

# Merchant's Wrinkle: The Ban on Dutch Bare R-Pronoun Ellipsis Remnants

Marlies Kluck

## 1. Introduction

This paper offers an explanation of the curious fact that bare Dutch R-pronouns cannot be remnants of ellipsis. That is, it is well-known that Dutch R-pronouns preferably strand P under A'-movement (1). However, pied-piping of P along with  $\text{pron}_R$  is obligatory under sluicing (2):

- (1) *Waar<sub>i</sub> rekt Bob t<sub>i</sub> op?*  
what<sub>R</sub> counts Bob on  
'What is Bob counting on?'
- (2) Bob rekt ergens op, maar ik weet niet *waarop<sub>i</sub> / \*waar<sub>i</sub> Bob t<sub>e</sub> (~~op~~) rekt.*  
Bob counts something<sub>R</sub> on but I know not what<sub>R</sub>.on what<sub>R</sub> Bob on counts  
'Bob is counting on something, but I don't know what.'

This fact is in opposition to Merchant's well-known P-stranding generalization, and although it was acknowledged in Merchant (2001:95, fn. 5), it remains yet to be explained.

Dutch R-pronouns are instances of locative adverbial proforms that are used instead of the regular pronominal paradigm in case the pronoun is the object of a preposition. So, R-words (as a general class) correspond to either locative adverbials ( $\text{loc}_R$ ) or pronouns ( $\text{pron}_R$ ). I argue that the Dutch sluicing facts support the idea that instances of  $\text{pron}_R$  and  $\text{loc}_R$  occupy the same structural position: both are base generated as sisters of P. In case the R-word is a proform to replace a DP and is consequently interpreted as an individual variable, the R-word needs licensing by an overt head, the P that selects it. The reverse holds for R-words replacing PPs, which require P to be null. The pattern in (2) is then explained as a violation of e-GIVENNESS: in the absence of P, it can only be licensed as a location variable. So, in order for  $\text{pron}_R$  to be licensed, P needs to escape out of the ellipsis site. The general claim is thus that the distribution of R-words under sluicing is not a problem for the P-stranding generalization, but rather provides a new window on the nature and licensing of R-words. This is in turn supported by the fact that the overtness condition for P also holds outside ellipsis contexts, which is illustrated for various types of relative clauses.

The paper is organized as follows. Section 2 provides a basic background of the Dutch adpositional domain and the basic structural properties of R-pronouns relevant to this paper. In section 3, I generalize the observation about sluicing (2) to various kinds of ellipsis in Dutch. Section 4 proposes a recursive PP in which R-words, which are categorically underspecified, obligatorily move to a specifier position (Van Riemsdijk, 1978; Koopman, 2010). How they are interpreted depends on the availability of an overt P, which enforces an individual variable interpretation for traces of R-words. Section 5 briefly discusses some seemingly challenging cases, and section 6 concludes the paper.

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\* Marlies Kluck, University of Groningen, m.e.kluck@rug.nl. I thank the audiences at WCCFL32 (USC, Los Angeles) and the workshop "Microvariation" (Villa Salmi, Arezzo) for feedback, criticism and data. In addition, I wish to thank Mirjam Hachem, Charlotte Lindenbergh, Jason Merchant, Craig Sailor, Mark de Vries and Jan-Wouter Zwart for comments on the earlier drafts of this paper. Obviously, none of the people mentioned here is responsible for anything I claim in this paper.

## 2. Background: the Dutch adpositional domain and R-pronouns

### 2.1. Adpositions in Dutch

Dutch adpositions can globally be divided in three basic types: prepositional PPs (3a), postpositional PPs (3b), and circumpositional PPs (3c):

- (3) a. **prepositional PPs** → [PP P DP ]  
 De kat zit [PP op [DP de tafel]].  
 the cat sits on the table  
 ‘The cat is sitting on the table.’
- b. **postpositional PPs** → [PP DP P ]  
 De kat ging [PP [DP de kamer] in].  
 the cat went the room in  
 ‘The cat went into the room.’
- c. **circumpositional PPs** → [PP P DP P ]  
 De kat loopt [PP op [DP zijn eten] af].  
 the cat walks on his food off  
 ‘The cat is walking towards his food.’

