

Preposition doubling in Flemish dialects and its implications for the syntax of Dutch PPs

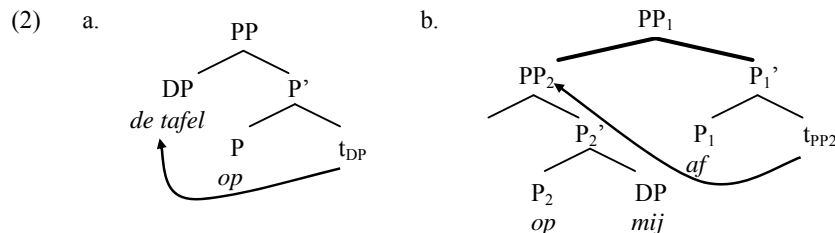
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1 INTRODUCTION

- Dutch exhibits three kinds of adpositions: prepositions, postpositions, and circumpositions.

- (1) a. Het boek ligt **op** de tafel. [preposition]
the book lies on the table
b. De kat springt de tafel **op**. [postposition]
the cat jumps the table on
'The cat jumps on(to) the table.'
c. Hij loopt **op** mij **af**. [circumposition]
he walks on me from
'He's walking towards me.'

→ Postpositions are derived from prepositions by movement of the DP object, and circumpositions through PP movement
(Koopman 1997, 2000, 2010; Helmantel 2002; Den Dikken 2003, 2006b, 2010)



- Topic of this talk:** Certain (Belgian) Dutch dialects (Aalst, Asse, dialects from Pajottenland and Waasland) display circumpositions with identical prepositions and postpositions.

- (3) dat hij **op** dem berg **op** is geklommen. [Asse Dutch]
that he on the hill on is climbed
'that he has climbed up on the hill.'

→ The interpretation is parallel to the Standard Dutch counterpart with either a (directionally interpreted) preposition or a postposition (obligatorily directional).

- (4) a. dat hij **op** de berg is geklommen. [Standard Dutch]
that he on the hill is climbed
b. dat hij de berg **op** is geklommen.
that he the hill up is climbed
'that he has climbed up on the hill.'

2 PROPERTIES OF DOUBLING PPs

2.1 The postpositional element is not a particle or verbal prefix

- The interpretation of the P is always the lexical spatial meaning of the P, not (as is often the case in verb-particle constructions) some idiosyncratic meaning contributed jointly by the P-element and the verb: the particle verb *op geraken* only has an idiosyncratic interpretation ('to run out', as in *de suiker geraakt op* 'the sugar is running out'), but in (5) *op geraken* has a compositional semantics derived from the lexical meanings of *op* and *geraken* ('manage to get up something').

- (5) Hij is op dienen berg niet op geraakt.
he is on that.MASC hill not on reached
'He didn't manage to get up on that hill.'

- That the second P in doubling PPs is not a particle is confirmed by the fact that P-doubling can occur in the complement of a noun, when there is no verb present at all, as in (6):

- (6) dat wegske over de brug over
that path.DIM over the bridge over
'that little path over the bridge'

→ Dutch simple particles cannot occur independently with nominals, in contradistinction to postpositional PPs:

- (7) a. de weg omhoog /*uit
the way up.high/out
'the way up/out'
b. de weg de stad uit
the way the city out
'the way out of the city'

- Perhaps the clearest indication that the second P-element in P-doubling constructions is not a particle is the fact that doubling PPs themselves co-occur with particles, as shown in (8); in doubling PPs with *naar*, this additional particle is in fact obligatorily present (see (8)b).

- (8) a. ?ik durfde door dat bos niet door**heen** lopen
I dared through that wood not through.PRT walk
 b. ge moet naar diene grote rots naar*(toe) springen
you must to that big rock to.PRT jump

- Given that the elements in boldface in the examples in (8) are particles, the P-elements immediately to their left cannot also be analysed as particles.
- As a general rule, particles are unique per verb; neither are there combinations of free-standing particles and any of the prefixal particles of Dutch, *be-*, *ver-* and *ont-* (see Hoekstra, Lansu & Westerduin 1987): thus, there is *afdekken* ‘off-cover, i.e., cover up’ and *bedekken* ‘BE-cover’ but not **afbedekken*; and there is *invoeren* ‘import’ and *vervoeren* ‘trans-port’ but not **invervoeren*; the pattern is systematic (on apparent exceptions, irrelevant for our purposes here, see Koopman 1995, Booij 2002, and esp. Den Dikken 2003:sect. 2).
- The co-occurrence of doubling PPs with particles thus precludes an analysis of the second P-token of P-doubling constructions as a verbal particle.

2.2 The distribution of doubling PPs

P doubling is only allowed with spatial PPs

- (9) a. Lili is **op** de kast **op** gekropen. [spatial]
Lili is on the cupboard on crawled
 ‘Lili crawled onto the cupboard.’
 b. Hij had **op** Lili (***op**) gerekend. [selected]
he had on Lili on counted
 ‘He had counted on Lili.’

