Dutch preposition stranding and ellipsis: 'Merchant's Wrinkle' ironed out

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Abstract This paper provides an explanation for the unexpected ban on preposition stranding by *wh*-R-pronouns under sluicing in Dutch. After showing that previous prosodic and syntactic explanations are untenable, we propose that the observed ban is a by-product of an EPP condition that applies in the PP domain in Dutch. Our analysis revolves around the idea that ellipsis bleeds EPP-driven movement, an idea that already has empirical support from independent patterns of ellipsis found in English and in other structural domains in Dutch. Our claim is that: (1) R-pronominalization involves a pronominal argument of P moving to the periphery of its extended PP domain (PlaceP) in order to satisfy a PP-internal EPP condition, (2) this EPP-driven movement is bled under sluicing, and (3) because SpecPlaceP is the 'escape hatch' through which R-pronouns must move in order to exit the PP domain to form preposition stranding configurations, bleeding the EPP-driven movement of R-pronouns to SpecPlaceP therefore precludes R-pronouns from undergoing the *wh*-movement required to form a sluicing configuration.

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1 Introduction

Sluicing (Ross 1969) refers to the configuration in which all but the *wh*-phrase of an embedded *wh*-question appears to go 'missing' (1). The prevailing view in mainstream generative circles is that sluicing configurations are generated by *clausal ellipsis*, which renders unpronounced an otherwise full-fledged TP (2) (Ross 1969; Merchant 2001).

(1) John laughed at someone, but I don't know **who**.

(2) John laughed at someone, but I don't know [$_{CP}$ who$_1$[$_{TP}$ ~~he laughed at~~ t_1]].

According to this analysis, the *wh*-phrase in sluicing undergoes A′-movement from a position within the ellipsis site. As a result, sluicing is predicted to be sensitive to the syntactic constraints on *wh*-movement in any given language *L*. Merchant (2001) demonstrates that this prediction is borne out for at least one constraint that varies across languages; namely, whether or not preposition stranding *wh*-movement is permitted in *L*. Merchant observes that languages that ordinarily permit preposition stranding *wh*-movement (e.g., English, Frisian, Swedish, Norwegian, Danish, Icelandic) also permit such movement under sluicing (see (1)), whereas language that ordinarily disallow preposition stranding *wh*-movement (e.g., Greek, Yiddish, Russian, Polish, Czech, Bulgarian, Slovene, Persian, Catalan, French, Spanish, Italian, Hebrew, Moroccan Arabic, and Basque) also disallow such movement under sluicing (3).

(3) **P-pied-piping wh-movement**
    a.   Me   pjon milise?   *Greek* (Merchant 2001, 94)
        with *who* *she.spoke*
        'Who did she speak with?'
  P-stranding wh-movement
    b. * Pjon   milise   me?
        who   *she.spoke*   *with*
  Sluicing
    c. I   Anna milise me   kapjon,   alla dhe ksero   *(**me**) pjon?
        the *Anna* *spoke* *with* *someone* *but* *not* *I.know* *with*   *who*
        'Anna spoke with someone, but I don't know with who.'

This observation is encapsulated in the *preposition stranding generalization* (Merchant 2001, 92):

(4) A language *L* will allow preposition stranding under sluicing iff *L* allows preposition stranding under regular *wh*-movement.

Researchers have observed apparent exceptions to this generalization, however. Some languages that disallow P-stranding under regular *wh*-movement, such as Spanish, Italian and French (Merchant 2001; Vicente 2008), Brazilian Portuguese (Rodrigues et al. 2009), and Polish (Szczegielniak 2008), allow for prepositionless

wh-remnants under sluicing (5). In addition, a lexically restricted set of English prepositions that ordinarily resist stranding can indeed be stranded under sluicing (6) (Ross 1969; van Craenenbroeck 2004; Fortin 2007).

(5) a. * [Qué chica]$_1$ ha hablodó Juan [$_{PP}$ **con** t_1]?   *Spanish*
         which girl   has talked Juan   with
         'Who has Juan talk with?'
     b.   Juan ha hablado con una chica pero no sé   cuál.
         Juan has talked   with a   girl   but not know which
          'Juan talked with a girl, but I don't know which.'

                                                        (Rodrigues et al. 2009, ex. 4)

(6) a. * Whose$_1$ wishes did Terry get married [$_{PP}$ against t_1]?
     b.   Terry got married against someone's wishes, but I don't know whose (wishes).
                                                        (Fortin 2007, ex. 405b and 407b)

On closer inspection, one sees that these data do not constitute true exceptions to the preposition stranding generalization. The abovementioned studies have shown that, in each case, the elliptical clause is not syntactically isomorphic with its antecedent clause but is instead an underlying cleft or simple copular structure, in which no P-stranding occurs (7).[1]

(7) a. Juan hablado con una chica pero no sé   cuál [es la chica con
         Juan spoke   with a   girl   but not know which is the girl   with
         la   que   ha   hablado Juan].
         the that   has   talked Juan
         'Juan talked with a girl, but I don't know which (is the girl with whom he talked).'
     b. Terry got married against someone's wishes, but I don't know
         whose (wishes) [it was].

The opposite type of exception is found in Dutch (Merchant 2001, 95; Zwart 2011, 44; Hoeksema 2014; Kluck 2015). While Dutch *wh*-R-pronouns can strand their selecting prepositions under regular *wh*-movement, they cannot do this under sluicing. Kluck (2015) refers to this exception as 'Merchant's Wrinkle'. This contrast is shown in the examples in (8), in which the *wh*-R-pronoun is marked with a subscripted 'R'.

(8) He is looking at something, …   *Dutch*
     a. maar ik weet niet waar$_{R1}$ hij [$_{PP}$ **naar** t_1] kijkt.
         but   I know not where   he   at   looks
         'but I don't know what he is looking at.'

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[1] For alternative explanations of exceptions to the preposition stranding generalization of the type in (5) and (6), see Sato (2011), Leung (2014), as well as Stjepanović (2008, 2012), Philippova (2014), Ionova (2020), and Stigliano (2019).

b. maar ik weet niet {waar / * waar$_R$ }.
   but I   know not   where   where
   i.   * 'He is looking at something, but I don't know
               what he is looking at.'
   ii.   'He is looking at something, but I don't know
               where he is looking at something.'

We have added the subscripted 'R' to the *wh*-R-pronoun to distinguish it from the 'true' locative *wh*-pronoun, with which the *wh*-R-pronoun is homophonous. Although the *wh*-R-pronoun cannot appear as the sole remnant of sluicing, the true locative pronoun can, as (8b) shows. In this case, the 'sprouting-type' interpretation in (8bii) is obtained, as the locative pronoun is interpreted as an adjunct to VP in the elliptical clause. On this interpretation, no preposition stranding is involved.

It should be mentioned that the same pattern is observed in German (Merchant 2001, 95), another language in which pronominal complements of certain prepositions are obligatorily realized as locative pronouns. Like in Dutch, *wh*-R-pronouns can also strand their preposition under regular *wh*-movement in certain varieties of German, yet they only have a locative interpretation when they appear as a 'bare' remnant of sluicing (9).[2]

(9) He counted on something, …   *German*
   a. aber ich weiß nicht wo$_{R1}$ er [$_{PP}$ **mit** t_1] gerechnet hat.
      but I   know not   where   he   with   counted has
      'but I don't know what he counted on.'
   b. aber   ich weiß nicht {wo   / * wo$_R$}.
      but   I   know not   where   where
      i   * 'He counted on something, but I don't know
            what he counted on.'
      ii.   'He counted on something, but I don't know
            where he counted on something.'

The pattern exemplified in (8) and (9) completes the empirical picture for possible combinations of preposition stranding behavior under regular *wh*-movement and under sluicing, as Table 1 shows. This pattern is significant because the answer offered to explain its converse pattern (i.e., the third column in Table 1)—namely, that the preposition stranding under sluicing is only apparent, and therefore that the preposition stranding generalization is not violated—cannot apply here in the Dutch case, as preposition stranding should be no obstacle for sluicing, and therefore need not be circumvented. Consequently, a new and independent analysis of this pattern is required. The purpose of this paper is to shed light on this pattern and offer an analysis for it, via an extensive case study of Dutch. While we hope that our results will extend without much modification for German, we leave the suitability of our proposal for this language for future research.

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[2] For discussion of the particularities of R-pronoun extraction in German, see Noonan (2017) and Hein and Barnickel (2018).

Table 1 Patterns of P-stranding under regular wh-movement and sluicing

P-stranding under regular *wh*-movement	✓	✗	✗	✓
P-stranding under sluicing	✓	✗	✓	✗
Example from this section	English (1)(2)	Greek (3)	Spanish (5) English (6)	Dutch (8) German (9)

The paper is structured as follows. In Sect. 2, we provide background information on preposition stranding in Dutch and its availability under sluicing, considering observations from the literature as well as the results of an acceptability judgment study we have carried out. In Sect. 3, we rule out appealing to prosody to explain 'Merchant's Wrinkle' by showing that, at least from a prosodic perspective, R-pronouns are licit remnants of sluicing. In Sect. 4, we first refute Kluck's (2015) syntactic explanation of 'Merchant's Wrinkle' before proposing our own account. Our analysis revolves around the idea that sluicing bleeds preposition stranding in Dutch.

2 Dutch R-pronouns

In this section, we first provide some background information on the form, distribution, and meaning of R-pronouns and related phenomena in Dutch, before elaborating on how R-pronominalization interacts with sluicing in Dutch. Because only the basic information needs to be conveyed for now, we gloss over many technical syntactic details in this section. A deeper and more technical picture of the Dutch locative PP is presented in Sect. 4, in which we outline our analysis.

2.1 Dutch PPs, R-pronouns, P-stranding, and P-pied-piping

Dutch R-pronouns are non-human, pronominal complements of spatial prepositions that are realized as locative pronouns but display the syntactic hallmarks of nominal expressions. They are called *R-pronouns* because all Dutch locative pronouns contain the phoneme *r* (e.g., *waar* 'where', *daar* 'there', *ergens* 'somewhere', *hier* 'here') (van Riemsdijk 1978). In addition to being realized in a locative form, an R-pronoun must linearly precede its preposition (10). The prevailing view is that the observed 'R-pronoun > P' word order arises from A′-movement of the R-pronoun. Thus, an R-pronoun necessarily strands its preposition. When stranding occurs PP-internally, the R-pronoun A′-moves to the specifier a functional projection within the PP domain (11) (Van Riemsdijk 1978; Koopman 2000; Den Dikken 2010; for alternative views, see Bennis and Hoekstra 1984; Müller 2000; Abels 2003; and Noonan 2017).

(10) a. Ik heb de bal **daar**$_R$op gelegd.
        I have the ball there.on put

    b. * Ik heb de bal op **daar**$_R$ gelegd.
        I have the ball on there put
        'I have put the ball on it.'

(11) *For (10a):* ... $[_{FP}$ **daar**$_{R1}$ ... $[_{PP}$ op $t_1]]$ ...

                     the locative PP domain in Dutch

When stranding occurs PP-externally [see (12) and (13)], the R-pronoun escapes the PP via the specifier of the functional projection represented in (11), which is characterized as the 'escape hatch' from the PP domain by Koopman (2000) and Den Dikken (2010).

(12) Waar$_{R1}$ kijkt hij $[_{FP}$ t_1 ... $[_{PP}$ **naar** $t_1]]$?
    where looks he at
    'What is he looking at?'

(13) De oorlog, DAAR$_{R1}$ heeft hij een boek $[_{FP}$ t_1 ... $[_{PP}$ **over** $t_1]]$ geschreven.
    the war there has he a book about written
    'The war: THAT's what he's written a book about.'

In Dutch, PP-pied-piping involves A′-movement of the entire PP domain (Koopman 2000; Den Dikken 2010). This results in configurations such as (14) and (15) for PP domains that contain R-pronouns.

(14) a. Waar$_R$naar kijkt hij?
        where.at looks he
        'What is he looking at?'

    b. $[_{FP}$ Waar$_{R1}$ ... $[_{PP}$ naar $t_1]]_2$ kijkt hij t_2?

(15) a. De oorlog, DAAR$_R$OVER heeft hij een boek t_2 geschreven.
        the war there.over has he a book written
        'The war: THAT's what he's written a book about.'

    b. ... $[_{FP}$ daar$_{R1}$ ... $[_{PP}$ over $t_1]]_2$ heeft hij een boek geschreven.

It is important to stress that R-pronominalization, and therefore preposition stranding, is confined to inanimate pronominal complements of prepositions in

Dutch. Animate pronouns and non-pronominal complements cannot strand their selecting prepositions:[3]

(16) a. **Naar** wie kijkt hij? /* Wie kijkt hij **naar**?
    at who looks he   who looks he at
    'Who is he looking at?'
  b. **Naar** welk plaatje kijkt hij? /* Welk plaatje kijkt hij **naar**?
    at which picture looks he   which picture looks he at
    'Which picture is he looking at?'

As mentioned in Sect. 1, despite being realized in a locative pronominal form, R-pronouns are nominal expressions, not prepositional phrases. In addition to the observation that R-pronouns are interpreted as binding the argument of a preposition (as already shown in many of the examples presented so far), support for this comes from licensing parasitic gaps: like standard A′-moved DPs, A′-moved R-pronouns can license parasitic gaps. Conversely, an A′-moved PP containing an R-pronoun cannot (17) (Zwart 2011, 217).

(17) a. Waar$_{R1}$ is Tasman zonder [e]$_{PG}$ naar op zoek te
    where is Tasman without   to up search to
    zijn t_1 naar toe gezeild?
    be   to towards sailed
    'What did Tasman sail towards without being on the lookout for?'

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[3] There are some exceptions to this generalization, however. First, as Broekhuis (2013) and Kluck (2014) show, the pattern exhibited by animate and non-pronominal complements of prepositions is increasingly used nowadays for some inanimate pronouns as well. Forms such as *op iets* 'on something', *op niets* 'on nothing', *op alles* 'on everything' or *op wat* 'on what' lack R-pronominalization of the inanimate complement of the preposition yet are acceptable for many speakers (see Müller (2000) for a similar alternation in interrogative contexts in German). Second, pronouns referring to animate non-human entities can optionally undergo R-pronominalization:

(i) Ik heb een hond, en ik ga {er$_R$mee /met hem} vaak wandelen.
   I have a dog and I go there.with with him often walk
   'I have a dog and I often go walking with him.'

Third, despite being met with disapproval by normative grammarians, R-pronouns with a human reference can occur as relative pronouns in colloquial speech (Broekhuis 2013):

(ii) het meisje waar$_R$ Jan verliefd op is
    the girl where Jan in.love on is
    'the girl who Jan is in love with'

For the purposes of this paper, we must leave these exceptions aside.

b. * Waar$_R$naar$_1$ is   Tasman zonder [e]$_{PG}$ op zoek   te zijn t_1
       where.to   *is*   *Tasman* *without*   *up search to be*
       toe   gezeild?
       towards   *sailed*
       Intended: 'In the direction of which (land) did Tasman sail without
       being on the lookout for?'