All types can be used in a spatial and a non-spatial sense. If spatially used, prepositional PPs are often locative, but may also be directional, postpositional PPs are always directional, and circumpositional PPs are directional or locative. The data in this paper are mostly restricted to transitive prepositional PPs. For more complicated variants of the Dutch adpositional domain, including intransitive and particles, I refer to Van Riemsdijk (1978); Bennis (1986); Helmantel (2002); Koopman (2010); Den Dikken (2010) and Broekhuis (2013).

### 2.2. R-pronouns and P-stranding

The use of R-pronouns (pron<sub>R</sub>) is a phenomenon witnessed in Dutch and German, in which adverbial locative proforms such as *waar* (Dutch) and *wo* (German) (‘where’) are used as pronouns instead of the regular pronouns (Van Riemsdijk, 1978; Bennis, 1986; Miller, 2004) under certain conditions. The Dutch adverbial proforms all contain the phoneme /r/, hence the name R-pronouns. The conditions are traditionally formulated in terms of a ±HUMAN feature: only [-HUMAN] pronominal arguments of P undergo R-formation. In addition, the R-pronoun obligatorily precedes its selecting P (*pace* Helmantel, 2002:146ff). This suppletion occurs in all types of adpositions illustrated in (3). The Dutch adverbial proforms are in (4), the basic paradigm for Dutch R-pronoun formation is in (5) (see also Van Riemsdijk, 1978; Broekhuis, 2013):<sup>1</sup>

- (4) waar/ ergens/ nergens/ overal/ er/ hier/ daar  
 where<sub>R</sub> somewhere<sub>R</sub> nowhere<sub>R</sub> everywhere<sub>R</sub> there<sub>R</sub> here<sub>R</sub> there<sub>R</sub>
- (5) a. {waar/ ergens/ nergens/ overal/ er/ hier/ daar} op  
 what<sub>R</sub> something<sub>R</sub> nothing<sub>R</sub> everything<sub>R</sub> it<sub>R</sub> this<sub>R</sub> that<sub>R</sub> on  
 ‘On what/something/nothing/everything/it/this/that’
- b. \*op {wat/ iets/ niets/ alles/ het/ dit/ dat}  
 on what something nothing everything it this that

The way represented here, the paradigm appears to be *absolute*: the forms in (5b) are ungrammatical and the intended meanings need to be construed as in (5a). However, data in the literature (including

<sup>1</sup> Dutch spelling actually combines pron<sub>R</sub> with the preposition, i.e. the examples in (5a) are normally written as *waarop*, *erop*, *hierop* and *daarop*. This is misleading as there is no incorporation in these cases (see Koopman, 2010). For transparency’s sake, the Dutch spelling conventions are ignored in this paper. In the glosses, I will mark all R-words with ‘<sub>R</sub>’, and make explicit if they are intended to be pronominal or adverbial by using the corresponding English words, so ‘where<sub>R</sub>’ refers to the locative *wh*-word and ‘what<sub>R</sub>’ refers to the pronominal *wh*-word, while both correspond to the same form. This is to avoid confusion in case the PP is spatial (see also discussion in §4.1 below).

Broekhuis, 2013) show increased acceptability of some of the regular pronouns following P, especially existentials such as *iets* ('something'). In a recent study with acceptability ratings of >500 native speakers of Dutch, Kluck (2014) shows that the majority of speakers find various of the forms in (5b) acceptable or just slightly marked, rather than completely impossible. Interestingly, ellipsis contexts in general appear to facilitate obviation of the R-formation rule in Dutch. Nevertheless, the bare pron<sub>R</sub> in these contexts is excluded, as is shown later on in §3.2.