P doubling is only allowed with directional PPs

- Spatial PPs come in two flavours: locative and directional.

- (10) a. Lola zit **op de stoel**. [locative]
Lola sits on the chair
 b. De kat springt **de kast op**. [directional]
the cat jumps the cupboard on
 ‘The cat jumps onto the cupboard.’

- Postpositional PPs are always directional.

- Prepositional PPs are usually locative, but can be directional when selected by certain verbs of motion (Koopman 2000; see also Gehrke 2007):

- (11) Lola springt in het water.
Lola jumps in the water
locative: Lola is in the water, jumping up and down.
directional: Lola jumps into the water.

- For cases in which a spatial PP is in principle interpretable either locatively or directionally, **P-doubling is a disambiguator**: it allows only for a **directional** reading:

- (12) Lili springt **in** het water **in**.
Lili jumps in the water in
 ‘Lili jumps into the water.’ [directional]
 # ‘Lili jumps up and down in the water.’ [*locative]

- This is further confirmed by the fact that in constructions featuring a manner of motion verb, the use of a doubling PP forces the selection of the auxiliary *zijn* ‘be’ rather than *hebben* ‘have’ (cf. (13)). This is typical of directional resultatives in general (Koopman 2000, Den Dikken 2010), as (14) illustrates: *hebben* triggers a locative reading and *zijn* a directional one.

- (13) a. Lili is **op** de kast **op** gesprongen.
Lili is on the cupboard op jumped
 ‘Lili has jumped onto the cupboard.’
 b. Lili heeft **op** de kast (***op**) gesprongen.
Lili has on the cupboard on jumped
 ‘Lili has jumped (up and down) on the cupboard.’
- (14) a. Lola **heeft** in het water gesprongen. [locative/*directional]
Lola has in the water jumped
 ‘Lola has jumped (up and down) in the water.’
 b. Lola **is** in het water gesprongen. [*locative/directional]
Lola is in the water jumped
 ‘Lola has jumped into the water.’

2.3 Doubling PPs and extraction

- In doubling PPs, the preposition and the DP object can undergo movement together, to the exclusion of the postposition: (15)
- But the doubling PP as a whole – including the postposition – cannot move: (16)

- (15) a. **Topicalization**
Op dienen berg is Lili *t op* geklommen.
on that.MASC hill is Lili on climbed
 ‘That hill Lili has climbed up on.’
- b. **Wh-movement**
Op welken berg is Lili *t op* geklommen?
on which.MASC hill is Lili on climbed
 ‘Which hill has Lili climbed up on?’
- c. **Scrambling across negation**
 Lili is **op dienen berg** niet *t op* geklommen.
Lili is on that.MASC hill not on climbed
 ‘Lili didn’t climb up on that hill.’
- (16) a. **Topicalization**
 * **Op dienen berg op** is Lili *t* geklommen.
on that.MASC hill on is Lili climbed
- b. **Wh-movement**
 * **Op welken berg op** is Lili *t* geklommen?
on which.MASC hill on is Lili climbed
- c. **Scrambling across negation**
 * Lili is **op dienen berg op** niet *t* geklommen.
Lili is on that.MASC hill on not climbed

→ The postposition needs to be adjacent to the verbal cluster, and can be incorporated into it (as is typical of postpositions, not prepositions, in (Standard) Dutch):

- (17) a. Lili zal *op dienen berg* <op> moeten <op> klimmen.
Lili will on that.MASC hill on must on climb
 ‘Lili will have to climb up on that hill.’
- b. Lili zal <niet> *op dienen berg* <niet> **op** <*niet> kunnen klimmen.
Lili will not on that.MASC hill not on not can climb

2.4 Doubling PPs and R-pronouns

- In Standard Dutch a neuter pronoun in the complement of a preposition moves to a specifier in the extended projection of P and surfaces as an R-pronoun:
 ‘P + pronoun’ → ‘R-pronoun P’

- (18) a. *op + iets* → *ergens op* b. *over + dat* → *daarover*
on something somewhere on over that there.over
 ‘on something’ ‘over that/it’

- But in doubling PPs, R-pronoun formation of the indefinite pronoun is ungrammatical, no matter where the doubling P is placed:

- (19) a. *dat Lili op iets <op> is <op> geklommen.*
that Lili on something on is on climbed
 ‘that Lili climbed up on something.’
- b. *dat Lili ergens op <*op> is <*op> geklommen.*
that Lili somewhere on on is on climbed

- R-words are not categorically forbidden in doubling PPs: the *wh*-pronoun can surface as the R-word *waar*, as in (20)b; and the demonstrative pronoun undergoes R-word formation obligatorily: *in situ* placement of *dat* is illicit (see (21)).