<div align="right">(Zwart 2011, 217, ex. 7.245a, b)</div>

Another clear indication that R-pronouns and true locative pronouns are different comes from word order. Although an R-pronoun must obligatorily precede its selecting preposition (recall (10)), a true locative pronoun, if selected by a preposition, must follow it (18).

(18) De bus vertrekt van **hier**.
      the bus departs from here

R-pronominalization therefore instantiates a form-function mismatch: although an R-pronoun has the morphological form of locative expression, it shows the syntactic and semantic hallmarks of a nominal.

2.2 Dutch R-pronouns and ellipsis

As already mentioned in Sect. 1, 'bare' R-pronouns in Dutch cannot be remnants of sluicing. The example in (8b) (repeated in (19b)), lacks the reading that is available in its non-elliptical counterpart in (14b). In other words, the *wh*-remnant in sluicing cannot refer to the complement of the elided preposition *naar*.

(19) He is looking at something, …   *Dutch*
      a. maar   ik weet niet waar$_{R1}$ hij [$_{PP}$ **naar** t_1] kijkt.
         but   I   know not   where   he   at   looks
         'but I don't know what he is looking at.'
      b. maar   ik weet niet {waar / * waar$_R$ }.
         but   I   know not   where   where
         i. * 'He is looking at something, but I don't know what he is looking at.'
         ii.   'He is looking at something, but I don't know where he is
               looking at something.'

The availability of reading (ii) in (19b) indicates that the problem is not due to a general ban on *wh*-extraction of 'locative-looking' proforms under ellipsis. Nor is the problem due to a general ban on interpreting locative-looking proforms within remnants of sluicing as arguments: the example in (20) is acceptable and has the argumental interpretation in (19bi).

(20) Hij kijkt ergens   naar, maar ik weet niet waar$_R$**naar**.
      he   looks somewhere at   but   I   know not   where.at
      'He is looking at something, but I don't know what (he is looking at).'

As Kluck ([2015]) points out, the ban on preposition stranding under sluicing extends to other types of elliptical constructions, including fragment questions (21), fragment answers (22), stripping (23), and gapping (24).

(21) A: Ik   ga   ergens$_R$ een   boek **over**   schrijven.
        I   *go*   *somewhere*   *a*   *book about write.INF*
        'I will write a book about something.'   (Kluck [2015], ex. 12)
    B: Oh ja? Waar$_R$*(**over**) dan?
        oh yes where.about   then
        'Really? About what?'

(22) A: Waar$_R$ heb jij   een boek **over**   geschreven?
        where have you a   book about written
        'What have you written a book about?'   (Kluck [2015], ex.11)
    B: Je   weet   wel, daar$_R$*(**over**).
        you know   AFF   that.about
        'You know, about that!'

(23) Ik schrijf HIER$_R$ een boek over   en   niet DAAR$_R$*(**over**).
     I   write   this   a   book about and not   that.about
     'I'll write a book about this, and not that.'   (Kluck [2015], ex.14)

(24) Ik schrijf HIER$_R$ een boek over   en   jij   DAAR$_R$ een essay *(**over**).
     I   write   this   a   book about and you that   an   essay about
     'I'll write a book about this, and you an essay
     about that.'   (Kluck [2015], ex.13)

As these examples show, the argumental reading of the R-pronoun is unavailable without its selecting preposition, leading to the generalization in (25) (Kluck [2015]).

(25) Dutch R-pronouns cannot strand a preposition in an ellipsis site.

In this paper we concern ourselves with the puzzle described in this section as formulated in (25).[4]

Note that the generalization in (25) applies only to R-pronouns: it does not extend to remnants of sluicing that are non-pronominal, such as lexical DPs. It transpires that such phrases can appear as remnants of ellipsis with or without their selecting preposition, with identical acceptability, as the examples in (26) illustrate. Because lexical DPs cannot strand their selecting prepositions under regular *wh*-movement in Dutch (as already mentioned in the previous subsection), cases such as (26B') violate the preposition stranding generalization. This type of violation fits the description given in the third column in Table 1, and therefore instantiates the same type of violation reported in Spanish, Brazilian Portuguese, Polish, and so on (see Sect. 1): they do not instantiate a case of 'Merchant's Wrinkle'.

(26) A: Waar$_R$ gooide je **mee**?
  where   threw   you   with
  lit. 'What have you thrown with?' (What have you thrown?)
 B: Met een softbal.
  with a   softball
 B': Een softbal.
  a   softball
  'With a softball.' / 'A softball.'

Nevertheless, because violations of this type seen in other languages have been analyzed as involving elliptical clefts and are therefore only apparent violations, it

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[4] That prepositions cannot be stranded under ellipsis seems to recall the situation with *wat voor/was für* split constructions in Dutch and German: the preposition *voor/für* can split off under *wh*-movement, but cannot do so under ellipsis (Corver and van Koppen 2018). We thank a reviewer for calling our attention to this phenomenon:

(i) Ze maken een film, maar ik weet niet wat voor een film.
   they make   a   film but   I know not what for a   film
   'They are making a film, but I don't know what kind of film.'
(ii) * Ze maken een film, maar ik weet niet wat ~~voor   een   film   ze   maken~~.
   *they make   a   film But   I know not what **for** a   film they make*
   'They are making a film, but I don't know what kind.'

On the surface of it, these facts seem to resemble P-stranding under ellipsis, in that ellipsis disallows an otherwise attested extraction. Yet, the ungrammaticality can plausibly have different sources in the two cases. The *was für/wat voor* split is independently ruled out under ellipsis due to the *no new words* condition banning novel lexical material from the ellipsis site, originally stated in Chung (2005). Since the preposition *voor* 'for' in (ii) only occurs in the ellipsis site but not in the antecedent, it violates the *no new words* condition. In our cases of preposition stranding under sluicing, the stranded preposition in the ellipsis site is given, and thus does not violate *no new words*, suggesting that the ungrammaticality must be due to another reason.

Due to the fact that the *wat voor/was für* split is only attested with *wh*-movement and *für/voor* in the relevant meaning cannot form part of the antecedent, it is impossible to manufacture an example in which the stranded preposition in this construction is not new. Even though this state of affairs does not rule out the logical possibility that the *was für/wat voor* split should receive the same explanation as P-stranding under ellipsis, it makes a simple comparison with our cases impossible. For this reason, we do not extend our investigation to the *was für/wat voor* split in this paper.

must be determined whether Dutch cases such as (26B') also involve an elliptical clause. The acceptability judgment task reported in the next subsection does precisely this.

2.3 The results of an acceptability judgment task

To test the validity of the generalization in (25), we carried out an online acceptability judgment task targeting sluicing and fragments, using native Dutch-speaking participants. This section describes the experiment and its results.

Method. The questionnaire was an ordinal response task on a 7-point Likert scale (1 for unacceptable, 7 for acceptable). Participants were asked to rate the acceptability of elliptical and non-elliptical clauses with R-pronoun extraction. To exclude the unwanted interpretation in which an elliptical remnant corresponds to an optional sprouted locative adjunct, all stimuli were preceded by a context-setting sentence in which the location of the referent under discussion was specified (see examples (27) to (30) for illustrations). The questionnaire used a Latin-square design and contained six sub-experiments, four of which are relevant for the current study (see the list of stimuli in the Appendix). Two sub-experiments were unrelated to the current study (they contained non-elliptical sentences in which a preposition is doubled, and ellipsis with prepositions as sole items). Our filler stimuli were elliptical sentences with a missing predicate after a finite, non-modal auxiliary verb.

The experiment was run in Qualtrics. Each test stimulus was presented on a separate page, and the order of the target and filler items was randomized across all sub-experiments and participants. The questionnaire was completed by 91 native speakers, 9 of whom self-identified as bilingual (Dutch-Frisian/English/French/Mandarin/Serbian). The informants did not receive any remuneration for filling in the questionnaire, nor was any personal data retained other than their status as monolingual or bilingual speakers.

The results of the experiment were statistically analyzed in Excel (descriptive statistics) and via the Wilcoxon signed-rank test (the non-parametric equivalent of the dependent *t* test) in R.

Results. In Sub-experiment 1, preposition stranding in standard (i.e., embedded) sluicing was tested. This sub-experiment contained a 2×2 factorial design, where the factors were the presence of preposition stranding by a *wh*-R-pronoun (P-stranding vs. pied-piping) and the presence of ellipsis (±elliptic). There were four lexicalizations for each condition. Each token contained a different verb and preposition: *kijken naar* 'look at something', *staan op* 'stand on something', *trekken aan* 'pull on something' and *gooien met* 'throw with something'.

The results of this experiment show that the generalization in (25) is valid. The [+ellipsis, P-stranding] condition [see (27a)] was judged as unacceptable, with an average of 2.5 across all lexicalizations, whereas the [+ellipsis, P-pied-piping]

condition [see (27b)] was judged as acceptable, with an average of 6.6 across all lexicalizations.[5]

(27) a. **ellipsis, P-stranding:** *unacceptable*

    Dirk zit in de woonkamer. Hij kijkt ergens
    Dirk sits in the living.room he looks something
    naar, maar ik weet niet waar$_R$.
    not at but I know where

  b. **ellipsis, P-pied-piping:** *acceptable*

    Dirk zit in de woonkamer. Hij kijkt ergens
    Dirk sits in the living.room he looks something
    naar, maar ik weet niet waar$_R$naar.
    at but I know not where.at
    'Dirk sits in the living room. He looks at something, but I don't know (at) what.'

Furthermore, the non-elliptical counterparts of these sentences, which are exemplified in (28), were judged as fully acceptable, with an average of 6.6 and 6.5 respectively.

(28) a. **non-ellipsis, P-stranding:** *acceptable*

    Dirk zit in de woonkamer. Hij kijkt ergens naar, maar
    Dirk sits in the living.room he looks something at but
    ik weet niet waar$_R$ hij naar kijkt.
    I know not where he at looks

  b. **non-ellipsis, P-pied-piping:** *acceptable*

    Dirk zit in de woonkamer. Hij kijkt ergens
    Dirk sits in the living.room he looks something

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[5] In a separate sub-experiment, we tested whether idiomaticity of the verb + preposition combination affected judgments. For this purpose, we used *wh*-R-pronouns with P-stranding in matrix sluicing environments, with four lexical verb + preposition combinations that had both an idiomatic and non-idiomatic reading. These were: *staan voor* ('stand before something' and 'refer to something'), *staan achter* ('stand behind something' and 'support something'), *zitten op* ('sit on something' and 'take classes in something'), *liggen aan* ('lie on something' and 'depend on something'). As both conditions were judged as unacceptable, the outcome of this sub-experiment indicates that idiomaticity has no effect on the generalization in (25).

(i) A: Jan probeert iets te verbergen. Hij **staat ergens voor**. (*non-idiomatic*)
       Jan tries something to hide he stands something before
       'Jan is trying to hide something. He is standing in front of something.'
    B: Waar? (*average = 2.7*)
       where
       'What?'

(ii) A: De naam van winkelketen HEMA is een afkorting. Het **staat ergens voor**. (*idiomatic*)
       the name of retail.chain HEMA is an acronym it stands some-thing for
       'The name of the HEMA retail chain is an acronym. It refers to something.'
    B: Waar? (*average = 2.2*)
       what
       'What?'

naar,   maar ik weet   niet   waar$_R$naar hij   kijkt.
at   but   I   know   not   where.at   he   looks
'Dirk is sitting in the living room. He is looking at something, but
I don't know <at> what he is looking <at>.'

The average mean scores of the four conditions are presented in Fig. 1, with the elliptical conditions in blue and the non-elliptical ones in red. Applying the non-parametric Wilcoxon signed-rank test indicated that the P-pied-piping ranks (Mdn = 7) are significantly higher than the P-stranding ranks (Mdn = 2) in the ellipsis condition; $V = 20.5$, $p < .001$. The same test also indicated that the P-stranding (Mdn = 7) and the P-pied-piping (Mdn = 7) conditions did not significantly differ in the non-ellipsis condition; $V = 276.5$, $p = .252$. This confirms that Dutch speakers cannot strand a preposition in the ellipsis site under standard embedded sluicing.

In a separate sub-experiment (namely, Sub-experiment 2), each elliptical example in Sub-experiment 1 was compared to its non-elliptical cleft counterpart [see, e.g., (29)], in a 2 × 2 factorial manner, where the factors were the presence of P-stranding and the sentence type (elliptical vs. non-elliptical cleft). Just like in Sub-experiment 1, there were four lexicalizations for each condition. The purpose of this experiment was to discover whether the elliptical clauses from Sub-experiment 1 could be clefts. Our informants reported that clefting is degraded but not fully unacceptable both in the P-stranding and pied-piping conditions, as examples in (29) show. Note that cleft continuation without a preposition (i.e., … *maar ik weet niet waar het is* 'I know not where it is') is fully ungrammatical, and was therefore not tested.

(29) a. **non-ellipsis/cleft, P-stranding:** *degraded acceptability*
          Dirk zit in   de   woonkamer. Hij kijkt ergens   naar,
          Dirk sits in   the   living.room he   looks something at
          maar ik   weet niet waar$_R$ het naar is.   (*average = 3.4*)
          but   I   know not   where   it   at   is
      b. **non-ellipsis/cleft, P-pied-piped:** *somewhat degraded acceptability*
          Dirk zit in de woonkamer. Hij kijkt ergens   naar,
          Dirk sits in the living.room he   looks something at
          maar ik   weet niet waar$_R$naar het is.   (*average = 4.7*)
          but   I   know not   where.at   it   is
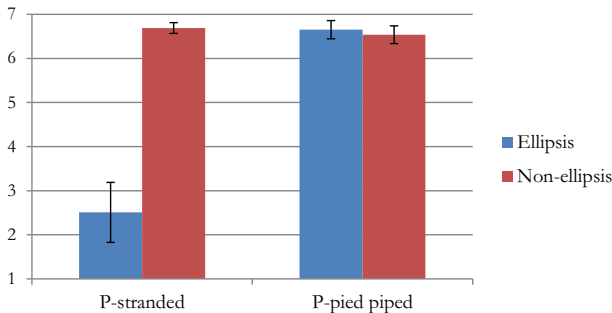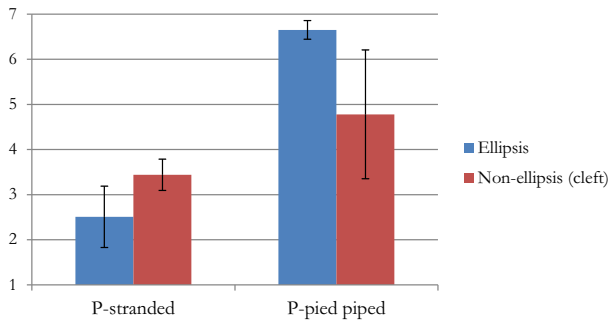

Fig. 1 Results of sub-experiment 1, average scores per condition

Fig. 2 Results of Sub-experiment 2, average scores per condition

Figure 2 shows that the elliptical condition in (27) is judged as less acceptable than the cleft in the P-stranding condition, but as more acceptable than the cleft in the P-pied-piping condition. These differences are significant in both cases. The Wilcoxon signed-rank test indicated that the −ellipsis (cleft) ranks (Mdn = 3) are significantly higher than the +ellipsis ranks (Mdn = 2) in the P-stranding condition; $V = 581, p < .001$. The same test also indicated that the +ellipsis ranks (Mdn = 7) are significantly higher than the –ellipsis (cleft) ranks (Mdn= 5) in the P-pied-piping condition; $V = 2814, p < .001$. Importantly, our informants' judgments differ also with respect to the two cleft conditions: clefts involving P-pied-piping are significantly better than those with P-stranding. The Wilcoxon signed-rank test shows that the P-pied-piping ranks (Mdn = 5) are significantly higher than the P-stranding ranks (Mdn = 3) in the non-elliptical (cleft) condition; $V = 832, p < .05$.