An important property of R-pronouns is that P-stranding is preferred under movement (6). By contrast, pied-piping is required in other *wh*-PPs (7):<sup>2</sup>

- (6) a. ✓ *Waar* zit de kat op?  
       what<sub>R</sub> sits the cat on  
       b. ?*Waarop* zit de kat?  
       what<sub>R.on</sub> sits the cat  
       'What is the cat sitting on?'  
 (7) a. \*{*Welke stoel/wie*} zit de kat op?  
       which chair who sits the cat on  
       b. *Op* {*welke stoel/wie*} zit de kat?  
       on which chair who sits the cat  
       'On which chair/who is the cat sitting?'

Under traditional assumptions (Van Riemsdijk, 1978) this follows from the structural position of the R-pronoun, as it obligatorily moves from the regular complement position to the right of P to a specifier position of P, from which subsequent movement to other specifier positions is possible.

### 3. Bare pron<sub>R</sub> cannot be an ellipsis remnant

#### 3.1. Trouble ahead for Merchant (2001)'s P-stranding generalization

The PF-deletion approach of ellipsis, as was already advocated by Ross (1969) and which has been one of the predominant analyses of ellipsis since Merchant (2001), states that ellipsis sites consist of fully-fledged syntactic structures. In case of sluicing, the *wh*-remnant moves out of IP, which is deleted at PF because of an E(llipsis)-feature residing on C. The IP is however fully represented in syntax. Connectivity, case matching and patterns with PPs depending on whether a language may strand P under movement or not are the main empirical pillars supporting this theory. The Dutch facts in (2) *prima facie* undermine the latter pillar.

Based on various languages, Merchant (2001:92ff) observes that languages that allow for P-stranding under regular *wh*-movement, also allow for P-stranding under sluicing, i.e. the so-called *P-stranding generalization*. This is attested for P-stranding languages such as English, Norwegian, Frisian and Icelandic as well as pied-piping languages such as Czech, German, Greek, Slovenian and many other languages.

Apart from the status of Dutch as a pied-piping or P-stranding language, we expect that R-pronouns should be able to strand P under sluicing, as this is preferred under regular *wh*-movement. This is however not the case, as movement of pron<sub>R</sub> stranding P is completely ungrammatical in sluicing (Merchant 2001:95, Kluck 2011:99-206):

- (8) a. \*Bob rekent ergens op, maar ik weet niet [<sub>DP</sub> WAAR]<sub>i</sub> ~~Bob t<sub>i</sub> op rekent~~.  
       Bob counts something<sub>R</sub> on but I know not what<sub>R</sub> Bob on counts  
       b. Bob rekent ergens op, maar ik weet niet [<sub>PP</sub> WAAR op]<sub>i</sub> ~~Bob t<sub>i</sub> rekent~~.  
       Bob counts something<sub>R</sub> on but I know not what<sub>R</sub> on Bob counts  
       'Bob is counting on something, but I don't know what.'

<sup>2</sup> Merchant (2001:95) reports speaker variation for Dutch P-stranding with regular (non-R) PPs, but the data are limited to the preposition *met/mee* ('with'). See Helmantel (2002); Broekhuis (2013) for detailed description, and Abels (2003) for critical discussion of P-stranding in Dutch and German.

It can be noted straight away though, that not all instances of R-words are ungrammatical as remnants of sluicing. For instance, (9) is perfectly acceptable, provided that *ergens* (here: ‘something’) is not focused, and consequently not interpreted as the correlate of *waar* (which must then be interpreted as ‘where’, with an implicit adjunct correlate in IP<sub>A</sub>):

- (9) Bea heeft ergens over geschreven maar ik weet niet WAAR ~~Bea ergens over~~  
 Bea has something<sub>R</sub> about written but I know not where<sub>R</sub> Bea something<sub>R</sub> about  
~~geschreven heeft.~~  
 written has  
 ‘Bea WROTE about something, but I don’t know WHERE.’