- (20) a. **Op wat** is Lili **op** geklommen?
on what is Lili on climbed
- b. **Waarop** is Lili **op** geklommen?
whereon is Lili on climbed
 ‘What did Lili climbed up on?’
- (21) a. { **Daarop**/* **op dat** } is Lili **op** geklommen.
thereon on that is Lili on climbed
- b. *dat Lili {daarop/* op dat} op geklommen is.*
that Lili thereon on that on climbed is
 ‘that Lili climbed onto that.’

2.5 Summary, and comparison with non-identical circumpositional PPs

Distribution	directional PPs	*selected PPs *locative PPs
Movement	[preP DP] _i ... t _i postP	*[preP DP postP] _i ... t _i
R-words	<i>wh</i> -pronoun (optionally) definite pronoun (obligatorily)	*indefinite pronoun

- Both in their resistance to movement of the entire complex PP and in the restrictions they impose on R-word formation, doubling PPs differ markedly from non-identical circumpositional phrases.

→ (22)b shows that non-identical circumPPs allow R-word formation with indefinites, in contradistinction to doubling PPs (recall (19)b).

- (22) a. Lola is **om iets heen** gelopen.
Lola is about something towards run
- b. Lola is **ergens omheen** gelopen.
Lola is somewhere about.towards run

- With non-identical circumPPs, the availability of movement of the entire complex PP versus ‘splitting’ depends on the nature of the nominal complement:
- with [+wh,+R] *waar*, as in (23), splitting *waar*+P_i off from P_k is impossible (in contrast to doubling PPs, where splitting with *waar* is fine: (20)b);
 - with [+wh,-R] *wat* full pied-piping is impossible ((24)a; cf. (20)a), with the grammaticality of splitting being subject to speaker variation (as is generally the case for the prePP of Dutch non-identical circumPPs; Den Dikken 2010).

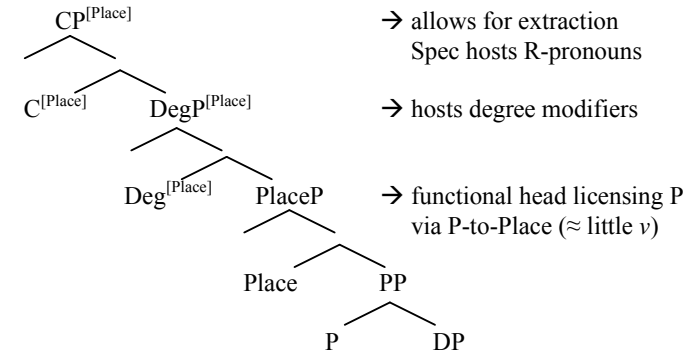
- (23) a. **Waar om heen** is hij gelopen?
where about towards is he run
 ‘What did he run around?’
- b. ***Waar om** is hij **heen** gelopen?
where about is he towards run
- (24) a. ***Om wat heen** is hij gelopen?
about what towards is he run
- b. %**Om wat** is hij **heen** gelopen?
about what is he towards run
 ‘What did he run around?’

- These comparative notes on doubling PPs versus non-identical circumPPs should bring home the fact that doubling PPs are not simply circumPPs that happen to have identical P elements on either side of the nominal constituent — their syntactic properties need to be addressed in their own right.
- We will not be able to discuss the syntax of non-identical circumpositional phrases here (see Koopman 2000, 2010, Den Dikken 2010, and references cited there); but we will take the result of Den Dikken’s exploration of Dutch spatial and directional PPs as our starting point in the development of an analysis of doubling PPs.

3 THE INTERNAL STRUCTURE OF DUTCH PPs

- van Riemsdijk (1978, 1990): PPs contain functional structure, parallel to the verbal/clausal and nominal domain
 - Koopman (1997, 2000, 2010): PathP as a functional layer in directional PPs
- potential functional structure in PPs:

(25) Locative PPs

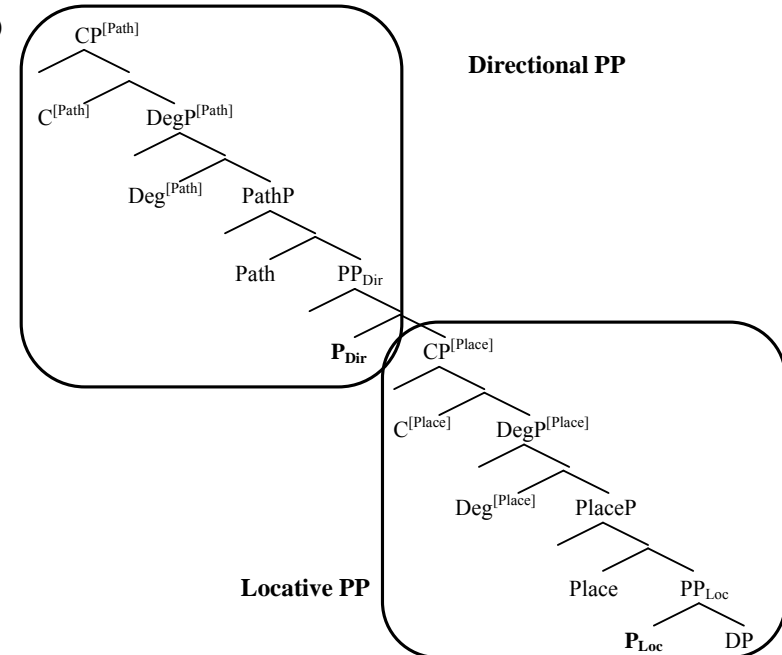


(26) Directional PPs: PathP + CP[Place]



- Den Dikken (2003, 2006b, 2010):
 - a lexical P_{Dir} instead of functional PathP
 - P_{Dir} has its own functional projections (allows for Degree modifiers etc.)

(27)



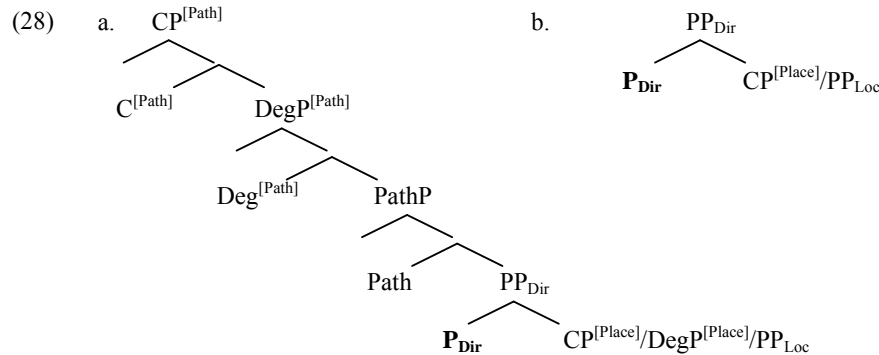
- Not all directional PPs flesh out this maximal structure: there is variation with respect to the size of the complement of P_{Dir} as well as the size of P_{Dir}'s own extended projection.

→ Den Dikken (2010) argues that there are six possible extended PPs, depending on whether or not the lexical Ps project functional structure.

4 ANALYSIS, PART I: A REDUCED HIGHER P LAYER

4.1 The P_{Dir} layer

- Den Dikken (2006b, 2010): P_{Dir} can either have a full functional structure or none.



- consequences of **full structure** (28a):
 - no incorporation into V: P_{Dir} can move to Path, but no higher.
 - entire extended PP can undergo movement as a unit, but locative subpart cannot be subextracted from it (no CP layer, or A-over-A violation).
- consequences of **no functional structure** (28b):
 - obligatory incorporation of P_{Dir} into V
 - no movement of entire extended PP, only of the complement of P_{Dir}

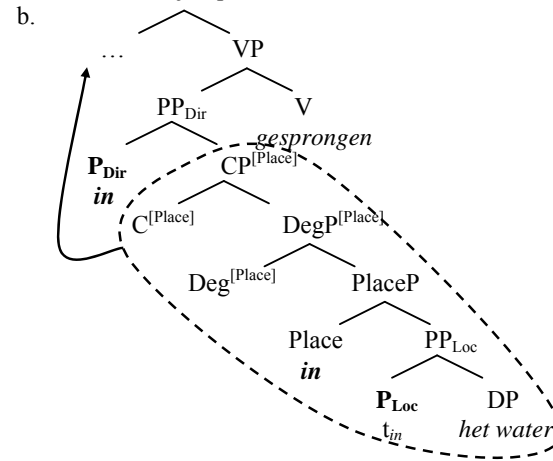
4.2 Doubling PPs

- Recall **section 2.3**: Our structure should allow for movement of the lower PP and incorporation of the postposition, and disallow movement of the entire dbl-PP.

Analysis:
 Doubling PPs have a **reduced higher layer**: the extended projection of P_{Dir} never reaches up to CP^[Path] in doubling PPs.

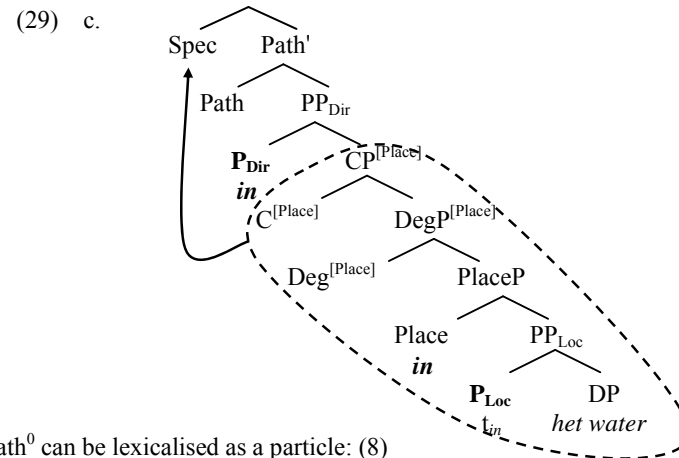
- Derivation (I): 'bare' PP_{Dir}; CP^[Place] is scrambled into the domain of the verb

(29) a. Lili is in het water in gesprongen.
Lili is in the water in jumped
 'Lili has jumped into the water.'