From these results we can conclude that the elided clause in configurations such as (27b) is not a cleft. Rather, the configuration in (28b), which was judged as perfectly natural, underlies (27b). This once again emphasizes the puzzle at the heart of 'Merchant's Wrinkle': if sluicing with a run-of-the-mill, isomorphic elliptical clause is perfectly acceptable with pied-piped PP remnant, why isn't the same run-of-the-mill configuration available for the P-stranding configuration in (27a)?

Notice that the clefts in (29) are truncated, insofar as their accompanying relative clause is not present. Including the relative clause in the cleft yields similar results. In a post-hoc questionnaire study with 14 native speakers, we found that the preposition cannot be stranded inside the relative clause, with *waar* as the pivot of the cleft (see (30a), whose average rating was 2.8). A prepositional phrase pivot fares better, but is nevertheless degraded (see (30b), whose average rating was 5.1). We must leave investigation of this intriguing observation for future research.

(30)   **P-stranding in cleft with relative clause: *unacceptable***   ($N = 14$)
    a. Dirk zit in de woonkamer. Hij kijkt ergens **naar**,
       Dirk sits in the living room he looks something at
       maar ik weet niet waar het is dat hij **naar** kijkt.
       but I know not where it is that he at looks
       'He is looking at something, but I don't know what it is that
       he is looking at.'

P-pied-piped in cleft with relative clause: *somewhat degraded*   ($N = 14$)

b. Dirk zit   in   de   woonkamer. Hij kijkt   ergens
   Dirk sits in   the   living room   he   looks   something
   naar, maar ik weet   niet waar**naar** het is dat   hij kijkt.
   at   but   I   know   not   where.at it   is that he   looks
   'He is looking at something, but I don't know what it is that
   he is looking at.'

Finally, in Sub-experiment 3, we tested the acceptability of lexical phrases in fragmentary elliptical clauses. This experiment employed a 2×2 factorial design, where the factors were the presence of P-stranding by a *wh*-R-pronoun (P-stranding versus P-pied-piping) and the sentence type (elliptical versus non-elliptical cleft). There were four lexicalizations for each condition. We found that the elliptical conditions are fully acceptable (see (31B) and (31B′), whose average ratings were 6.8 and 6.2 respectively) whereas the non-elliptical cleft conditions are unacceptable in both cases (see (32B) and (32B′), whose average ratings were 1.6 and 2.3 respectively).

(31) A: Waar$_R$ kijkt   hij naar?
          where   looks he   at
          'What is he looking at?'
          P-pied-piped, ellipsis: *acceptable*
      B: Naar   mijn   favoriete   film.
          at   my   favorite   film
          P-stranding, ellipsis: *acceptable*
      B′: Mijn   favoriete   film.
          my   favorite   film

(32) A: Waar$_R$ kijkt   hij naar?
          where   looks he   at
          'What is he looking at?'
          P-pied-piped, non-ellipsis/cleft: *unacceptable*
   B: Naar mijn favoriete film is het.
          at   my   favorite   film   is   it
          'It is at my favorite film.'
          P-stranding, non-ellipsis/cleft: *unacceptable*
      B′: Mijn favoriete film is het.
          my   favorite   film   is   it
          'It is my favorite film.'

The average results for this experiment are presented in Fig. 3. Notice that the results are significant for both the P-stranding and the P-pied-piping conditions. The Wilcoxon signed-rank test indicated that the +ellipsis ranks (Mdn = 7) are significantly higher than the −ellipsis (cleft) ranks (Mdn = 2) in the P-stranding condition; $V = 3474.5, p < .001$. Similarly, the +ellipsis ranks (Mdn = 7) are significantly higher than the −ellipsis (cleft) ranks (Mdn = 1) in the P-pied-piping condition; $V = 4005, p < .001$.
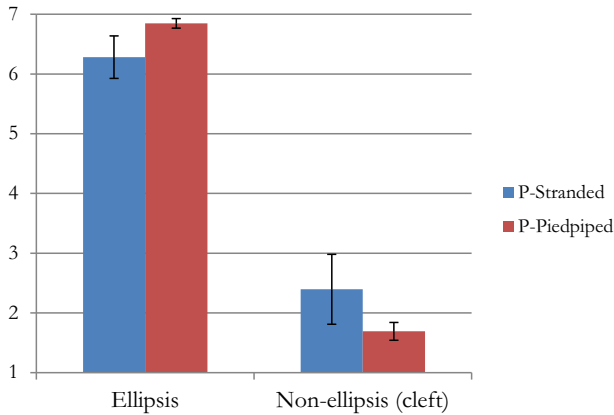
Fig. 3 Results of Sub-experiment 3, average scores per condition

Based on these results, we conclude that P-less lexical remnants in Dutch do not originate as pivots of a cleft. We propose that these remnants are left-peripheral dislocated constituents that are resumed by an R-pronoun, with clausal ellipsis applying to the resumptive element and whatever follows it (33). This proposal is motivated by the fact that clausal ellipsis in (contrastive) left-dislocation is already known to be available in mainland Germanic languages in some contexts (Den Dikken and Surányi 2017; Abels 2018), and by the fact that there are independent reasons to assume that the non-elliptical counterpart of (31B′) involves (contrastive) left-dislocation with ellipsis of the demonstrative pronoun, as in (34).[6]

(33) Mijn favoriete film, [~~daar~~_R ~~kijkt~~ ~~hij~~ ~~naar~~]
      my   favorite   film   there   looks   he   at
      'My favorite film, (that's) what he's looking at.'

(34) Mijn favoriete film, ~~daar~~_R kijkt hij naar.
      my   favorite   film   there   looks   he   at
      'My favorite film, (that's) what he's looking at.'

To summarize: in addition to confirming the claims made in the prior literature about preposition stranding under sluicing in Dutch, the results of our acceptability judgment experiments show that neither pied-piped PP remnants of sluicing nor 'bare' lexical DP remnants (i.e., DPs that are interpreted as complements of prepositions) are extracted from elliptical truncated or full clefts. From this, one may infer that any explanation for why bare R-pronoun remnants are disallowed under sluicing that appeals to non-isomorphic elliptical clefts is likely to be on the wrong track. In the case

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[6] The licensing conditions of this type of clausal ellipsis are not clear to us. While Den Dikken and Surányi (2017) argue that left dislocated phrases can only survive clausal ellipsis if they are explicitly contrastive, the contexts discussed in Abels (2018) do not require explicit contrast. The P-less remnants in our study can, but need not be, contrastive. We leave determining the role of contrast in licensing this type of ellipsis for future research.

of 'bare' lexical DP remnants, we proposed that these are left-dislocated phrases in elliptical clauses that contain preposition stranding A′-movement, and which therefore do not violate Merchant's preposition stranding generalization.

In short, our experiments confirm the generalization that Dutch R-pronouns cannot strand a preposition in an ellipsis site. In the next section, we refute the extant explanations for why this generalization holds.

3 Previous analyses

3.1 Merchant (2001): accentuating the R-pronoun remnant

Merchant (2001, 95) offers a prosodic explanation for the unavailability of preposition stranding under sluicing in R-pronoun contexts. He proposes that remnants of sluicing must be able to bear both non-contrastive and contrastive focal accents and that R-pronouns make for unsuitable remnants because they can bear only a contrastive focal accent (compare (35a) and (36); see also examples in Hoeksema 2014, 33). Thus, the unavailability of bare R-pronoun remnants in sluicing arises from a clash in the prosodic requirements of R-pronouns, which reject a non-contrastive accent, and sluicing, which induces such an accent (35b).[7]

(35) ***Non-contrastive (nuclear) accent on R-pronoun***
    a.   *   Ik   weet   niet   WAAR$_R$ hij   op   rekent.
            I   *know*   *not*   *where*   *he*   *on*   *counts*
            'I don't know what he counts on.'   (judgment from Merchant 2001, 95)
    b.   *   Ik   weet   niet   WAAR$_R$ ~~hij~~   ~~op~~   ~~rekent~~.
            I   *know*   *not*   *where*   *he*   *on*   *counts*
            'I don't know what.'

(36) ***Contrastive (nuclear) accent on R-pronoun***
     Het   maakt   me   niet   uit   WAAR$_R$ je   naar   kijkt,   als   je
     it   *makes*   *me*   *not*   *out*   *where*   *you*   *at*   *look*   *if*   *you*
     maar   ERGENS$_R$ naar kijkt.
     but   *somewhere*   *at*   *look*
     'I don't care WHAT you look at, as long as you look at SOMETHING.'

Merchant's explanation only works if it is indeed true that R-pronouns cannot bear non-contrastive stress. Problematically, this assumption is false. The pitch contours of some of the pilot recordings we elicited from 3 Dutch native speakers show that R-pronouns can receive both contrastive and non-contrastive (i.e., nuclear/sentence-level) accent. This is shown on the pitch track in Fig. 4, which we generated from one of our pilot recordings.

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[7] Note that in Merchant's account, contrastive focus accent on the remnant is a necessary but not a sufficient condition to license ellipsis, as the ungrammaticality of (23)/(24), both involving contrastive accent on the remnant, shows.
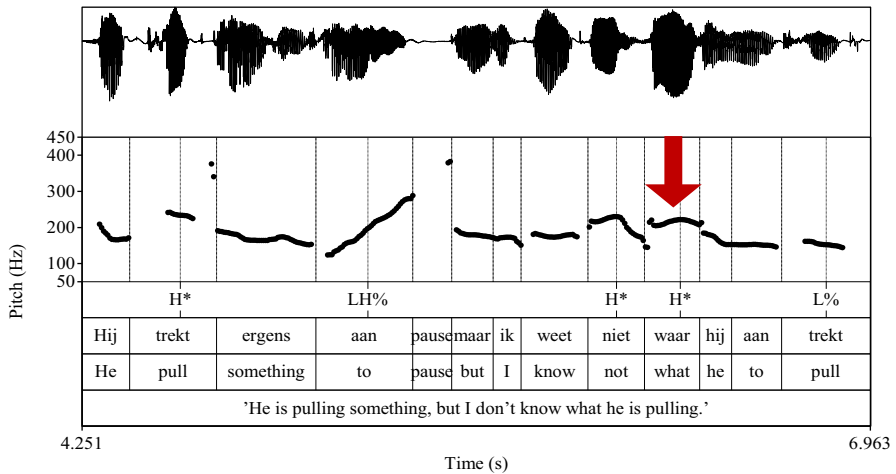
Fig. 4 F0 contour of an accented R-pronoun (**non-contrastive**)

(37) **Example used in Fig. 4**

Hij trekt ergens$_R$ aan, maar ik weet niet WAAR$_R$ hij aan trekt.
he pull somewhere to, but I know not where he to pull
'He is pulling something, but I don't know what he is pulling.'

As the arrow indicates, the F0 contour on the area where the second R-pronoun (*waar*) is positioned exhibits a peak, which is the marker of an accent in Dutch. The area that follows this peak bears a low level flat F0, indicating that this area (i.e., the string *hij aan trekt*) is deaccented and that the accent on the R-pronoun is the last accent in the sentence. The contrast between the accented R-pronoun and the succeeding deaccented area is also reflected in the mean F0. The mean F0 of *waar* is 210 Hz, whereas the mean F0 of the deaccented area that follows *waar* is 165 Hz. Since the final accent in Dutch is interpreted as the most prominent one, it is analyzed as bearing the nuclear/sentence-level accent (Gussenhoven 1984). From this pitch track, we can therefore conclude that the R-pronoun does bear a non-contrastive accent, and this accent is a sentence-level nuclear accent.

Considering that R-pronouns may indeed bear (non-)contrastive accents, Merchant's analysis cannot be correct: there must be another reason for why R-pronouns that bear a non-contrastive accent (such as (35b)) or a contrastive one (such as (38), which is the elliptical counterpart of (36)), cannot be remnants of sluicing.

(38) * Hij trekt ergens$_R$ aan, maar ik weet niet WAAR$_R$ ~~hij~~ ~~aan~~ ~~trekt~~.
he pulls somewhere to, but I know not where he to pulls
'He is pulling something, but I don't know what.'

3.2 Accenting the elided preposition

Another potential prosodic solution rests on the assumption—which we will adopt in this subsection for the sake of argument—that ellipsis involves *radical deaccentuation* (Tancredi 1992). This refers to the idea that only material that is already given (in Schwarzschild's 1999 sense) and therefore prosodically deaccented can be rendered unpronounced:

(39) Radical deaccentuation cannot target items that must be accented.

Equipped with (39), one may propose that preposition stranding under sluicing is banned in Dutch because the preposition that is left behind in the ellipsis site must bear an accent, which precludes radical deaccentuation (i.e., ellipsis).

At first glance, this explanation seems plausible, as prepositions do indeed receive an accent in most R-pronominalization configurations (see (40), and also Merchant 2001; Gussenhoven 1984, 178−179).

(40) a. Waar**VAN** heb je   genoeg?
          where.of have you enough
          'What have you had enough of?'
      b. Waar krabde je   het van**AF**?
          where scratch you it of.from
          'What did you scratch it off from?'

For this analysis to work, prepositions in R-pronominalization configurations must always bear an accent. Problematically, this is not true. The example in (41) and its accompanying pitch track in Fig. 5 show that such prepositions can indeed be deaccented.