However, the only possible interpretation of *waar* is the locative adverbial interpretation: (9) is an example of *sprouting* in the sense of Chung et al. (1995), the *wh*-remnant in IP<sub>E</sub> corresponds to a silent locative adjunct in IP<sub>A</sub>. So, the R-word here is a regular adverbial proform (loc<sub>R</sub>), and not an instance of pron<sub>R</sub>. This also holds for spatial PPs:

- (10) a. \*De kat zat ERGENS op, maar ik zag niet WAAR ~~de kat t<sub>i</sub> op zat.~~  
 the cat sat something<sub>R</sub> on but I saw not what<sub>R</sub> the cat on sat  
 b. De kat zat ergens op, maar ik zag niet WAAR ~~de kat ergens op zat.~~  
 the cat sat something<sub>R</sub> on but I saw not where<sub>R</sub> the cat something<sub>R</sub> on sat  
 ‘The cat sat on something, but I didn’t see where (the cat was sitting on something).’

In (10) the antecedent creates a locative context. Nevertheless, the interpretation actually involves a double location, as is indicated in the example: the pronominal interpretation of the R-word is still ungrammatical in this context (10a). In short, the R-word remnants in these examples can only be interpreted as instances of loc<sub>R</sub>.

The question that arises is clear: how can these facts be reconciled with the Merchant (2001)’s P-stranding generalization? In what follows, I will argue that R-words are underspecified proforms, and that their interpretation depends on semantic licensing as loc<sub>R</sub> (locative adverbial) or pron<sub>R</sub> (pronominal). First, I further illustrate the robustness of the restriction on bare pron<sub>R</sub>.

### 3.2. No stranding P by pron<sub>R</sub> in ellipsis sites in general

The puzzling behavior of R-pronouns is not restricted to sluicing contexts. Examples (11)–(15) show that it is consistent for any elliptical context in which pron<sub>R</sub> undergoes movement out of an ellipsis site stranding P. First, bare pron<sub>R</sub> cannot be the remnant of fragment answers (FAs), which are often analysed in terms of sluicing (Merchant, 2004):

- (11) A: *Waar* heb jij een boek *over* geschreven?  
 what<sub>R</sub> have you a book about written  
 ‘What did you write a book about?’  
 B: Je weet wel, *daar* \*(*over*).  
 you know AFF that<sub>R</sub> about  
 ‘You know, about that.’

The same holds for the less well-studied fragments of the type in (12), i.e. fragment questions (FQs):

- (12) A: Ik ga *ergens* een boek *over* schrijven.  
 I go something<sub>R</sub> a book about write  
 ‘I’m going to write a book about something.’  
 B: O ja? *Waar* \*(*over*) dan?  
 o yes what<sub>R</sub> about then  
 ‘Really? About what?’

Also gapping (13) and stripping (14) contexts do not allow bare pron<sub>R</sub> remnants:

- (13) Ik schrijf HIER een BOEK over, en jij DAAR een ESSAY \*(over).  
I write this<sub>R</sub> a book about and you that<sub>R</sub> an essay about  
'I'll write a book about this, you an essay about that.'
- (14) Ik schrijf HIER een boek over niet DAAR \*(over).  
I write this<sub>R</sub> a book about not that<sub>R</sub> about  
'I'll write a book about this, not (about) that.'

Finally, right-dislocation (RD) of the bare pron<sub>R</sub> associated with matrix P is similarly banned, which is consistent with the recent analysis of RD in terms of sluicing (Ott & de Vries, 2012):

- (15) Ik heb d'r laatst nog over geschreven, DAAR \*(over).  
I have that:WEAK<sub>R</sub> lately PRT about written that<sub>R</sub> about  
'I wrote about it lately, (about) THAT.'