→ The preposition is base-generated in P_{Loc}
 The postposition is base-generated in P_{Dir} (and incorporated into V).
 CP^[Place] becomes the derived object of the verb and precedes the postposition.

- Derivation (II): PP_{Dir} + PathP; CP^[Place] is raised to SpecPathP



→ Path⁰ can be lexicalised as a particle: (8)

- This captures the distributional and extraction properties of doubling PPs.
 - The structure contains both a P_{Loc} and a P_{Dir} .
 - Doubling PPs are obligatorily interpreted directionally.
 - The preposition (P_{Loc}) forms a constituent with the object to the exclusion of the postposition (P_{Dir}), which does not project up to CP.
 - $CP^{[Place]}$ (with the preposition and the object) can undergo movement on its own, without the postposition; the postposition cannot be taken along;
 - The postposition (P_{Dir}) can incorporate into the verb.

5 ANALYSIS, PART II: A DEFECTIVE LOWER P LAYER

- In the previous section we explained the movement properties of doubling PPs by claiming that P_{Dir} never has an extended projection reaching all the way up to $CP^{[Path]}$ in such constructions.
- The obligatory absence of $CP^{[Path]}$ will be shown in this section to *follow* from a key property distinguishing doubling PPs from run-of-the-mill circumpositions: the fact that the $C^{[Place]}$ of doubling PPs is *defective*.
- The defectivity of $C^{[Place]}$ also brings forth an account of the R-pronoun facts of doubling PPs.
- In section 6, we will present a third corollary of the defectivity of $C^{[Place]}$ in doubling PPs: its cross-dialectal distribution.

5.1 $CP^{[Place]}$ as a defective goal, and the emergence of P-doubling

- Our central hypothesis about what makes doubling PPs different from ordinary circumpositional phrases is that the $CP^{[Place]}$ in the complement of P_{Dir} in P-doubling constructions is defective.
 - We understand defectivity here in the sense of Roberts (2010): the feature content of $C^{[Place]}$ in doubling PPs is a proper subset of the feature content of the $Path-P_{Dir}$ probe upstairs: P_{Dir} has a feature [directional], which P_{Loc} does not have (directionality versus non-directionality is a *privative* opposition).
 - P_{Dir} is thus a proper featural superset of its complement: it subsumes the features that its complement has, and adds directionality to it.
 - The defectivity of $CP^{[Place]}$ explains all of the core properties of doubling PPs, including the emergence of doubling itself.
- For Roberts (2010), defective probe–goal relations result either in silence or in displacement; they do not result in doubling.

- Why does the defective probe–goal relation between $Path-P_{Dir}$ and $C^{[Place]}$ deliver P-doubling?
 - P_{Loc} does not raise to $C^{[Place]}$; $C^{[Place]}$ does not probe P_{Loc} , so the latter is spelled out independently.
 - $C^{[Place]}$, *qua* head of the extended projection of P_{Loc} , shares with P_{Loc} all its lexical features — as an automatic consequence of extended projection in the sense of Grimshaw (1993).
 - When defective $CP^{[Place]}$ is probed by the upstairs $Path-P_{Dir}$ probe, this causes C 's features to be spelled out at P_{Dir} .
 - This results in double spell-out of P_{Loc} 's lexical features: once in P_{Loc} (*in situ*) and once in P_{Dir} .

- In this approach to P-doubling, there is multiple spell-out of the same feature-set: the features of P_{Loc} are spelled out both in its base position and in P_{Dir} , in the latter case as a result of the defective probe–goal relation between $Path-P_{Dir}$ and CP .
 - But it is **not** the case that multiple members of a single head-movement chain are spelled out: the chain-formation operation in question cannot be performed.
 - The grammaticality of subextraction of the prepositional part (see (30)) demonstrates that there must be a $CP^{[Place]}$ in the complement of P_{Dir} .
 - We know that head movement cannot proceed through C heads: CP s always break head-movement chains; head movement via C into a higher lexical head is never legitimate (see Li 1990).
 - So the fact that (30) demonstrates that the complement of P_{Dir} is as large as $CP^{[Place]}$, in conjunction with the fact that head movement out of CP is impossible, precludes an analysis of P-doubling in terms of the spell-out of multiple members of a head-movement chain.

(30) **Op welken berg** <*op> is Lili <op> geklommen?
on which hill on is Lili on climbed
 ‘Up on which hill has Lili climbed?’