(41) Bob   schrijft ergens   over, maar ik   weet
      Bob   writes   somewhere about but   I   know
      niet WAAR hij over   schrijft.
      not   where he   about   writes
      'Bob is writing about something, but I don't know what he is writing about.'

Like the contour in Fig. 4, the F0 contour in Fig. 5 exhibits a peak on the area where the R-pronoun *waar* is positioned in the second clause. This marks the nuclear, sentence-level accent. The area that follows this peak bears a low level flat F0, indicating that this area (i.e., the string *hij over schrijft*) is deaccented and that the accent on the R-pronoun is the last high pitch accent in this sentence. Just like in Fig. 4, the mean F0 of the accented R-pronoun is higher than the mean F0 of the succeeding deaccented string. The mean F0 of *waar* in Fig. 5 is 235 Hz, whereas the mean F0 of the deaccented area that follows *waar* is 172 Hz. As the contour below the arrow indicates, the preposition *over* is deaccented, bearing a mean F0 of 158 Hz.
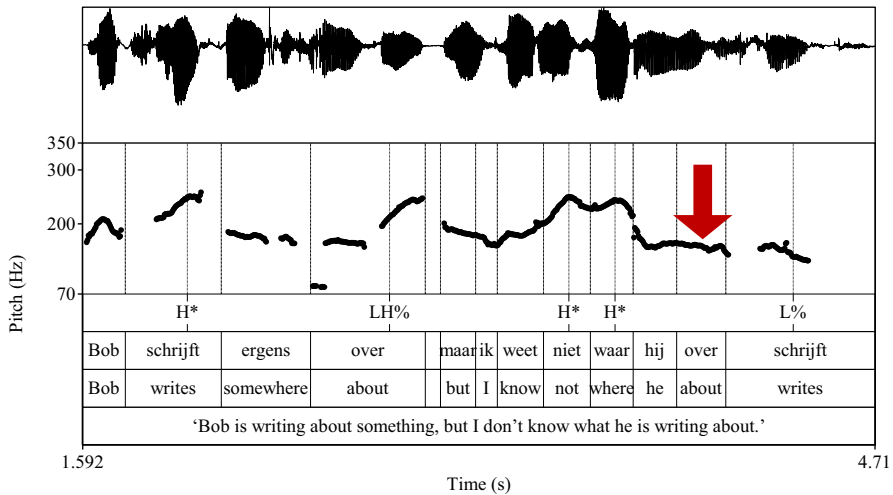
Fig. 5 F0 contour of a deaccented preposition that is stranded (*over* in the second clause)

Furthermore, there are R-prominalization contexts in which prepositions clearly **cannot** be accented. This is seen in the examples in (42), in which the item that precedes the preposition, rather than the preposition itself, must be accented (see Gussenhoven 1984, 178 for discussion of related facts).

(42) a. Waar heb je {GENOEG van / * genoeg VAN}?
    where have you   enough of   enough of
    'What have you had enough of?'
   b. Hier is ze {BLIJ mee / * blij MEE}.
    here is she happy with   happy with
    'She is happy about this.'

The fact that the prepositions in non-elliptical R-pronominalization configurations may be deaccented means that they can also undergo radical deaccentuation in elliptical contexts. Therefore, the unacceptability of a sluicing construction such as (43), which is the elliptical version of (41), cannot be related to the unavailability of radical deaccentuation on such prepositions.

(43) * Bob schrijft ergens   over, maar ik weet niet WAAR ~~hij over schrijft.~~
    Bob writes somewhere about but   I know not where he about writes
    'Bob is writing about something, but I don't know what he is writing about.'

In summary, we conclude that neither the R-pronoun nor the preposition exhibit prosodic properties that prevent sluicing from occurring. Therefore, the ban on preposition stranding under sluicing in Dutch cannot be explained by appealing to

the accentuation profile of either the preposition with the ellipsis site or the R-pronoun remnant.

3.3 Kluck (2015): overtness of P as a syntactic requirement

Recall the generalization on preposition stranding under sluicing presented in Sect. 2 [repeated below in (44)].

(44) Dutch R-pronouns cannot strand a preposition in an ellipsis site.

Kluck (2015) views 'Merchant's Wrinkle' being related to prepositions rather than to preposition stranding. As a result, she recasts the generalization in (44) as follows:

(45) Prepositions that select R-pronoun arguments must be overt in sluicing.

Kluck suggests that R-pronouns are inherently semantically underspecified and interpreted as either a true locative or as an argument of a preposition only through a syntactic licensing process. She claims that a 'locative-looking' expression such as *waar* can only be interpreted as an argument of a preposition if its selecting preposition is overt. When there is no selecting preposition in the syntactic phrase marker, or when the selecting preposition is not overt, then only the locative interpretation is licensable, and therefore only the locative interpretation is obtained. The licensing conditions for both interpretations are schematized in (46). In the examples below, dotted arrows mark syntactic licensing.

(46) a. $[_{PP}$ **P**$_{OVERT}$ $[$ pron$_R]]$ $\rightarrow$ incompatible with the ellipsis of P$_{OVERT}$

   b. $[_{PP}$ **P**$_{NULL}$ $[$ pron$_{LOC}]]$ $\rightarrow$ compatible with the ellipsis of P$_{NULL}$

Kluck's syntactic licensing mechanism correctly predicts that a sluicing remnant such as *waar* cannot be interpreted as the argument of a stranded preposition because the stranded preposition, having been rendered null by ellipsis, cannot license its R-pronoun argument. Thus, in a sentence such as (47), the copy of *waar* in the ellipsis site cannot be licensed by the elided preposition (assuming that the presence of an overt argument licensing preposition in the antecedent clause cannot serve as a licensor itself, via structural parallelism of some sort).

(47) P$_{NULL}$: ✗ argumental licensing

   * Hij rekent ergens   op, maar ik weet niet
     he *counts* *somewhere* *on* *but* *I* *know* *not*

                                   $[_{CP}$ waar$_R$ $[_{TP}$ ~~hij~~ $[_{PP}$ t_R $[$ ~~op$_{NULL}$~~ t_R $]]$ ~~rekent~~ $]]$
                                          where   *he*   *on*   *counts*

   'He counts on something, but I don't know **what** (he counts on).'

The only licensing configuration that suits sluicing contexts is (46b), in which the locative interpretation is licensed. Precisely how a null/elided preposition licenses

the locative interpretation in Kluck's account is illustrated in (48), in which the context allows for a (sprouted) true locative interpretation of *waar*.

(48) P_{NULL}: ✔ locative licensing

Hij rekent ergens op,
he counts some-where on

maar ik weet niet [$_{CP}$waar$_{LOC}$ [$_{TP}$ hij [$_{PP}$ P∅ t_{LOC}] [$_{PP}$ ergens [op-t_R]] rekent]]
but I know not where he somewhere on counts

'He counts on something, but I don't know **where** (he counts on something).'

Although the syntactic licensing conditions in (46) account for the ban on preposition stranding under sluicing in Dutch R-pronominalization contexts, this analysis exhibits several shortcomings.

First, the postulation of a **syntactic** licensing relation based on the phonological properties of its licensing head (i.e., overt or null) is ad-hoc, unattested elsewhere in the grammar of Dutch and involves 'look-ahead', as the syntactic licensing of the R-pronoun should take place earlier in the derivational procedure than ellipsis (according to every account that treats the process of deletion as a PF phenomenon). This holds for the licensing of argumental R-pronouns and locative R-pronouns alike.

Second, Kluck's proposal wrongly predicts that whenever the licensor preposition is not overt (e.g., whenever it is elided), the argument meaning of the R-pronoun cannot be licensed, regardless of whether the R-pronoun itself is elided. This prediction is not borne out. In (49), for example, the elided R-pronoun *ergens* can receive an argumental interpretation despite its licensor preposition being null.

(49) P_{NULL}: ✔ **argumental** licensing

Hij rekent ergens op,
he counts some-where on

maar ik weet niet [$_{CP}$waar$_{LOC}$ [$_{TP}$ hij [$_{PP}$ P∅ t_{LOC}] [$_{PP}$ ergens$_{NULL}$ [op$_{NULL}$ t_R]] rekent]]
but I know not where he somewhere on counts

'He counts on something, but I don't know where (he counts **on something**).'

Third, since the licensing conditions in (46) are syntactic/semantic in nature, one expects to see similar effects in other languages that strand argument-licensing prepositions. English is a language in which such configurations can be found and in which, in some contexts, the extracted complement of a preposition can take the form of a locative adjunct. Consider the examples in (50) and (51), in which the remnant of sluicing *where* is in principle ambiguous between a locative and an argumental interpretation (see Caponigro and Pearl 2009 for an account of this ambiguity). Nevertheless, for both British English and American English speakers,

the argumental reading is available for *where* the elliptical questions, and this reading is preferred over the locative reading. The fact that the argumental interpretation is available under ellipsis, even when the licensor preposition is null, shows that the licensing conditions in (46) do not apply in a closely-related language, which in turn casts doubt on their reality in Dutch.

(50) A: You have to fly through a lot of places on your way to Vancouver.

B: Where exactly? ✔argumental = Where$_i$ exactly ~~do I have to fly through~~$_{NULL}$ ~~t$_i$~~?

(51) A: I have taken ideas from a lot of articles.

B: Where exactly? ✔argumental = Where$_i$ exactly ~~have you taken ideas from~~$_{NULL}$ ~~t$_i$~~?

Because of these shortcomings in Kluck's proposal, we believe the explanation for 'Merchant's Wrinkle' should be sought elsewhere. We present our own proposal in the next section.

4 A novel analysis: 'Merchant's Wrinkle' as EPP repair

4.1 An informal overview

Several researchers have argued that ellipsis bleeds overt A-movement of the subject to SpecTP. Merchant's (2001) evidence for this comes from the observation that the Subject Condition (Chomsky 1973) seemingly ceases to apply under sluicing in English [compare the examples in (52)]. Assuming that subjects are islands in non-elliptical contexts because they occupy a derived position (i.e., they are A-moved phrases) (53a), Merchant proposes that subjects inside ellipsis sites are not islands because they do not occupy a derived position. Instead, their movement to SpecTP is bled, meaning that they occupy their base position (53b). Put differently, Merchant proposes that the Subject Condition still applies under sluicing but is circumvented by A-movement being bled.

(52) a. * [Which Marx brother]$_1$ is [a biography of t_1] going to be published this year?
  b.   A biography of a Marx brother is going to be published this year, guess which one!

(53) a. *For (52a):* [which MB]$_1$ … [$_{TP}$ [a biography of t_1]$_2$ [$_{vP}$ t_2 …]]
  b. *For the ellipsis site in (52b):* [which one]$_1$[~~$_{TP}$~~ [~~$_{vP}$~~ [~~a biography of t_1~~] …]]

Van Craenenbroeck and Den Dikken (2006, 658) use the same reasoning to explain why the elliptical clause in (54b) is acceptable whereas its non-elliptical counterpart in (54a) is not, following a proposal in Den Dikken et al. (2000). In (54a), the NPI subject cannot be licensed because negation does not c-command it, whereas in (54b) the NPI subject is licensed because it remains in its base position, from which

negation c-commands it, as (54c) shows. Note that the representation in (54c) reflects the so-called *in-situ* view of ellipsis, an operation that does not utilize movement of the remnant to allow unselective deletion of a syntactic constituent.

(54) a. * Any of the printing equipment didn't work.
 b. A: What didn't work?
   B: Any of the printing equipment.
 c. *For the ellipsis site in (54a):* [~~TP~~ ~~did not~~ [vP any of the printing equipment] ~~work~~]

Van Craenenbroeck and Den Dikken (2006, 658−663) also argue that movement to SpecTP is bled in Dutch elliptical constructions. Their evidence comes from how complementizer agreement and sluicing interact in Dutch dialects. First, they observe that complementizer agreement is possible in certain varieties of Dutch, but only when the subject has moved to SpecTP (i.e., above the adverb *allichte* 'probably'):

(55) a. … darr-**e** **wiej** allichte de wedstrijd winne zölt.
     that-AGR *we* *probably* *the* *game* *win* *will*
                                   Hellendoorn Dutch

 b. … darr(*-**e**) allichte **wiej** de wedstrijd winne zölt.
     that-AGR *probably* *we* *the* *game* *win* *will*
     '…that we will probably win the game.'

Second, they observe that complementizer agreement is not permitted under sluicing (compare the examples in (56)). This, they claim, is expected if subject-movement to SpecTP is bled under ellipsis: the ellipsis site will always pattern with (56b), in which the absence of subject-movement blocks complementizer agreement.

(56) a. Jan weet niet wie darr-**e** wiej gezien hebt. *Hellendoorn Dutch*
     Jan knows not who that-AGR we seen have
     'Jan doesn't know who we have seen.'
 b. Wiej hebt 'r ene ezeen, en Jan weet niet wie(*-**e**).
     we have there someone seen and Jan knows not who-AGR

As is well known, subject-movement to SpecTP in English occurs to satisfy the Extended Projection Principle (*the EPP*; Chomsky 1981), which states that the structural subject position—i.e., SpecTP—must be filled. The EPP is a formal syntactic requirement, insofar as it has no intrinsic semantic motivation. Chomsky (1995) recasts the EPP as the description of a syntactic feature, namely the uninterpretable D feature that resides on T. This feature is STRONG, which means that, when it Agrees with the closest phrase that satisfies it, it triggers overt movement to T's specifier (ibid.). This movement can therefore be viewed as *EPP-driven movement*. Adopting these ideas, Merchant (2001) characterizes the bleeding of

subject-movement to SpecTP under ellipsis as the bleeding of EPP-driven movement. Exactly how ellipsis bleeds EPP-driven movement is currently unknown, as no adequate formal analysis has yet been developed that avoids the 'look-ahead' problem that afflicts Merchant's (2001) original account (though see Den Dikken 2013 for possible workarounds). We do not attempt to develop such an analysis here: we instead assume that such an analysis can in principle be developed (i.e., the task might be difficult, but not impossible). What is important for our current purpose is not **how** ellipsis bleeds EPP-driven movement but simply that ellipsis **does** bleed it, and that there is robust empirical evidence for this fact. Consequently, the generalization presented in (57) will suffice for our purposes.[8]

(57)   **Bleeding EPP-driven movement under sluicing**
       Let F be a feature borne by a STRONG head. If F is a purely formal feature
       (i.e., it has no semantic import), then F is never present in a TP-ellipsis site.[9]

In more recent research, the term 'EPP-feature' has been applied to other features that, like the uninterpretable D feature on T, are STRONG and which make no discernible semantic contribution. For instance, Cable (2010) characterizes the uninterpretable Q feature on C as an EPP-feature.