This leaves the following generalization to be explained:

- (16) Dutch R-pronouns cannot strand P in an ellipsis site.

In what follows, I argue that this generalization reveals something about the nature and licensing of R-words. As such, it is not necessarily a complication for the PF-deletion approach to sluicing, rather, the ungrammaticality of bare pron<sub>R</sub> remnants follows straightforwardly from e-GIVENness, assuming that null or silent Ps enforce a locational variable.

#### 4. e-GIVENness and licensing pron<sub>R</sub> in the layered PP

##### 4.1. Overt P required for licensing pron<sub>R</sub>

In agreement with Koopman (2010), I argue that the homophony of loc<sub>R</sub> and pron<sub>R</sub> is not coincidental. R-words are categorically underspecified and obtain their meaning and function structurally. As it turns out, the generalization in (16) is governed by a more general rule: the pronominal use of R-words (pron<sub>R</sub>) requires licensing by an overt head, i.e. its selecting P. That is, also outside of ellipsis contexts, the selecting P may never be left unpronounced. Clear evidence for this is found in Dutch relative clauses (RelCPs) and so-called 'standard free relatives' (SFRs). Consider first the regular RelCPs in (17):

- (17) a. het huis [{*waar/ waar in*} ik woon]  
the house where REL<sub>R</sub> in I live  
'the house where I live/the house in which I live.'
- b. het idee [{\**waar/ waar in*} ik geloof]  
the idea where REL in I believe  
'the idea that I believe in'

There is a subtle meaning difference between the two possibilities in (17a): the spatial PP *waar in* ('in which', pron<sub>R</sub>) refers to the building in which the speaker lives, whereas the adverbial *waar* ('where', loc<sub>R</sub>) more generally refers to the place where the speaker lives (e.g. the place where the speaker's house happens to be located). However, in case of a non-spatial meanings (17b) it is clearly impossible to construe a relative with a bare R-word, i.e. leaving out the preposition. So, also here the bare R-word can only be interpreted as loc<sub>R</sub>, which renders this example ungrammatical.

It has been noted that for some speakers, P is optional in prepositional overtly-headed RelCPs (18a) and SFRs (18b) (Larson, 1987; Grosu, 2003):<sup>3</sup> In Dutch, however, P is obligatorily present in SFRs and preferably stranded (De Vries, 2004) (19):

- (18) a. I will live in every city that you live %(in).  
b. I will sing in whatever bar you want me to sing %(in).

<sup>3</sup> I thank an anonymous reviewer for WCCFL32 for pointing out the relevance of these examples.



This is one of the reasons why Bennis & Hoekstra (1984) reject the idea that R-words are DPs, instead Bennis (1986:189ff) suggests that R-words (including  $\text{pron}_R$ ) are PPs that are left-complements of P and escape case assignment (presumably only assigned to the right) this way.<sup>5</sup> Abels (2003) however argues that the implied optionality of case assignment by P in their approach is a weakness that in the end fails to explain the facts in (23). He suggests R-words are PPs but they are the specifier of a zero-place P, which puts the burden in the lexicon.

The present approach makes a different claim: R-words are categorically and semantically *underspecified*. What they happen to be in a particular context, depends on their structural environment. All R-words are base-generated as sisters of P in a strictly head-initial PP-structure, potentially as sisters of different Ps in the same structure, as in (9)-(10). They correspond to either pro-PPs or pro-DPs, depending on how they are licensed in their base position. To an extent, this is in line with Collins (2007)'s view on (locative) R-words in English.<sup>6</sup> They obligatorily move up to the specifier of a higher layer of the adpositional projection: SpecPlaceP (Koopman, 2010). For the present purposes, I adopt Koopman's motivation for this movement: R-words encode Place morphologically (not necessarily semantically) in agreement with a locative head, contrary to DP complements of P. This forces overt movement to SpecPlaceP, movement that regular DPs cannot undergo.<sup>7</sup> From SpecPlaceP, further movement is possible, eventually out of the adpositional domain from the highest specifier (here from  $\text{PP}^{\text{Place}}$ ).<sup>8</sup> The basic scheme for R-words in the PP is then as follows, where R is represented in all its potential landing sites (only represented as trace in its base position because movement is only obligatory from that position), including movement out of the prepositional layer into SpecCP, as is relevant for sluicing later on:

$$(24) \quad [\text{CP } \mathbf{R} \dots [\text{PP}(\text{Place}) \mathbf{R} [\text{P}(\text{Place}) [\text{DegP}(\text{Place}) \text{MOD} [\text{Deg}(\text{Place}) [\text{PlaceP } \mathbf{R} [\text{Place} [\text{PP } \mathbf{P} \mathbf{t}_x/\mathbf{t}_{loc}]]]]]]]]]]]$$

In case of pied-piping, the entire adpositional projection (i.e.  $\text{PP}(\text{Place})$  as in (24) or Koopman's  $\text{CP}(\text{Place})$ ) is moved, in case of P-stranding only the element moving from the highest specifier in this projection moves out. How the R-word is interpreted depends on how the element is licensed in its base position, which in turn depends on whether P is overt or not: null Ps always license a location variable ( $\mathbf{t}_{loc}$  corresponding to  $\text{loc}_R$ ), and overt Ps always license an individual variable ( $\mathbf{t}_x$  corresponding to  $\text{pron}_R$ ). Conversely, a null P can never license an individual variable, nor can an overt P ever license a locational variable. This is summarized in table 1:

	$\text{pron}_R$	$\text{loc}_R$
$\mathbf{P}$	✓	*
$\mathbf{P}_\emptyset$	*	✓

**Table 1:** Licensing of R-words by P.

This also explains the ungrammaticality of (23b): more generally locational R-words will only be selected by null Ps (see also Katz & Postal, 1964; Kayne, 2005). The exact derivation of adverbial pronouns as pro-PPs requires further study that lies beyond the limits of this paper.

#### 4.3. E-GIVENness and the licensing of $\text{pron}_R$

This structural analysis of R-words gives us the following basic derivation to account for the fact that bare R-pronouns cannot be ellipsis remnants (here for sluicing, based on (8a)):

<sup>5</sup> The core argument in Bennis & Hoekstra (1984) is that they do not pattern with DPs with respect to licensing of parasitic gaps, which traces of  $\text{pron}_R$ , contrary to traces of regular pronouns fail to do. See also Abels (2003).

<sup>6</sup> Confusingly, Collins refers to English R-words as R-pronouns, but the data he discusses only involve locative R-words. Movement of (locative) English R-words is into SpecPP for Collins, who assumes that the null P is the result of an edge generalization that states that either the specifier or the head gets spelled out, but not both (comparable to the older Doubly-Filled Comp Filter, see also Koopman & Szabolsci, 2000).

<sup>7</sup> Recall that if there is no R-word in SpecPlaceP, the entire PP moves into that position under Koopman's analysis. DP complements of P cannot strand P because PP, having moved to SpecPlaceP, is on a left branch, i.e. this is excluded as left-branch violation (Koopman, 2010:34).

<sup>8</sup> This is  $\text{CP}^{\text{Place}}$  in Koopman's analysis (22). I will not adopt her view, which draws a parallel between complementizer phrases and adpositional phrases. This is orthogonal to the questions discussed in this paper.