- From the logic of Roberts’ (2010) theory of defective goals it follows that if $Path-P_{Dir}$ established a probe–goal relation with defective P_{Loc} , the result would be a simple postposition, not a P-doubling construction: whenever P_{Loc} itself serves as the defective goal for the $Path-P_{Dir}$ probe, the result is always displacement (*i.e.*, spell-out of P_{Loc} 's features at P_{Dir}).
 - So in simple postpositional PPs (*de berg op* ‘the hill on’), $Path-P_{Dir}$ takes a smaller complement (just PP_{Loc}), and probes its head (P_{Loc}).
 - This P_{Loc} is a defective goal for the probe, and must consequently remain silent, with the features of P being spelled out at P_{Dir} .

- In ‘ordinary’, non-identical circumpositional PPs, the $CP^{[Place]}$ in the complement of the Path- P_{Dir} probe is **not** defective.
- Since $CP^{[Place]}$ in non-identical circumPPs is not the extended projection of a proper subset of the P-features under P_{Dir} , we do not get doubling of P_{Loc} (as in doubling PPs) or silence under P_{Loc} (as in postpositional PPs).
- P-doubling results **only** in a situation in which P_{Dir} takes a CP complement that is a proper featural subset of the upstairs Path- P_{Dir} probe — in other words, when $CP^{[Place]}$ is defective.

5.2 Defectivity and the forced absence of $CP^{[Path]}$ in doubling PPs

- A second consequence of the defective $C^{[Place]}$ in doubling PPs is the fact that P_{Dir} cannot have an extended projection including $CP^{[Path]}$.
- Recall from (30) that movement of the locative prepositional PP stranding the postposition is grammatical, but movement of the entire doubling PP is not.
- We have blamed this ungrammaticality on the apparent fact that no $CP^{[Path]}$ can be built on top of the projection of P_{Dir} in P-doubling constructions; but we have not yet provided a rationale for this.
- $C^{[Place]}$'s defectivity in doubling PPs can once again be held responsible for this.
- The defectivity of the $C^{[Place]}$ in the complement of P_{Dir} in doubling PPs rests on P_{Loc} being a proper featural subset of P_{Dir} , with the Path- P_{Dir} complex upstairs establishing a defective probe-goal relation with $CP^{[Place]}$.
- This proper subset relation effectively establishes a single extended projection running from P_{Loc} all the way up to the Path- P_{Dir} complex; $CP^{[Place]}$ is a member of this extended projection.
- No single extended projection is ever allowed to contain multiple projections of C: there is no ‘CP recursion’ in the strict sense of the term; there is a unique C for any extended projection.
- Since the extended projection of P_{Loc} already includes an instance of C, it is impossible for P_{Dir} to be associated with another projection of C.

5.3 Defectivity and R-movement

- An indefinite neuter pronoun cannot undergo R-word formation in doubling PPs: (31)a, with *iets in situ*, is grammatical, but the R-movement in (31)b is impossible.

- (31) a. dat Lili **op iets** (op) geklommen is.
that Lili on something on climbed is
 ‘that Lili climbed up on something.’
- b. dat Lili **ergens** op (*op) geklommen is.
that Lili somewhere on on climbed is

- The ungrammaticality of (31)b notwithstanding, R-words are not categorically forbidden in doubling PPs: (32) shows that both *daar* and *waar* are grammatical.

- (32) a. dat Lili **daar op (op)** geklommen is.
that Lili thereon on climbed is
 ‘that Lili climbed onto that.’
- b. Ik vraag me af **waarop** Lili (op) geklommen is.
I ask me off whereon Lili on climbed is
- c. Ik vraag me af **waar** Lili **op (op)** geklommen is.
I ask me off where Lili on on climbed is
 ‘I wonder what Lili climbed up on.’

5.3.1 Two positions for R-pronouns

- Koopman (2010): there are, in principle, two positions that can accommodate R-words: SpecCP and SpecPlaceP.
- We argue that there is a difference between SpecPlaceP and SpecCP with respect to the kinds of R-pronouns they can house, drawing a parallel between SpecPlaceP in the extended projection of P and SpecvP in the extended projection of V, and taking SpecPlaceP to be a *scrambling* position – a position with information-structural import.
- What is raised to SpecPlaceP gets a ‘strong’ interpretation.
- By contrast, movement to SpecCP does not have any information-structural consequences.
- *Definite* R-pronouns are freely licensed in either SpecPlaceP or SpecCP, whereas *indefinite* R-pronouns are not licensed in SpecPlaceP unless they receive a ‘strong’, [+specific] interpretation.