Our analysis of 'Merchant's Wrinkle' capitalizes on the fact that EPP-features have been identified in additional syntactic domains. Extending the analysis in Koopman (2000), we propose that the head of the highest functional projection in the Dutch locative PP, namely PlaceP (which was referred to simply as 'FP' in Sect. 2), bears an EPP-feature, and it is this feature which, when checked by an R-pronoun, triggers movement of the R-pronoun to SpecPlaceP. If ellipsis bleeds EPP-features, then this feature should therefore be bled under sluicing. We propose that this is precisely what happens. Because SpecPlaceP is the 'escape hatch' through which R-pronouns must move in order to exit the PP domain to form

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[8] The formulation in (57) presupposes that EPP-driven movement is obligatorily bled under clausal ellipsis. The data discussed in the prior literature support this view: the English data in (52) and (54) are compatible with bleeding being obligatory (but fail to rule out the possibility that bleeding is optional), whereas the Dutch data favor an 'obligatory bleeding' perspective. Seeing as our analysis of R-pronouns will rely on EPP-driven movement being obligatorily bled under ellipsis, an anonymous reviewer wonders whether additional data can be adduced to support the 'obligatory bleeding' position. We tentatively suggest that English subject fragments, which must arise in the default, accusative form [see (i)], could feasibly be analyzed as supporting this position. If nominative-case assignment is tied to an EPP-feature on T in English, and if this feature is absent if T is contained in a TP-ellipsis site [following (57)], then the English subject fragment case facts are explained.

(i)   A: Who ate my sandwich?
      B: Me. / * I.

[9] Chomsky (1995) views strength (i.e., STRONG versus WEAK) as a property of features: when checked via Agree, a STRONG feature residing on head H triggers overt movement to SpecHP, whereas a WEAK feature does not. For the purposes of this paper, we view strength as a property of heads. Under this conception, any feature residing on a STRONG head will, when checked, trigger overt movement to SpecHP, **provided that** SpecHP is not already filled. We adopt this position merely for expositional convenience: our analysis can be stated in a manner that remains faithful to Chomsky (1995), but the result is less succinct.

P-stranding configurations such as P-stranding *wh*-clauses (see Sect. 4.2), bleeding EPP-driven movement of R-pronouns to SpecPlaceP therefore precludes R-pronouns from undergoing the *wh*-movement required to form *wh*-clauses. Put differently and more succinctly, we claim that:

(58) **A bleeding analysis of 'Merchant's Wrinkle'**
      P-stranding under sluicing in Dutch is impossible because ellipsis bleeds P-stranding *wh*-movement.[10]

The rest of this section is devoted to positioning the proposal encapsulated in (58) within a formal syntactic theory of Dutch locative PPs, R-pronouns, and EPP-features (Sects. 4.2.1–4.2.2). Although we do this primarily to show that (58) is compatible with contemporary views on the syntax of Dutch PPs, we hope that presenting an explicit formalism for (58) will prove beneficial for researchers who are working on these or closely related phenomena in the mainland Germanic languages. We should mention at this point that we view the following analysis as only one possible treatment of the facts, and as such we are not especially wedded to the technical apparatus (e.g., systems of feature-checking, particular feature values, etc.) that we employ, despite the ease with which it captures the data at hand.

In addition to introducing such a formal theory, in Sect. 4.2.3. we will also show that our proposal of EPP satisfaction by R-pronouns finds parallels in the clausal domain as well, when considering recent work by Wesseling (2018) showing that both true pleonastics (*er*) and contentful locative phrases (such as *hier* 'here' and *daar* 'there') can satisfy T's EPP feature.

4.2 The formal implementation

4.2.1 The technical apparatus: Pesetsky and Torrego's (2007) feature system

We adopt the feature-sharing Agree system outlined by Pesetsky and Torrego (2007), who distinguish between the *interpretability* and *valuation* of features. This yields the fourfold typology presented in (59). Here, the symbols i and u stand for 'interpretable' and 'uninterpretable'. The term that precedes the colon, which is represented here by the placeholder F, is the feature's attribute, and the term that follows the colon, which is represented here by the placeholder *val*, is the feature's value. An underscore denotes an unvalued feature. (When the interpretability and/or value of a feature is irrelevant to our analysis, we will not represent it in our phrase marker diagrams.)

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[10] An anonymous reviewer asks for clarification about place of EPP-bleeding in the architecture of grammar. Our understanding of Merchant (2001) and Den Dikken and Van Craenenbroeck (2006) is that EPP-bleeding is the absence in the numeration of those features that are present only to ensure that PF-demands are satisfied. Thus, EPP-bleeding occurs in the (pre-)syntax, yielding the most economical derivation possible (because those costly operations that take place to satisfy PF-demands do not occur). It therefore seems feasible to associate EPP-bleeding under ellipsis with a demand for global economy: the smallest numeration containing a particular type of [E]-feature is favored, and this numeration will not contain features that are present purely to ensure that PF-demands are satisfied, as these demands need not be satisfied when ellipsis occurs.

(59) iF: val = interpretable and valued
  iF: _ = interpretable and unvalued
  uF: val = uninterpretable and valued
  uF: _ = uninterpretable and unvalued

In this system, the operation *Agree* (Chomsky 2000, 2001) works as follows:

(60) **Agree** (simplified from Pesetsky and Torrego 2007)
  a. An unvalued feature Fα (a Probe) on a head H scans its c-command domain for another instance of Fβ (a Goal) with which to agree.
  b. Replace Fα with Fβ, so that the same feature is present in both locations.

We also assume that atomic features form feature-sets. For instance, the atomic features PLURAL, GENDER, ANIMATE, etc., form the φ-feature feature-set (Harley and Ritter 2002).

 We must make one extension to this otherwise well-established system of feature-checking. We will allow that feature attributes can, under well-defined conditions, be repurposed as values (61). This notion of repurposing feature attributes as values will play a pivotal role in the analysis presented below.

(61) **Feature repurposing**
  If an Agree relationship has been established between Fα (the Probe) on head H_1 and Fβ (the Goal) on head H_2, then an independent feature attribute G on H_1 can be repurposed as a value for Fβ (provided that G could independently serve as a value for Fβ).

To provide an example of how (60) and (61) work together, consider the abstract scenario presented in (62). Because the φ-feature on H is unvalued, it probes its c-command domain for another occurrence of itself. It establishes an Agree relationship with the φ-feature bundle on X, and therefore receives val_1 and val_2 from its Goal. Problematically, one of the atomic φ-features on X (namely, F_3) remains unvalued. When this happens, feature repurposing occurs, and G on H is repurposed as a value for F_3.
[11]

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[11] We view Agree as a relation between feature-bundles (i.e., syntactic heads), with Agree relations being established by one (or more) feature(s) within a bundle successfully probing downwards for a suitable goal feature. Once an Agree relation is established between two heads, the structural position of these heads relative to each other becomes irrelevant for the purposes of feature sharing/valuation. Under this conception of Agree, the idea that Feature Repurposing involves an additional instance of 'reverse' or 'upwards' Agree (Pesetsky and Torrego 2007; Zeijlstra 2012) above and beyond the Agree relation already established via the higher φ-Probe (as an anonymous reviewer suggests) becomes otiose. Note also that upwards Agree necessarily involves an uninterpretable feature probing upwards for its interpretable counterpart (Zeijlstra 2012), which is not required for Feature Repurposing. The anonymous reviewer is therefore correct that Feature Repurposing is similar in spirit to Pesetsky and Torrego's (2001) analysis of nominative case-checking [which, we contend, does not exhibit the flaws attributed to it by Pesetsky and Torrego in their later work (2007, 277)].

(62) a. **Before F probes for its Goal**
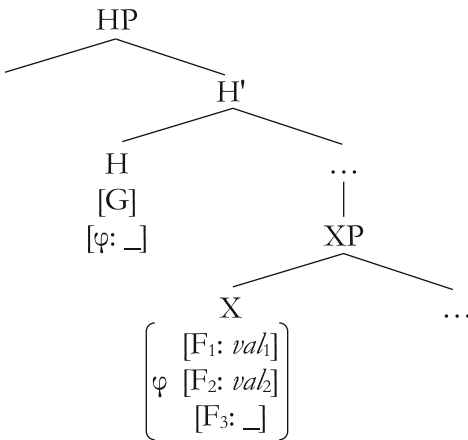
b. **Agree relationship established; G on head H is repurposed as the value for F on head X**

(underlined values are obtained via Agree)
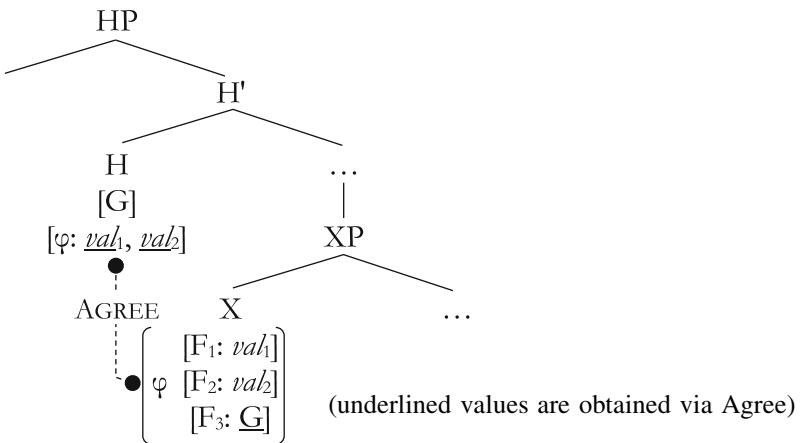
In Sect. 4.2.2, we will present our assumptions regarding the internal syntax of R-pronouns. Afterwards, we will show how the internal syntax we assume interacts with the PP domain in which such pronouns are observed. Following a detailed formalization of how R-pronouns are derived in the domain of PP, we will revisit the elliptical cases. In line with (58), we show how the syntax we suggest for R-pronoun containing PPs are not fit for deriving wh_R (without an overt P) in the context of ellipsis.

4.2.2 The formal analysis

As already discussed in Sects. 2 and 3, Dutch has two types of locative pronouns: 'true' locative pronouns, which linearly follow their selecting preposition and which are interpreted as denoting a location, and R-pronouns, which linearly precede their selecting preposition and which, despite appearances, exhibit the syntactic and semantic hallmarks of standard, non-human personal pronouns (*it*, *what*, etc.). Kayne (2004) accounts for these differences by proposing that the pronounced item in each case (i.e., *er*, *waar*, *daar*, etc.) is not actually a pronoun but rather a demonstrative that selects for a null noun, either PLACE (in the case of true locatives) or THING (in the case of R-pronouns) (63).[12,13]

(63)

True locative pronoun	R-pronoun
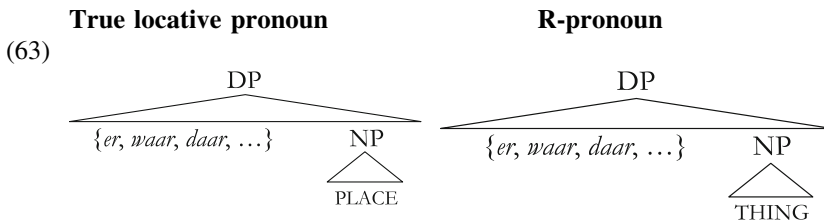
For reasons discussed later in this subsection, we believe that Kayne's core insight is better served by adopting a decompositional, Distributed Morphology approach, in which *waar*, *er*, *daar* etc. is the phonological realization of a complex syntactic head comprising an underspecified *n* head and a D head that can be specified for definiteness and *wh*-features. In the 'true locative' case, *n* bears an interpretable LOC feature, which captures the fact that true locatives arise with an inherently locative meaning (64). Although *n* in the R-pronoun case also bears LOC, it does so only as a formal φ-feature value (65). A first-blush approximation of the Vocabulary

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[12] This is a simplification of Kayne's approach. Kayne also postulates the existence of an additional silent demonstrative (THIS/THAT) and proposes that the phrase composed of the locative demonstrate and the null noun undergoes comp-to-spec movement over the THIS/THAT silent demonstrative. See Kayne (2004) for details.
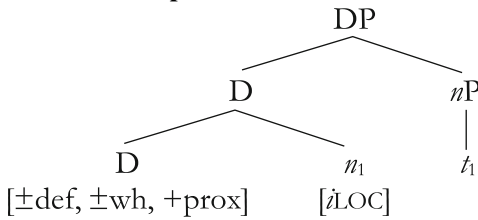
[13] True locative pronouns can function as both arguments and adjuncts, as the English examples in (i) and (ii) illustrate. To account for this and still maintain that they are always DPs, Kayne proposes that true locative pronouns can be selected by inherently null Ps [$\emptyset_{AT}$, in the case of (ii)]. He also proposes that R-pronouns in English, such as *thereof*, cannot be selected by inherently null pronouns.

(i) John saw Mary in there. (*there* is the argument of *in*)
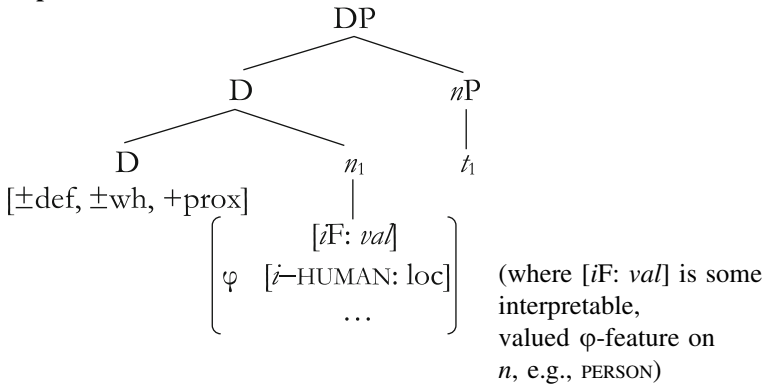(ii) John saw Mary there.   (*there* is an adjunct adverbial)

We wish to endorse Kayne's proposal for Dutch, and simultaneously highlight that Kayne's proposal is entirely unrelated to Kluck's analysis from the previous section. Kayne does not equate inherently null prepositions (i.e., Ps that are unpronounced even in non-elliptical environments) with prepositions that are ordinarily exponed but are rendered unpronounced when contained in a larger elided phrase. Therefore, his account does not ban R-pronouns from being selected by prepositions that will, at PF, be elided (indeed, to do this would incur the same 'look-ahead' problem from which Kluck's analysis suffers).

Insertion rules for *waar*, *er*, *daar*, and *hier* are presented in (66). (Note that D and n must *Fuse* (Halle and Marantz 1993) before these Vocabulary Insertion rules apply.)

