effects. So what seems to be at issue here is a more general restriction on noun phrases featuring polar-*heel*. I suggested right above (87) that that restriction is imposed directly by the position of polar-*heel* in the structure of the complex noun phrase: it occupies D⁰ and thereby kicks out all possible competitors for the same structural position.

While I believe this does indeed take care of the facts in (87) and (88), it seems something more needs to be said. For even though polar-*heel* is fine in noun phrases featuring the *distal* demonstrative *die/dat*, it is pretty much impossible in their counterparts with the *proximal* demonstrative *deze/dit*. We already came across this fact in the introduction — the relevant facts are repeated here:

- (4) a. ik ken die/[?]de/^{??}deze/*een hele vent *(niet)
I know that/the/this/a whole-INF bloke not
b. [?]ik ken heel die/*de/*deze/*een vent *(niet)
I know whole that bloke not
‘I don’t know that bloke at all’

It is unlikely that the structural positions of distal and proximal demonstratives are different; so an account purely in terms of syntactic structure is not going to cover the entire spectrum of D-domain restrictions.

Interestingly, a link back to the beginning of this subsection will allow us to find another syntactic context in which we come across essentially the same kinds of D-domain restrictions — the *N of a N* construction:

- | | | | | |
|------|----|--|-----|--|
| (90) | a. | ik ken die idioot van een dokter niet | cf. | ik ken die hele vent niet |
| | | I know that idiot of a doctor not | | I know that whole bloke not |
| | b. | ^{??} ik ken deze idioot van een dokter niet | | ^{??} ik ken deze hele vent niet |
| | | I know this idiot of a doctor not | | I know this whole bloke not |
| | c. | ^{??} ik ken de idioot van een dokter niet | | ^{?(?)} ik ken de hele vent niet |
| | | I know that idiot of a doctor not | | I know that whole bloke not |
| | d. | *ik ken geen idioot van een dokter | | *ik ken geen hele vent |
| | | I know no idiot of a doctor | | I know no whole bloke |

Once again, we find a striking contrast between distal and proximal demonstratives; and as in the case of polar-*heel* noun phrases, the use of the definite article or an indefinite noun phrase severely degrades the result.³⁷

37 To my ear, (90c) is worse than the corresponding polar-*heel* case. Pekelder (n.d.), who did corpus-based research on the *N of a N* construction in Dutch, has found that the definite articles *de* and *het* are exceedingly rare as introducers of *N of a N* constructions (7% and 5%, resp.). As in the case of polar-*heel*, it is possible (though perhaps to a lesser extent than in the case of polar-*heel*) to use a simple definite in epithetic contexts. On simple definite *N of a N* used as an epithet, see Aarts’s (1994) English example in (i); a reasonably close Dutch counterpart is given in (ii), which strikes me as passable (though not perfect).

The difference in distribution between distal and proximal demonstratives found in polar-*heel* constructions thus does not stand on its own. It is shared by a complex nominal construction whose derivation involves the inversion of a DP-internal predicate with its subject (cf. Den Dikken 1998, Bennis, Corver & Den Dikken 1997). Two possibilities present themselves as to what causes the contrast between *this* and *that* in *N of a N* constructions: (i) it could be a consequence of the syntactic derivation of *N of a N* constructions, or (ii) it could have something to do with the special evaluative semantics of the construction. If (i) is correct, it may suggest — in the light of the fact that polar-*heel* constructions largely show the same distribution of D-domain elements — that noun phrases containing polar-*heel* likewise involve a Predicate Inversion derivation, with *heel* originating as a DP-internal predicate. Option (ii) is syntactically more neutral, and will not commit us to a Predicate Inversion derivation of polar-*heel*; all it demands, in order to be successfully carried over to polar-*heel*, is that *N of a N* constructions and polar-*heel* noun phrases have in common the semantic property of evaluativity. And that they certainly do seem to share. How the semantics of evaluativity (and condescension; cf. fn. 5, above) translates into the difference in distribution between distal and proximal demonstratives is a question I cannot go into here.³⁸ But the parallelism between polar-*heel* and *N of a N* constructions with respect to D-domain restrictions is sure to be informative on our quest for the syntactic and semantic analyses of these two constructions.

References

- Aarts, B. (1994). The syntax of binominal noun phrases in English. *Dutch Working Papers in English Language and Linguistics* 30. University of Leiden/HIL.
- Baker, M. (1988). *Incorporation*. Chicago: University of Chicago Press.
- Bennis, H., N. Corver & M. den Dikken (1997). Predication in nominal phrases. *Journal of Comparative Germanic Linguistics* 1:2. 85–117.
- Bernstein, J. (1997). Demonstratives and reinforcers in Romance and Germanic languages. *Lingua* 102. 87–113.
- Besten, H. den & J. Rutten (1989). On Verb Raising, extraposition and free word order in Dutch. In D. Jaspers, W. Klooster, Y. Putseys & P. Seuren (eds), *Sentential complementation and the lexicon. Studies in honour of Wim de Geest*. Dordrecht: Foris. 41–56.
- Branigan, Ph. (1992). *Subjects and complementizers*. Diss., MIT.
- Brisson, C. (1998). *Distributivity, maximality, and floating quantifiers*. Diss., Rutgers University.
- Chomsky, N. (1986). *Barriers*. Cambridge, MA: MIT Press.
- Chomsky, N. (1993). A minimalist program for linguistic theory. In K. Hale & S.J. Keyser (eds), *The view from Building 20*. Cambridge, MA: MIT Press. 1–52.