- (33) $[_{C(Place)P} _ [C^{[Place]} [_{Deg(Place)P} vlak Deg^{[Place]} [_{PlaceP} _ [Place [_{PP} P_{Loc} DP]]]]]]$

- The occupant of SpecCP necessarily precedes degree modifiers like *vlak* ‘right’, while the occupant of SpecPlaceP must follow them.
- *Definite* R-words should in principle be able to appear on either side of such modifiers (because they can surface in either SpecPlaceP or SpecCP), but *indefinite* R-words should show a more restricted behaviour.
- This prediction is borne out:

- (34) a. <daar> **vlak** <daar> onder/ boven/naast/...
there right there under above next.to
 ‘right under/above/next to that’

- b. <ergens> **vlak** <?[?]ergens> onder/boven/ naast/...
somewhere right somewhere under above next.to
 ‘right next to/above/under something’
- c. nooit <ook maar ergens> **vlak** <?*ook maar ergens>
never also but anywhere right also but anywhere
 onder/ boven/naast
under above next.to
 ‘never right under/above/next to anything (at all)’

5.3.2 The ban on indefinite R-words in doubling PPs

- The problem with (35b) is that there is no suitable position for the indefinite R-word *ergens* to surface in.

- (35) a. dat Lili **op iets** (**op**) geklommen is.
that Lili on something on climbed is
 ‘that Lili climbed up on something.’
- b. dat Lili **ergens op** (***op**) geklommen is.
that Lili somewhere on on climbed is

- Recall: the CP^[Place] in the complement of P_{Dir} in doubling PPs is defective.
- One salient consequence of its defectivity is that its C head cannot be specified for the EPP property.
- EPP is the trigger for terminal movement; so the fact that C^[Place] cannot be EPP-specified entails that it is impossible for something to move into the SpecCP^[Place] in the complement of P_{Dir} in doubling PPs and for the derivation to end there.

5.3.3 The difference between terminal and intermediate movement

Q Why is [+wh] indefinite *waar* different from *ergens*?

- (36) a. **Waarop** is Lili **op** geklommen?
whereon is Lili on climbed
 ‘What did Lili climbed up on?’
- b. Ik vraag me af **waarop** Lili **op** geklommen is.
I ask me off whereon Lili on climbed is
- c. Ik vraag me af **waar** Lili **op** geklommen is.
I ask me off where Lili on climbed is
 ‘I wonder what Lili climbed up on.’

- The essential difference between *ergens* and *waar* is that movement of *ergens* to SpecCP *terminates* the derivation whereas in the case of movement of [+wh] *waar* to SpecCP, onward movement must always ensue — either onward movement of *waar* by itself or onward pied-piping movement.
- The creation of *intermediate* members of the movement chain is not in any obvious sense a function of the checking of features, but instead a matter of ensuring that the movement operation satisfies the locality restrictions imposed on the formation of such chains.
- To the extent that *intermediate* movement steps exist at all, we believe (with Bošković 2007) that these require no featural trigger.

- Movement of *waar* into SpecCP^[Place] in doubling PPs is not the terminal link in the movement dependency that *waar* is involved in: it is an intermediate step, necessarily followed by movement into the matrix SpecCP.
- Intermediate movement steps are not EPP-triggered, hence can target defective SpecCP^[Place] in doubling PPs.

5.4 Summary

- In our account of the ungrammaticality of **ergens op op*, a central role is played by the hypothesis that the C head of the CP-complement of P_{Dir} in P-doubling constructions is defective.
- In section 5.1, we had already demonstrated that this hypothesis also provides an account for the very fact that makes P-doubling special: the occurrence of two *identical* P elements in a single complex PP.
- And in section 5.2, we showed that C^[Place]’s defectivity in doubling PPs has the further benefit of explaining the fact that no functional structure can be built on top of the projection of P_{Dir} in these PPs, something that is responsible for the fact that the entire doubling PP fails to undergo movement as a constituent.
- These things combined reveal the strength of the single hypothesis that underlies our analysis of P-doubling in Flemish.
- In the final section, we complete our case for defectivity by arguing that it also provides us with a window on the distribution of doubling PPs in the Dutch-speaking world.

6 ON THE DISTRIBUTION OF DOUBLING PPs

6.1 Directional prepositions to introduce infinitival clauses in Flemish

- Doubling PPs are restricted to Flemish Brabant and the areas bordering it.

Question: Why is the distribution of defective C^[Place] across the Dutch-speaking world restricted, and what does this distribution correlate with?

Answer: The use of directional preposition *van* to introduce raising infinitives

- Standard Dutch: locative P *om* introduces control infinitives:

- (37) a. Ik zal proberen [CP (**om**) [TP de klus te klaren]].
I will try COMP the job to accomplish
 'I will try to accomplish the job.'
 b. Je zal meer moeten studeren [CP **om** [TP te slagen]].
you will more must study COMP to pass
 'You'll have to study more to pass.'

Flemish varieties: directional Ps *van* 'of/from' and *voor* 'for/in front of' (cf. (38)) can be used as clause introducers as well (cf. (39)).