(64) **True locative pronoun**

$$
\begin{array}{c}
\text{DP} \\
\diagup \qquad \diagdown \\
\text{D} \qquad\qquad \text{nP} \\
\diagup\quad\diagdown \qquad\qquad | \\
\text{D} \qquad n_1 \qquad t_1 \\
[\pm\text{def}, \pm\text{wh}, +\text{prox}] \quad [i\text{LOC}]
\end{array}
$$

(65) **R-pronoun**

$$
\begin{array}{c}
\text{DP} \\
\diagup \qquad\qquad \diagdown \\
\text{D} \qquad\qquad\qquad \text{nP} \\
\diagup\qquad\diagdown \qquad\qquad | \\
\text{D} \qquad\qquad n_1 \qquad t_1 \\
[\pm\text{def}, \pm\text{wh}, +\text{prox}]
\end{array}
$$

$$
\varphi
\begin{bmatrix}
[i\text{F}: val] \\
[i{-}\text{HUMAN}: loc] \\
\dots
\end{bmatrix}
$$

(where [*i*F: *val*] is some interpretable, valued φ-feature on *n*, e.g., PERSON)

(66) [+wh, +loc]   ⇔ *waar*
[+def, +prox, +loc] ⇔ *daar/er*
[+def, −prox, +loc] ⇔ *hier*

Let us focus on the *n* head in (65). Following the standard assumption that *n* heads are subcategorized for certain inherent inflectional morphological values (i.e., they

ordinarily bear φ-features for gender and animacy) (Don 2004; Aquaviva 2009; Kalin 2019), we propose that the inanimate feature value on n in Dutch is defective, insofar as it arises from the lexicon without a prespecified value. This feature must therefore be valued via an Agree relationship with a suitable c-commanding Probe (Chomsky 2000, 2001). Problematically, those prepositions with which R-pronouns appear do not bear suitable Probes for n's defective feature, and, as a consequence, an uninterpretable φ-feature that can enter into an Agree relationship with n must be inserted on a higher functional head in the PP domain to ensure that the syntactic derivation can proceed without crashing. Put in Kalin's (2019) terms, a functional head must, as a last resort, be converted into 'φ-probe' for n's defective feature.

The functional head that establishes an agreement relationship with the R-pronoun is Place in Dutch (Koopman 2000; Den Dikken 2010), which c-commands the PP. We follow Koopman (2000) in analyzing Place as an attribute of those locative phrases that allow for R-pronominalization, but we do not adopt Koopman's view that Place is the syntactic locus of locative meaning.[14] Due to its inherent relationship with location, we assume that Place has an unvalued uLOC feature and it must establish an Agree relationship with the PP. In addition, Place is a STRONG head, which means that Agreeing with the PP will ordinarily trigger the overt movement of the PP to SpecPlaceP (67) (Koopman 2000). The fact that the PP moves to SpecPlaceP explains why a non-R-pronominal DP cannot strand its preposition in Dutch: P-stranding subextraction induces an island violation, as PP occupies a derived position.

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[14] Instead, we follow Svenonius (2010) and assume that the semantics of location are encoded in the functional heads Loc and AxPrt, which form part of the PP domain. We refrain from including these heads in our syntactic representations. This departure from Koopman's original proposal is motivated by empirical observations about the types and readings of prepositions that allow for R-pronominalization. As Koopman (1993) already observed, although R-pronominalization is only possible with prepositions that allow for a locative meaning in some uses (allowing *met* 'with' indicating co-occurrence and *na* 'after' indicating temporal order), it is not the case that all prepositions with a locative reading allow for R-pronominalization: for example, *beneden* 'underneath', *rond* 'round', *te* 'at' do not allow for it (see Zwarts 1997 for a complete list and for a possible explanation of the difference between the two types).

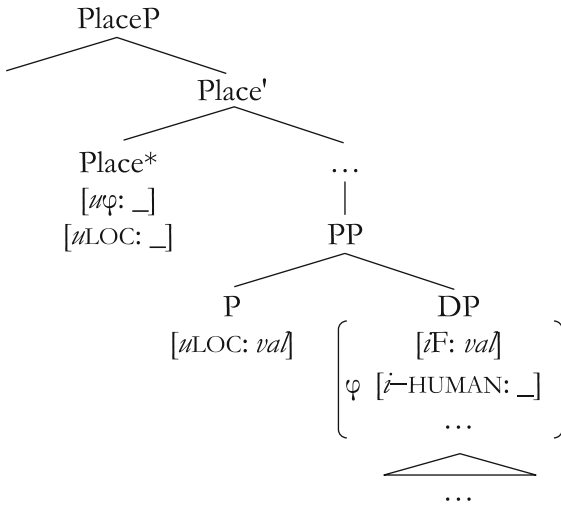(67) a. **before movement of PP 'to the station' to SpecPlaceP**

PlaceP

Place'

Place*
[*u*LOC: *val*]

. . .

PP

P *het station*

AGREE

naar

[*u*LOC: *val*]
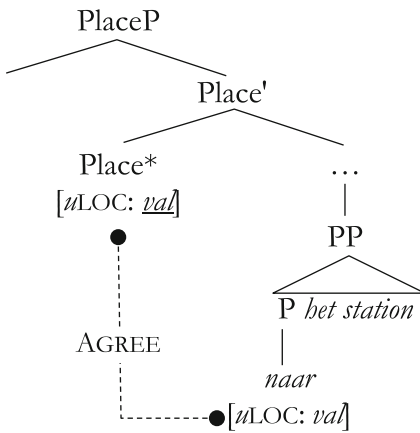
b. **after movement of PP 'to the station' to SpecPlaceP**

PlaceP

PP₁

Place'

P *het station*

Place*
[*u*LOC: *val*]

. . .

naar

t_1

[*u*LOC: *val*] AGREE
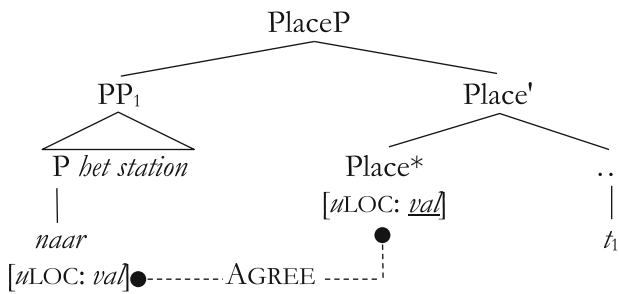
As mentioned above, Place becomes a φ-probe in R-pronoun configurations. This means that Place will bear (at least) two features that will probe:

(68) **R-pronoun configuration, before the features on Place probe for their Goals**

PlaceP
 Place'
  Place*
  $[u\varphi: \_]$
  $[u\text{LOC}: \_]$
   PP
    P
    $[u\text{LOC}: val]$
     DP
     $[i\text{F}: val]$
     $\varphi \; [i-\text{HUMAN}: \_]$
     …
    …
   …

As (68) illustrates, Place must establish two distinct Agree relationships in R-pronoun configurations: one with the PP and one with the R-pronoun. Because Place is a STRONG head, one of these Agree relationships triggers overt movement of the Goal to SpecPlaceP. The word order of Dutch R-pronominalization, wherein an R-pronoun always precedes its selecting preposition (see Sect. 2), informs us that the R-pronoun, rather than the PP, always moves to SpecPlaceP (69).[15] Because Dutch does not permit multiply-filled specifiers (for instance, only one phrase can occupy the *voorveld*, which is usually analyzed as SpecCP; see the Taalportaal, section 11.1.III; Landsbergen et al. 2014), this entails that movement of the R-pronoun bleeds movement of the PP (Koopman 2000).

Because the φ-feature on Place is unvalued (by definition), it does not itself provide the defective −HUMAN feature on *n* with its much-needed value. Instead, an independent feature on Place is co-opted for this purpose, utilizing the operation of *Feature Repurposing* defined in (61) from Sect. 4.2.1. This feature will then be transferred to *n* via the established Agree relationship, where it will serve as the value for *n*'s defective −HUMAN feature. Because Place independently bears an uninterpretable LOC feature, the value transferred to *n* is therefore LOC, as (69) already shows. This is how R-pronouns receive their +loc specification and are consequently exponed in a locative form.

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[15] We refrain from committing to any particular explanation for why the R-pronoun, rather than the PP, moves to SpecPlaceP. One possibility is that φ-features on a head H probe before other types of features on H, and overt movement is triggered whenever the specifier position of a strong head is empty. Another possibility is that, if the PP were to move to SpecPlaceP, the copy in the base-position is rendered opaque for further Agree operations, which would preclude satisfaction of *n*'s defective feature. Which of these explanations is more plausible (if any) is a question we leave for future research.

(69) **R-pronoun configuration, after Agree and movement to SpecPlaceP**
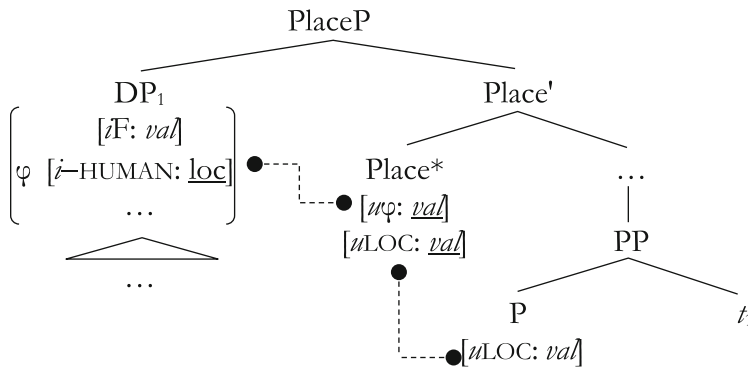
As the highest specifier in the functional sequence that comprises the PP domain, SpecPlaceP is the escape hatch from which an R-pronoun may escape the PP domain altogether, thus stranding its preposition inside the PP (Koopman 2000; Den Dikken 2010, following van Riemsdijk 1978) (70). Because SpecPlaceP is an escape hatch only for phrases that can independently stop and be spelled-out in its specifier (i.e., if movement to SpecPlaceP is triggered for reasons other than escaping the PP domain), PP-pied-piping configurations involve movement of the entire PP domain (ibid.), as already mentioned in Sect. 2, and as shown in (71) and (72).[16]

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[16] An R-pronoun can appear either before or after a degree (*tien meter*) or deictic locative (*vlak*) modifier, without affecting the interpretation, as shown in (i) and (ii) (Van Riemsdijk 1978). For Koopman (2000), these modifiers occupy a Deg(place)P projection that selects PlaceP. In (i), the R-pronoun stops in SpecPlaceP, whereas in (ii) it moves to the specifier CP(Place), the highest functional projection in the PP domain, which selects DegP [compare (iii) and (iv)]. Consequently, CP(Place) is the escape hatch from the PP domain for Koopman, rather than SpecPlaceP, as in our analysis.

(i)	[<er>	vlak	<er>	bij]		(Koopman 2000, 35)
	there	*close there*		*near*		
(ii)	[<er>	tien	meter	<er>	naast] heeft Jan gezeten.	(Den Dikken 2010, 79)
	there	*ten*	*meters there*		*next.to has Jan sat*	

Assuming that PP-pied-piping involves movement of the entire PP domain, Koopman (2010) predicts that complex PPs such as those in (i) and (ii) can undergo PP-pied-piping to form standard topicalization and *wh*-question configurations. Based on feedback from 8 native speakers we informally consulted, this prediction appears to be incorrect: topicalization with *er* in the initial position is degraded (in opposition to reports in the literature), while non-echoic *wh*-movement with *waar* in the initial position is unacceptable, see (ii) and (iii) below. We conclude from this that there is insufficient evidence to motivate the existence of functional structure higher than PlaceP within the locative PP domain. We leave open the question of precisely how the word-order variation exemplified in (i) and (ii) is derived.

(iii)	*	[Er	tien	meter	naast]	heeft	Jan	gezeten.
		there	*ten*	*meter*	*next.to*	*has*	*Jan*	*sat*
(iv)	*	[Waar	tien	meter	naast]	heeft	Jan	gezeten?
		where	*ten*	*meter*	*next.to*	*has*	*Jan*	*sat*
(v)	?	[Er	vlak	naast]	heeft	Jan	gezeten.	
		there	*close*	*next.to*	*has*	*Jan*	*sat*	
(vi)	??	[Waar	vlak	naast]	heeft	Jan	gezeten?	
		where	*close*	*next.to*	*has*	*Jan*	*sat*	

(70) **R-pronoun leaves the PP domain; P is stranded**

Waar$_{R1}$ kijkt hij [$_{PlaceP}$ t_1 ... [$_{PP}$ naar t_1]]?   (repeated from (12))
where   looks he   at
'What is he looking at?'

(71) **Standard PP-pied-piping**

[PlaceP ... [PP Naar welk boek]]$_1$ kijkt hij t_1?
              at   which book   looks he
'Which book is he looking at?'

(72) **P-pied-piping in R-pronominalization context**

a. Waar$_R$naar kijkt hij?   (repeated from (14))
   where.at looks he
   'What is he looking at?'

b. [$_{PlaceP}$ Waar$_{R1}$ ... [$_{PP}$ naar t_1]]$_2$ kijkt hij t_2?

Before returning to ellipsis, let us summarize the formal analysis of R-pronominalization that we have outlined so far. While we have adopted Kayne's (2004) suggestion that the syntactic and semantic differences between true locative pronouns and R-pronouns can be attributed to them exhibiting distinct nominal cores, we have departed from Kayne's analysis by couching this distinction in a 'decompositional' framework. We did this for two reasons. First, such an approach naturally explains why Dutch R-pronominalization is obligatory. If the phonological exponence of a non-human pronoun is determined by its syntactic environment (as we claim), then every such pronoun that is merged in the 'R-pronoun' position—i.e., a position from which it will receive the value LOC under Agree with Place—will necessarily be realized in the locative form. In other words, it is impossible to expone the standard pronoun *het/wat* in this position, as the Vocabulary Insertion rule(s) for *het/wat* do(es) not include +loc. In contrast, Kayne's account requires additional stipulations to capture the fact that R-pronominalization is mandatory, which Kayne himself neglects to provide.

   Second, it explains why only pronouns, and not non-human lexical DPs, undergo movement to SpecPlaceP. This is because the *n* head that nominalizes a lexical root need not be specified for ±HUMAN features, as the (non-)humanness of roots is conventional knowledge and therefore not encoded in the grammatical system in Dutch. Because pronouns are functional items (and are therefore rootless by definition), their (non-)humanness does need to be expressed via a grammatical means, namely via φ-features on *n*.

We have also adopted Koopman's (2000) claim that Place is a STRONG head and that the PP and R-pronoun compete to fill Place's specifier (with the R-pronoun always winning). By adopting Koopman's analysis, we inherit from her an explanation for why Dutch is ordinarily a non-P-stranding language (namely, PP occupies a derived position and is therefore an island for subextraction).