- (25) \*Bob reKent ergens op, maar ik weet niet [<sub>CP</sub> WAAR<sub>i</sub> C<sub>[E]</sub> ~~IP ... [<sub>PP</sub> *ergens* t<sub>i</sub> [<sub>PlaceP</sub> t<sub>i</sub> [<sub>PP</sub> ~~op t<sub>i</sub>]]]]] reKent].~~~~

Assuming Merchant (2001)'s identity condition on sluicing, e-GIVENness, sluicing is only allowed if IP (IP<sub>A</sub>) entails the ellipsis site (IP<sub>E</sub>) and vice versa. The remnant of ellipsis and its correlate in the antecedent clause play a crucial role in this condition (for discussion, see Chung et al., 1995; Romero, 1998; Merchant, 2001; Kluck, 2011): IP<sub>A</sub> produces a variable which matches the remnant that moves out of IP<sub>E</sub>, and matching follows from category of the correlate and the remnant in IP<sub>A</sub> and IP<sub>E</sub> respectively. A basic example that is ruled out as a violation of e-GIVENness is (26), i.e. that Bob likes an entity *x* does not entail that Bob likes a quantity *Q* of something or *vice versa*:

- (26) \*Bob likes something, but I don't know how many.  
 IP<sub>A</sub> = Bob likes e<sup>*x*</sup>  
 IP<sub>E</sub> = Bob likes t<sup>*Q*</sup> \*e-GIVENness

We can similarly derive the possibilities for sluices with R-word remnants. Recall that R-words do not have an inherent category: what they mean depends on the presence or absence of an overt P. If *wh*-movement involves just the R-word (extracted from a specifier of PP) and not the entire adpositional phrase, P is left in IP<sub>E</sub>, which is marked for deletion (25).<sup>9</sup> The ban on pron<sub>R</sub> as the remnant of sluicing is now explained as e-GIVENness violation, as silent Ps always give rise to a locational variable, and that Bob counts on *x* (IP<sub>A</sub>) does not entail that he counts on something in a certain location *loc* (IP<sub>E</sub>):

- (27) IP<sub>A</sub> = Bob counts on e<sup>*x*</sup>  
 IP<sub>E</sub> = Bob counts on t<sup>*loc*</sup> (←WAAR) \*e-GIVENness

So, in order for the intended meaning to be derived, the licensing head of the R-word needs to escape the ellipsis site in order to enforce the pronominal meaning of its complement. Importantly, this means that the P-stranding generalization can be maintained after all: Dutch remnant R-words with individual variable correlates in their antecedents give rise to e-GIVENness violations if they strand their selecting P in an ellipsis site under movement. In addition, we are not forced to stipulate obligatory pied-piping for ellipsis in general. This is desirable given the possibility of scrambling over object stranding P in gapping:

- (28) Ik schrijf HIER een BOEK over, jij DAAR<sub>i</sub> een ARTIKEL t<sub>i</sub> \*(over).  
 I write this<sub>R</sub> a book about you that<sub>R</sub> an article about  
 'I'll write a book about this, you an article about that.'

The relevant difference with the sluice in (25) is obviously that stranding in (28) does not leave P in an ellipsis site, hence the desired individual variable reading for *daar* is not risked. In the final section, I discuss two empirical observations that appear to complicate the analysis.

## 5. *Prima facie* challenging facts for the analysis

### 5.1. Obligatory pied-piping of circumpositions

It has been observed that (spatial) circumpositions obligatorily tag along with *wh<sub>R</sub>* under sluicing, however pied-piping is highly marked in regular *wh<sub>R</sub>*-movement (29).<sup>10</sup> Pied-piping is clearly impossible in the non-spatial use of the same PP, but obligatory in sluicing (30):

<sup>9</sup> On a more abstract level, this proposal requires reconsideration of our conception of the model of grammar, as it implies connection between modules that are separated in mainstream Minimalist theory (i.e. LF and PF the inverted Y-model). A connection between these modules is however defended in the parallel architecture proposed in Jackendoff (2002). Late-insertion theories of morphology (Halle & Marantz, 1993) suggest LF reanalyzes the derivation *after* vocabulary insertion, implying interaction between these modules as well. I thank Jason Merchant (p.c.) for suggestions regarding this point. I leave this broader issue open for future work on the topic.

<sup>10</sup> Koster (1987), Koopman (2010), and Den Dikken (2010) report varying and contradictory judgments in similar cases. They improve with focus on the entire *wh*-PP.