- (i) I went to see my bank manager, but the sly fox of a man had just left
 (ii) ?ik was op weg naar m'n advocaat, maar de etter van een vent was net vertrokken
 I was on way to my lawyer but the jerk of a guy was just left

English *N of a N* constructions seem quite okay with *this*; Aarts (1994) mentions several examples of this type. Pekelder (n.d.) found, however, that in a corpus of 98 *N of a N* constructions precisely 1 featured the neuter proximal demonstrative *dit* and none had non-neuter proximal *deze*; on the other hand, a total of 26% had neuter distal *dat* and 57% non-neuter distal *die*. The virtually complete lack of proximal demonstratives in Dutch *N of a N* (and polar-*heel*) constructions versus the relative acceptability of proximal demonstratives introducing English *N of a N* constructions may be related to the special use of *this*-phrases as indefinites, as in *there was this woman sitting on the bus who...*; see Bernstein (1997) for discussion. Dutch does not have this special incarnation of the proximal demonstrative.

38 It is certainly not unreasonable, in the light of the fact that *dat mens* ‘that person’ serves as a strongly condescending way to refer to a woman, to suspect there to be a link between distal demonstratives and condescension. This may be enough to take care of polar-*heel* (cf. fn. 5); but the *N of a N* construction is not intrinsically negative/condescending: *that darling of a child*.

- Chomsky, N. (1995). *The minimalist program*. Cambridge, MA: MIT Press.
- Chomsky, N. (1999). *Derivation by phase*. MITWPL.
- Cinque, G. (1990). *Types of A'-dependencies*. Cambridge, MA: MIT Press.
- Dikken, M. den (1992). Empty operator movement in Dutch imperatives. In D. Gilbers & S. Looyenga (eds), *Language and Cognition 2*. Groningen. 51–64.
- Dikken, M. den (1995). *Particles: On the syntax of verb-particle, triadic and causative constructions*. Oxford Studies in Comparative Syntax (R.S. Kayne, series editor). Oxford/New York: Oxford University Press.
- Dikken, M. den (1998). Predicate Inversion in DP. In A. Alexiadou & C. Wilder (eds), *Possessors, predicates and movement in the determiner phrase*. Amsterdam: John Benjamins. 177–214.
- Dikken, M. den (1999). Speaker-oriented particles in Dutch imperatives. *GLOT International* 3:9/10. 23–24.
- Dikken, M. den & A. Giannakidou (to appear). From *hell* to polarity: 'Aggressively non-D-linked' *wh*-phrases as polarity items. To appear in *Linguistic Inquiry*
- Giannakidou, A. (2000). Negative... concord? *Natural Language and Linguistic Theory* 18. 457–523.
- Haegeman, L. (1995). *The syntax of negation*. Cambridge: Cambridge University Press.
- Haegeman, L. & R. Zanuttini (1991). Negative heads and the Neg Criterion. *The Linguistic Review* 8. 233–51.
- Heycock, C. & A. Kroch (1999). Pseudocleft connectedness: Implications for the LF interface level. *Linguistic Inquiry* 30. 365–97.
- Hoekstra, T., J. Doetjes & J. Rooryck (n.d.). *Heel die vent, die hele vent*. Unpublished notes, University of Leiden/HIL.
- Honcoop, M. (1998). *Dynamic excursions on weak islands*. Diss., University of Leiden/HIL.
- Hornstein, N. (1995). *Logical Form: From GB to minimalism*. Oxford: Blackwell.
- Huang, C.-T.J. (1982). *Logical relations in Chinese and the theory of grammar*. Diss., MIT.
- Kayne, R. (1984). *Connectedness and binary branching*. Dordrecht: Foris.
- Kayne, R. (1994). *The antisymmetry of syntax*. Cambridge, MA: MIT Press.
- Koster, J. (1978). Why subject sentences don't exist. In S.J. Keyser (ed.), *Recent transformational studies in European languages*. Cambridge, MA: MIT Press. 53–65.
- Laka, I. (1990). *Negation in syntax: On the nature of functional categories*. Diss., MIT.
- Lee, F. (1994). *Negative polarity licensing in wh-questions. The case for two licensors*. MA thesis, UCLA.
- Linebarger, M. (1980). *The grammar of negative polarity*. Diss., MIT.
- Moltmann, F. (1997). *Parts and wholes in semantics*. Oxford/New York: Oxford University Press.
- Morzycki, M. (2001). *Wholes and their covers*. Ms., University of Massachusetts, Amherst.
- Mulder, R. & M. den Dikken (1992). Tough parasitic gaps. *Proceedings of NELS 22*. Amherst: GLSA.
- Müller, G. & W. Sternefeld (1993). Improper movement and unambiguous binding. *Linguistic Inquiry* 24. 461–507.
- Obenauer, H.-G. (1984). On the identification of empty categories. *The Linguistic Review* 4. 153–202.
- Ortiz de Urbina, J. (2001). *Focalization in negative sentences in Basque*. Ms., Universidad de Deusto.
- Pekelder, J. (n.d.) *Genuscongruentieverschijnselen in de kwalitatieve binominale NP*. Ms., Université de Paris, Faculté d'Études Germaniques, Département d'Études Néerlandaises.
- Postal, P. (1998). *Three investigations of extraction*. Cambridge, MA: MIT Press.
- Progovac, L. (1994). *Positive and negative polarity: A binding approach*. Cambridge: Cambridge University Press.
- Uribe-Etxebarria, M. (1994). *Interface licensing conditions on negative polarity items: A theory of polarity and tense interactions*. Diss., University of Connecticut, Storrs.
- Zwart, C.J.-W. (1997). *Morphosyntax of verb movement. A minimalist approach to the syntax of Dutch*. Dordrecht: Kluwer.