Let us now return to ellipsis, recalling from Sect. 4.1 the following generalization:

(73) **Bleeding EPP-driven movement under sluicing**
Let F be a feature borne by a STRONG head. If F is a purely formal feature (i.e., it has no semantic import), then F is never present in a TP-ellipsis site.

In this subsection, we have seen that Place, a STRONG head, bears two features. Both of these features are uninterpretable: the uLOC feature lacks semantic import (see footnote 14 above), and the φ-feature that is inserted purely as a last resort (to ensure that the R-pronoun's −HUMAN feature is valued and therefore that a derivational 'crash' is avoided) is similarly uninterpretable. For this reason, both of these features fit the description in (73) of an EPP-feature, and therefore are never present in a TP-ellipsis site. As already mentioned in Sect. 4.1, the repercussion of this is that *wh*-R-pronouns do not undergo movement to SpecPlaceP under sluicing, and therefore cannot escape via this position to SpecCP (in addition to this, they fail to get a *loc* value for their defective i−HUMAN feature; see (74)). This bleeds preposition stranding *wh*-R-movement under sluicing. (Note that R-pronominalization is still available in the configuration exemplified in (75) because the entire PP domain escapes ellipsis, and therefore Place is not contained within the TP-ellipsis site.) Consequently, Dutch still conforms to the preposition stranding generalization, and therefore 'Merchant's Wrinkle' is successfully ironed out.
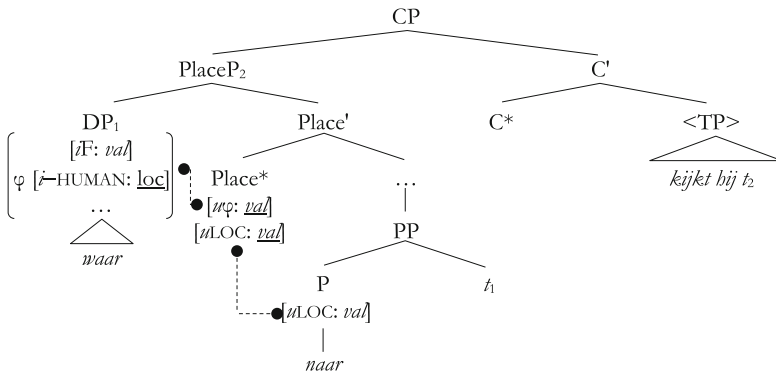
(74) a. * Dirk zit   in de woonkamer. Hij kijkt ergens
        Dirk sits in the living.room he looks something
        naar, maar ik weet niet [CP waar_R [TP ~~kijkt hij~~ ~~naar~~ t_2]
        at   but   I know not   where   looks he   at

b.
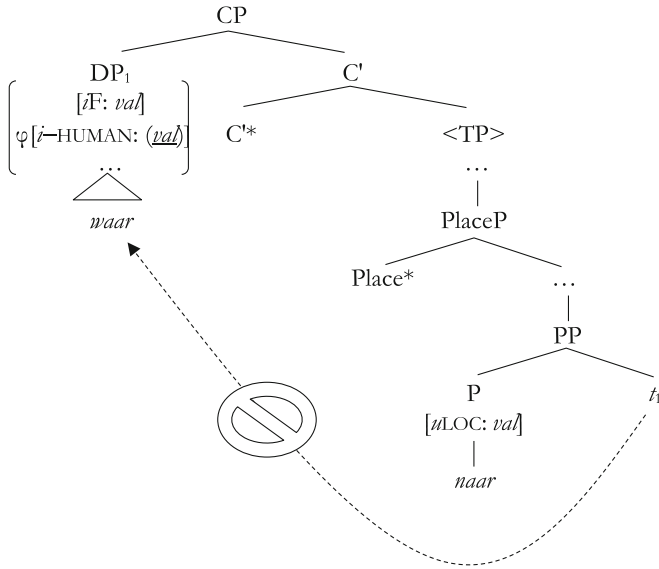
(75) a. Dirk zit in de woonkamer. Hij kijkt ergens   naar, maar ik weet
       Dirk sits in the living.room he looks something at   but I know
       niet [CP waar_R naar_2 [TP ~~kijkt hij t_2~~]
       not   where.at   looks he

b.

(where < > represents ellipsis)

Before closing this section, we must add that the core of our proposal, namely that ellipsis bleeds EPP-features in the manner defined in (57/73), should not be extended to the *edge features* that are needed to derive successive-cyclic movement in Chomsky's (2008) system. We believe edge features should be excluded from the group of EPP-features proper (i.e., STRONG features) for the following reasons. First, there are WEAK counterparts of the STRONG features, with the variant observed being subject to cross-linguistic variation. The presence/absence of edge-features is not subject to cross-linguistic variation, however. Second, the movement driven by STRONG features is encapsulated: the moved item need not necessarily move further. Conversely, items moved by edge-features always move further, as edge-features attract items into intermediate positions in an A′-chain. Third, while EPP features proper satisfy a PF-demand, edge-features satisfy computational demands: they are only present in a derivation when needed to enforce successive-cyclic movement, unlike the STRONG features we are dealing with. For these reasons, we believe that STRONG features and edge-features do not form a natural class, and consequently there is no expectation that they should behave similarly under ellipsis.[17]

4.2.3 A parallel in the clausal domain: EPP checking by er *and true locative pronouns*

Having introduced our analysis in the previous two subsections, we turn now to the broader picture, with the hope to convince the reader that the EPP-driven movement observed in the PP domain in Dutch (i.e., movement to SpecPlaceP) can be related to satisfying the EPP in the inflectional domain (i.e., filling SpecTP).

Recent research from Wesseling (2018) suggests that the two phenomena share important commonalities, namely that both Place and T come prespecified with a LOC feature and both can be φ-probes. According to Wesseling, T also exhibits the property of requiring only one of its two features—either the LOC or φ feature—to be checked under Agree (whether Place exhibits the same property is beyond the scope of this paper). This commonality explains why true pleonastic subjects in Dutch, such as those found in impersonal passive configurations (76), arise in the same locative form that some R-pronouns do, and for why semantically contentful locative phrases (such as *hier* 'here' and *daar* 'there') can satisfy the EPP. In the

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[17] The most plausible candidate for 'phase head' status in the Dutch spatial prepositional domain is Place. (P cannot be a phase head: if it were, antilocality (Abels 2003) would prevent R-pronouns from reaching SpecPlaceP, contrary to observation.) If Place is a phase head, and if edge features indeed exist, then Place should bear edge features that attract the complement of P to SpecPlaceP regardless of whether ellipsis occurs. Thus, if our analysis is correct, then Place cannot bear edge features. But why not? One possibility is that PlaceP is not a phase in Dutch. The second possibility is that Place is indeed a phase head, but that it does not bear edge features for reasons concerning input in L1 acquisition. Under ordinary circumstances (i.e., in non-elliptical contexts), the effect of edge features on Place would never be seen, as the $u\varphi$ and uLOC features borne by Place already attract the PP or the R-pronoun into SpecPlaceP, therefore performing the function that edge features on Place would otherwise perform. Having no reason to suppose that edge features are present on Place, Dutch L1 learners therefore acquire Place as a phasal head without edge features. This acquisition tactic is generally economical (as edge features on Place are redundant in non-elliptical contexts), having only a negligible downside, which is that P-stranding of R-pronouns under sluicing is not possible.

case where the EPP is satisfied by a semantically contentful locative pronoun, such pronouns are probed by T's LOC feature, rather than by its φ-probing feature (77). In the expletive case, the defective −HUMAN feature on *n* receives the LOC value from the φ-probe on T [see (78)], and therefore the expletive is exponed as a locative, according to the Vocabulary Insertion rules listed in (66). Note that exponence of non-human pronouns as locatives is restricted to R-pronouns and pleonastic subjects because it is only in the structural configurations that these pronouns are observed that *n*'s defective feature will fail to procure a value from another φ-probe already in present in the syntax [such as under sisterhood with v, in the case of Agentive subjects (79)].

(76) Ik denk dat {**er**/ **daar**/ **hier**} waarschijnlijk wordt gezongen.
 I think that EXPL/ *there*/ *here probably is sung*
 'I think that there is probably singing (there/here).'

(modified from Wesseling 2018, 4)

(77) **Using a true locative pronoun to satisfy the EPP in Dutch**
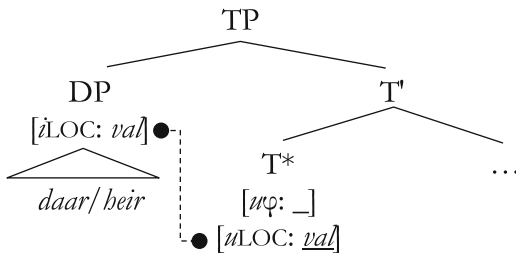
(78) **Using an expletive pronoun to satisfy the EPP in Dutch**
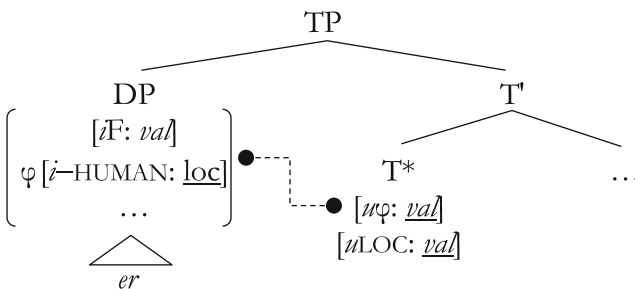
(79) **Using an agentive personal pronoun to satisfy the EPP in Dutch (before movement to SpecTP)**
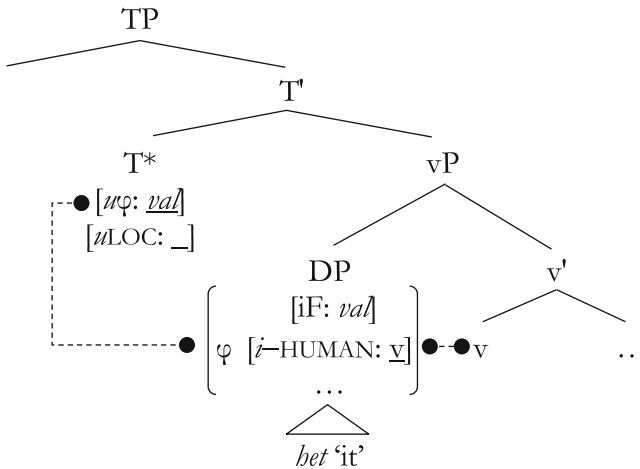
The fact that locative features have been implicated in satisfying the classic EPP in Dutch provides indirect but independent support for our claim that movement of R-pronouns to SpecPlaceP is EPP-driven movement, which, like other EPP-driven movement investigated in the literature, is subject to bleeding under sluicing.

5 Extensions

In the previous section, we argued that ellipsis itself—rather than, e.g., the prosody requirements of the R-pronoun—is responsible for bleeding preposition stranding under sluicing in Dutch. If this is true, then preposition stranding is bled in all configurations that involve clausal ellipsis, not just sluicing. This can therefore be utilized as diagnostic for clausal ellipsis in more 'exotic' syntactic structures.

Let us first apply this diagnostic to right node raising, a configuration whose syntactic structure remains hotly debated (see Barros and Vicente 2011 for pertinent discussion and references). For advocates of ellipsis-based analyses of right node raising, an English right node raising utterance such as (80a) is derived via the application of clausal ellipsis in the initial coordinand (80b). If ellipsis-based analyses are correct, then stranding a preposition in the alleged ellipsis site in the initial coordinand should be impossible in Dutch R-pronominalization contexts, leading to the prediction that an R-pronoun should not arise unaccompanied by its preposition in the initial coordinand. The examples in (81) demonstrate that this prediction is not borne out: the relevant R-pronouns (*daar* in each case) can arise unaccompanied by their prepositions (*over* and *naar*, respectively). This suggests that, at least in cases such as these, right node raising is not derived via ellipsis—a

conclusion that dovetails with the conclusions drawn by McCawley (1982), Wilder (1999), de Vos and Vicente (2005), Bachrach and Katzir (2009), and others.

(80) a. I think Bill, but John probably thinks Mary, is the best candidate for the job.

  b. [&P [I think Bill ~~is the best candidate for the job~~], but [John probably thinks Mary, is the best candidate for the job]]

(81) a. Ik   zal   misschien daar$_R$, maar in elk   geval niet hier$_R$,
      I   *will*   *perhaps*   *there*   *but* *in* *every* *case*   *not*   *here*
      over   willen   praten.
      about *want.INF* *talk.INF*
      'Perhaps that, but at any rate not this, I would like to talk about.'

  b. Ik   zal   misschien daar$_R$, maar in elk   geval
      I   *will*   *perhaps*   *there*   *but* *in* *every* *case*
      hier$_R$, **naar** willen   kijken.
      here   *about* *want.INF*   *talk.INF*
      'Perhaps that, but at any rate not this, I would like to talk about.'

We can also apply our diagnostic to so-called *reformulative* appositions. These are appositions that function to provide an additional referent for their anchor (see (82a), where the apposition and its discourse markers are italicized, and anchor is boldfaced). The syntactic structure of (seemingly) subclausal reformulative appositions is debated: some researchers claim that they are derived by clausal ellipsis (82b) (Döring 2014; Ott 2016) whereas others argue that they are not (82c) (Griffiths 2015a, b). In the Dutch cases, one observes that reformulative appositional R-pronouns—*daar* in each example in (83)—can arise unaccompanied by a preposition. This would be impossible if the appositional R-pronoun was the remnant of clausal ellipsis, as ellipsis bleeds preposition stranding. This therefore suggests that reformulative appositions are not derived by clausal ellipsis, which aligns with Griffiths' conclusions. More specifically, Griffiths argues that reformulative appositions are coordinated with their anchors, which yields the prediction that a reformulative apposition must have the same syntactic/semantic type as its anchor (as coordination must be balanced). The Dutch R-pronoun data provide support for this aspect of Griffiths' analysis, too: a DP anchor cannot be followed by a PP apposition, and *vice versa* (84).

(82) a. **The Big Apple**, *i.e. New York*, is a huge city.

  b. The Big Apple, i.e. New York ~~is a big city~~, is a big city.

  c. [&P [DP The Big Apple], i.e. [DP New York]], is a big city.

(83) a. ? Hij zit   ergens$_R$, *misschien wel daar$_R$*, **naar** te kijken.
         he *sits* *something* *perhaps*   *AFF* *there*   *at*   *to* *look.INF*
         'He is looking at something, perhaps that.'

b.   Hij   zit   ergens$_R$ **naar**,   *misschien wel daar$_R$ **naar**,* te   kijken.
          he   sits   something   at   perhaps AFF *there at   to   look.*INF
          'He is looking at something, perhaps at that.'