- (29) a. Bea is ergens van af gevallen, maar ik weet niet waar \*(van af).  
 Be a is something<sub>R</sub> of off fallen but I know not what<sub>R</sub> of off  
 ‘Bea fell off something, but I don’t know what.’  
 b. ?\*Waar van af viel Bea?  
 what<sub>R</sub> of off fell Be a
- (30) a. Bob wil ergens snel van af zijn, maar het is niet duidelijk waar \*(van af).  
 Bob wants something<sub>R</sub> quickly of off be but it is not clear what<sub>R</sub> of off  
 ‘Bob wants to quickly get rid of something, but it isn’t clear (of) what.’  
 b. Waar \*(van af) wil Bob snel van af zijn?  
 what<sub>R</sub> of off wants Bob quickly of off be  
 ‘What does Bob want to get rid off quickly?’

Koopman (2010) explains this as follows: PathP in circumpositions is not dominated by the ‘C-type’ category prerequisite for movement, so no pied-piping is possible. Pied-piping in these sluices thus corresponds to ungrammatical *wh*-constructions, in Koopman’s view because it requires extraction from PathP. Although this certainly requires more study, a plausible solution is that this is a ‘repair’ effect similar to other island violations that are grammatical under sluicing (Merchant, 2001, 2004; Fox & Lasnik, 2003).

### 5.2. *DegP as the fifth wheel in pied-piping under sluicing*

Another interesting observation is that *DegP* (a functional layer for modifiers of P, see (22) above) cannot be stranded when the PP is pied-piped: only the entire prepositional projection (my PP(place)) can move, not parts from it ((31a) slightly adapted from Koopman, 2010:38). However, pied-piping *DegP* along with pron<sub>R</sub> and P in sluicing is degraded:

- (31) a. \*Waar achter begint het niemandsland twee meter?  
 what<sub>R</sub> behind starts the no.man’s.land two meter  
 b. Waar twee meter achter begint het niemandsland?  
 what<sub>R</sub> two meter behind starts the no.man’s.land  
 ‘Two meters from what does the no man’s land start?’
- (32) ’t Begint ergens twee meter achter, niemand weet WAAR (\*?twee meter) achter.  
 it starts something<sub>R</sub> two meter behind no.one knows what<sub>R</sub> two meter behind  
 ‘It starts two meters behind something, but no knows (two meters) behind what.’

Within the present analysis, there are two options: 1. we could reconsider constituency in/of layered PP and move only PlaceP (see (24)), stranding *DegP*, or 2. we could explain (32) as a separate deletion operation in the remnant *after* movement out of IP<sub>E</sub>, comparable to NP-deletion in regular sluices with complex *wh*-remnants:

- (33) Be a fancies one of her professors, but I don’t know which (?\*of her professors) she fancies t<sub>i</sub>.

The latter seems a promising direction: the degradation of (32) is then due to the same redundancy that causes the strong preference for NP-deletion in cases such as (33).

## 6. Conclusion

This paper can be seen as the starting point to revisiting the mystery of R-words in generative theory, and inevitably leaves open many new questions, such as how pro-PP R-words are derived under the present assumptions and to what extent this analysis can be applied to German R-words. The modest goal of this paper was to account for the fact that bare R-pronouns cannot be ellipsis remnants. For this, I have argued that R-words 1. are categorically underspecified and 2. occupy the same structural position in PP, base-generated as sisters of P that obligatorily move to SpecPlaceP in the extended projection of the adpositional phrase. Only an overt P head can license the trace of its complement to correspond to an individual variable, hence pied-piping of P may be required to escape from ellipsis sites to meet

e-GIVENNESS, as is the case in sluicing and various other types of ellipsis. Ultimately, this means that Merchant's P-stranding generalization is not undermined by the fact that pied-piping of P is necessary if its complement is a pronominal R-word.

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