- (38) a. Ik kom net **van** m'n werk. [Standard Dutch/Flemish]
I come just from my work
 'I've just come from work.'
 b. Ik rijd / zet de auto wel even **voor** de deur.
I drive put the car DPRT quickly in front of the door
 'I'll just quickly drive/put the car in front of the door.'
- (39) a. Ik probeer altijd **van** vroeg op te staan.
I try always COMP early up to stand
 'I always try to get up early.'
 b. We hebben niks meer **voor** te eten.
we have nothing more for to eat
 'We've got nothing left to eat.'

- Problem:** directional Ps as clause introducers stretch across Flanders, whereas doubling PPs are more restricted.

→ This problem is only apparent:

Clue = the use of *van* as an introducer of raising infinitives

6.2 The different properties of *van* as a clause introducer

- van Craenenbroeck (2000): There are two groups of Flemish speakers who allow *van* as a clause introducer.

① Non-central language area (West and East Flanders, Limburg,...)

→ *van* is the Flemish lexical counterpart of *om* in these dialects: both *om* and *van* introduce control infinitives, but no raising infinitives.

- (40) Hij lijkt/ schijnt $\{(*om/\%van)\}$ de beste kandidaat te zijn.
he seems appears COMP the best candidate to be
 'He seems/appears to be the best candidate.'

→ *om* and *van* lexicalise C, and CP blocks NP-raising.

→ ***van* = infinitival complementiser**

② The central area (in and around Flemish Brabant, possibly extending all the way to Antwerp), which has doubling PPs

→ *van* has a wider distribution than *om*: it can be used with epistemic verbs and raising verbs, unlike *om* (cf. the % in (40)).

→ The presence of *van* also makes a semantic contribution that is not found when *van* is absent:

- (41) a. Ik zal proberen van de afwasmachine te repareren.
I will try VAN the dishwasher to repair
 'I will try to repair the dishwasher.'
 → merely an *attempt* to repair it (successful completion dubious)
- b. Ge schijnt van Marie graag te zien.
you seem VAN Marie gladly to see
 'You seem to love/really like Marie.'
 → merely *indirect* evidence

- Hypothesis:** *van* is **not** being used as a filler of the C head in the second group.

***Van* is a P that occupies a position immediately outside the infinitival clause.**

→ It projects a lexical category making an autonomous semantic contribution.

→ It can form an amalgam with the null C-head, rendering the clause transparent to NP-raising: amalgamation of *van* and C makes Spec,CP an L-related position, allowing onward movement of the occupant of SpecCP to an L-related position (*i.e.*, SpecTP) higher up the tree.

P-doubling dialects: *van* in NP-raising constructions provides direct evidence for the use of P_{Dir}'s as selectors of CPs with whose null heads they featurally amalgamate.

This allows these speakers to build prepositional structures in which a P_{Dir} selects a defective CP^[Place] in P-doubling constructions.

7 CONCLUSION

- ❶ P-doubling in Flemish dialects is the result of identical spell-outs of P_{Loc} and P_{Dir} .
- ❷ The key properties of P-doubling are:
 - (i) It only occurs with spatial directional PPs.
 - (ii) The entire [P DP P] string cannot undergo movement, but the prepositional part can subextract.
 - (iii) Indefinite pronouns stay *in situ* and do not form R-words; definite pronouns obligatorily form R-words, and *wh*-pronouns optionally do.
- ❸ To capture these properties we argue for the following structure:
 $[_{PP} P_{Dir} [_{CP(Place)} C^{[Place]} [_{DegP} Deg^{[Place]} [_{PlaceP} Place [_{PP} P_{Loc} DP]]]]]$
 - (i) Both P_{Loc} and P_{Dir} are present \rightarrow explains distribution.
 - (ii) P_{Dir} does not have an extended projection reaching up to $CP^{[Path]}$, capturing the movement properties.
 - (iii) P_{Loc} projects a defective $CP^{[Place]}$ without EPP, which forces indefinite neuter pronouns to stay *in situ* and not form R-words. Definite pronouns move to Spec,PlaceP, and *wh*-pronouns can access Spec $CP^{[Place]}$ as an intermediate step in their *wh*-movement chain.
- ❹ The defectivity of $C^{[Place]}$ in the complement of P_{Dir} also:
 - (i) derives doubling: $CP^{[Place]}$ is a defective goal for Path- P_{Dir} , ultimately causing P_{Dir} to spell out identically to P_{Loc} , and
 - (ii) prevents P_{Dir} from projecting a full extended projection up to $CP^{[Path]}$, causing the entire doubling PP to be immobile as a unit; only the $CP^{[Place]}$ portion of doubling PPs can undergo syntactic movement.
- ❺ The defectivity of $C^{[Place]}$ in P-doubling also captures the empirical correlation between P-doubling and the use of directional *van* in raising infinitivals in certain Flemish dialects.

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