(84) a.   ?* Hij   zit   ergens$_R$,   *misschien wel daar$_R$*   **naar**, naar te   kijken.
             he   sits   something perhaps   AFF   *there   at   at   to   look.*INF
             'He is looking at something, perhaps at that.'

     b.   *   Hij   zit   ergens$_R$ **naar**,   *misschien wel   daar$_R$,*   te   kijken.
             he   sits   something   at   perhaps   AFF   *there   to   look.*INF
             'He is looking at something, perhaps that.'

6 Conclusion

This paper offered an explanation for the observation that preposition stranding is bled under sluicing in Dutch R-pronominalization configurations—an observation that, at first glance, appears to contradict Merchant's (2001) *preposition stranding generalization*. Having demonstrated that R-pronouns make for suitable remnants of sluicing (contra Merchant 2001) and that prepositions that select R-pronouns are elidable (contra Kluck 2015), we offered an analysis according to which ellipsis itself is responsible for preposition stranding being bled under ellipsis in R-pronominalization configurations. In particular, we adopted Koopman's (2000) and Den Dikken's (2010) claim that the initial step of syntactic movement that generates preposition stranding configurations in Dutch is EPP-driven and proposed that features that trigger EPP-driven movement are obligatorily absent in clausal ellipsis sites, which therefore precludes the preposition stranding under sluicing (following similar earlier proposals by Merchant 2001; Den Dikken and Van Craenenbroeck 2006; Den Dikken 2013). We presented a formal implementation of this idea, utilizing contemporary notions from Distributed Morphology and from Pesetsky and Torrego's (2007) system of syntactic feature checking. The resulting analysis dovetails with recent research on the nature of the 'classic' EPP condition in Dutch from Wesseling (2018) and generates a diagnostic test that we utilized for diagnosing (the absence of) clausal ellipsis in right node raising and appositional configurations in Dutch.

In short, we have demonstrated that, once the obstructive nature of ellipsis is properly considered, the absence of preposition stranding under sluicing in Dutch R-pronominalization contexts does not represent a serious challenge to Merchant's preposition stranding generalization.

Appendix with stimuli used in the experiments reported in Sect. 2

Sub-experiment 1

1a. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waar.
Dirk sits in the living.room he looks somewhere at but I know not where

1b. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waarnaar.
Dirk sits in the living.room he looks somewhere at but I know not where.at

1c. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waar hij naar kijkt.
Dirk sits in the living.room he looks somewhere at but I know not where he at looks

1d. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waarnaar hij kijkt.
Dirk sits in the living.room he looks somewhere at but I know not where.at he looks

2a. Lena is in de speeltuin. Ze staat ergens op, maar ik weet niet waar.
Lena is in the playground she stands somewhere on but I know not where

2b. Lena is in de speeltuin. Ze staat ergens op, maar ik weet niet waarop.
Lena is in the playground she stands somewhere on but I know not where.on

2c. Lena is in de speeltuin. Ze staat ergens op, maar ik weet niet waar zij op staat.
Lena is in the playground she stands somewhere on but I know not where she on stands

2d. Lena is in de speeltuin. Ze staat ergerns op, maar ik weet niet waarop zij staat.
Lena is in the playground she stands somewhere on but I know not where.on she stands

3a. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waar.
the boy walks beside his mother he pulls somewhere to but I know not where

3b. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waaraan.
the boy walks beside his mother he pulls somewhere to but I know not where.to

3c. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waar hij aan trekt.
the boy walks beside his mother he pulls somewhere to but I know not where he to pulls

3d. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waaraan hij trekt.
the boy walks beside his mother he pulls somewhere to but I know not where.to he pulls

4a. Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waar.
Anne stands on the sportfield she throws somewhere with but I know not where

4b. Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waarmee.
Anne stands on the sportfield she throws somewhere with but I know not where.with

4c. Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waar ze mee gooit.
Anne stands on the sportfield she throws somewhere with but I know not where she with throws

4d. Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waarmee ze gooit.
Anne stands on the sportfield she throws somewhere with but I know not where.with she throws

Sub-experiment 2, non-ellipsis/cleft conditions

5a. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waar het naar is.
Dirk sits in the living.room he looks somewhere at but I know not where that at is

5b. Dirk zit in de woonkamer. Hij kijkt ergens naar, maar ik weet niet waarnaar het is.
Dirk sits in the living.room he looks somewhere at but I know not where.at that is

6a. Lena is in de speeltuin. Ze staat ergens op, maar ik weet niet waar het op is.
Lena is in the playground she stands somewhere on but I know not where that on is

6b. Lena is in de speeltuin. Ze staat ergens op, maar ik weet niet waarop het is.
Lena is in the playground she stands somewhere on but I know not where.on that is

7a. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waar het aan is.
the boy walks beside his mother he pulls somewhere to but I know not where that to is

7b. Het jongetje loopt naast zijn moeder. Hij trekt ergens aan, maar ik weet niet waaraan het is.
the boy walks beside his mother he pulls somewhere to but I know not where.to that is

8a.   Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waar het mee is.
Anne stands on the sport.field she throws somewhere with but I know
not where that with is

8b.   Anne staat op het sportveld. Ze gooit ergens mee, maar ik weet niet waarmee het is.
Anne stands on the sport.field she throws somewhere with but I know
not where.with that is

Sub-experiment 3

9a.   A: Waar zat je op?
          where sat you on
      B: Een bankje.
          a bench
9b.   A: Waar zat je op?
          where sat you on
      B: Op een bankje.
          on a bench
9c.   A: Waar zat je op?
          where sat you on
      B: Een bankje is het.
          a bench is that
9d.   A: Waar zat je op?
          where sat you on
      B: Op een bankje is het.
          on a bench is that
10a. A: Waar gooide je mee?
          where threw you with
      B: Een softbal.
          a softball
10b. A: Waar gooide je mee?
          where threw you with
      B: Met een softbal.
          with a softball
10c. A: Waar gooide je mee?
          where threw you with
      B: Een softbal is het.
          a softball is that
10d. A: Waar gooide je mee?
          where threw you with
      B: Met een softbal is het.
          with a softball is that

11a.   A: Waar kijkt hij naar?
           where looks he at
      B: Mijn favoriete film.
           my favorite film

11b.   A: Waar kijkt hij naar?
           where looks he at
      B: Naar mijn favoriete film.
           at my favorite film

11c.   A: Waar kijkt hij naar?
           where looks he at
      B: Mijn favoriete film is het.
           my favorite film is that

11d.   A: Waar kijkt hij naar?
           where looks he at
      B: Naar mijn favoriete film is het.
           at my favorite film is that

12a.   A: Waar trekken jullie aan?
           where pull you to
      B: Het touw.
           the rope

12b.   A: Waar trekken jullie aan?
           where pull you to
      B: Aan het touw.
           to the rope

12c.   A: Waar trekken jullie aan?
           where pull you to
      B: Het touw is het.
           the rope is that

12d.   A: Waar trekken jullie aan?
           where pull you to
      B: Aan het touw is het.
           to the rope is that

Sub-experiment reported in footnote 5

13a.   A: Jan probeert iets te verbergen. Hij staat ergens voor.
           Jan tries something to hide he stands somewhere before
           'Jan is trying to hide something. He is standing in front of something.'
      B: Waar?
           where

13b.   A: De naam van winkelketen HEMA is een afkorting. Het staat ergens voor.
           the name of retail.chain HEMA is an acronym it stands something for
           'The name of the HEMA retail chain is an acronym. It refers to something.'
      B: Waar?
           where

14a. A: Marco was in de hoek van de gymzaal. Hij zat ergens op.
          Marco was in the corner of the sport.hall he sat somewhere on
          'Marco was in the corner of the sport.hall. He was sitting on something.'
      B: Waar?
          where

14b. A: Willem sportte vaak en hij hield erg van ballet. Hij zat ergens op.
          Willem did.sports often and loved a.lot of ballet he sat somewhere on
          'Willem did a lot of sports and loved ballet. He took lessons in something.'
      B: Waar?
          where

15a. A: Lisa was in de badplaats in Frankrijk om te zonnen. Ze lag ergens aan.
          Lisa was in the bathing.resort in France COMP to sunbathe she lay somewhere on
          'Lisa was in a resort in France to sunbathe. She was lying on something.'
      B: Waar?
          where

15b. A: Laura vond wiskunde erg lastig. Dat lag ergens aan.
          Laura found math very difficult that lay somewhere on
          'Laura found math very difficult. That depended on something.'
      B: Waar?
          where

16a. A: De agent op het kruispunt was niet goed zichtbaar. Hij stond ergens achter.
          the policeman at the crossing was not very visible he stood somewhere behind
          'The policeman at the crossing could not be seen easily. He was standing behind something.'
      B: Waar?
          where

16b. A: Elias was het met zijn vrouw eens over het broeikaseffect. Hij stond ergens achter.
          Elias was it with his wife in.agreement about the greenhouse.effect he stood somewhere behind
          'Elias agreed on the issue of the greenhouse effect with his wife. He was supporting some view.'
      B: Waar?
          where

References

Abels, Klaus. 2003. *Successive cyclicity. Anti-locality and preposition stranding*. Doctoral thesis, University of Connecticut.

Abels, Klaus. 2018. On "sluicing" with apparent massive wh-piped piping. *Natural Language and Linguistic Theory* 37: 1205–1271.

Acquaviva, Paolo. 2009. Roots and lexicality in Distributed Morphology. *York Papers in Linguistics* 2: 1–21.

Agüero-Bautista, Calixto. 2007. Diagnosing cyclicity in sluicing. *Linguistic Inquiry* 38(3): 413–443.

Bachrach, Asaf, and Roni Katzir. 2009. Right node raising and delayed spell-out. In *Interphases: Phase-theoretic investigations of linguistic interfaces*, ed. Kleanthes Grohmann, 283–316. Oxford: Oxford University Press.

Barros, Matt, and Luis Vicente. 2011. Right node raising requires both ellipsis and multidomination. *University of Pennsylvania Working Papers in Linguistics* 17(1): article 2.

Bennis, Hans, and Teun Hoekstra. 1984. Gaps and parasitic gaps. *The Linguistic Review* 4: 29–87.

Broekhuis, Hans. 2013. *Syntax of Dutch. Adpositions and adpositional phrases*. Amsterdam: Amsterdam University Press.

Cable, Seth. 2010. *The grammar of Q: Q-particles, wh-movement and pied-piping*. Oxford: Oxford University Press.

Caponigro, Ivano, and Lisa Pearl. 2009. The nominal nature of *where*, *when*, and *how*: Evidence from free relatives. *Linguistic Inquiry* 40(1): 155–164.

Chomsky, Noam. 1973. Conditions on transformations. In *A Festschrift for Morris Halle*, eds. Stephen Anderson and Paul Kiparsky, 232–285. New York: Holt, Rinehart and Winston.

Chomsky, Noam. 1981. *Lectures on government and binding*. Dordrecht: Foris.

Chomsky, Noam. 1995. *The minimalist program*. Cambridge, MA: MIT Press.

Chomsky, Noam. 2000. Minimalist inquiries. In *Step by step: Essays on minimalist syntax in honor of Howard Lasnik*, ed. Roger Martin, David Michaels, and Juan Uriagereka, 89–156. Cambridge, MA: MIT Press.

Chomsky, Noam. 2001. Derivation by phase. In *Ken Hale: A life in language*, ed. Michael Kenstowicz, 1–52. Cambridge, MA: MIT Press.

Chomsky, Noam. 2008. On phases. In *Foundational issues in linguistic theory: Essays in honor of Jean-Roger Vergnaud*, eds. Robert Freiden, Carlos Otero, and Maria Luisa Zubizarreta, 133–166. Cambridge, MA: MIT Press.

Chung, Sandra. 2005. Sluicing and the lexicon: The point of no return. In *BLS 31: General session and parasession on prosodic variation and change*, ed. Rebecca T. Cover and Yuni Kim, 73–91. Berkeley, CA: Berkeley Linguistics Society.

Corver, Norbert and Marjo van Koppen. 2018. Dutch. In *The Oxford Handbook of Ellipsis*, ed. Jeroen van Craenenbroeck and Tanja Temmerman. Oxford: Oxford University Press.

de Vos, Mark, and Luis Vicente. 2005. Coordination under Right Node Raising. In *Proceedings of WCCFL 24*, ed. John Aldereta, Chung-hye Han, and Alexei Kochetov, 97–104. Somerville, MA: Cascadilla Proceedings Project.

Den Dikken, Marcel. 2010. On the functional structure of locative and directional PPs. In *Mapping spatial PPs. The cartography of syntactic structures 6*, ed. Guglielmo Cinque and Luigi Rizzi, 74–126. Oxford: Oxford University Press.

Den Dikken, Marcel. 2013. Prepare and repair: On pre-emptive strikes and post-hoc patches. In *Repairs*, ed. Patrick Brandt and Eric Fuß, 131–153. Berlin: Walter de Gruyter.

Den Dikken, Marcel, André Meinunger, and Chris Wilder. 2000. Pseudoclefts and ellipsis. *Studia Linguistica* 54(1): 41–89.

Den Dikken, Marcel, and Balázs Surányi. 2017. Contrasting contrastive left-dislocation explications. *Linguistic Inquiry* 48(4): 543–584.

Don, Jan. 2004. Categories in the Lexicon. *Linguistics* 42 (5): 931–956.

Döring, Sandra. 2014. Parentheticals are – presumably – CPs. In *Parenthesis and ellipsis. Cross-linguistic and theoretical perspectives*, eds. Marlies Kluck, Dennis Ott, and Mark de Vries, 109–145. Berlin: Mouton de Gruyter.

Fortin, Catherine. 2007. *Indonesian sluicing and verb phrase ellipsis: Description and explanation in a minimalist framework*. Doctoral thesis, University of Michigan.

Fox, Danny, and Howard Lasnik. 2003. Successive-cyclic movement and island repair: The difference between sluicing and VP-ellipsis. *Linguistic Inquiry* 34: 143–154.

Griffiths, James. 2015a. *On appositives*. Doctoral thesis, University of Groningen. LOT Publications 389.

Griffiths, James. 2015b. Reformulative appositions and clausal ellipsis. *Lingua* 165(Part A): 70–91.

Gussenhoven, Carlos. 1984. *On the grammar and semantics of sentence accents*. Dordrecht: Foris.

Halle, Morris, and Alec Marantz. 1993. Distributed Morphology and the pieces of inflection. In *The view from Building 20: Essays in linguistics in honour of Sylvain Bromberger*, ed. Ken Hale and Samuel J. Keyser, 111–176. Cambridge, Mass: MIT Press.

Harley, Heidy, and Elizabeth Ritter. 2002. Person and number in pronouns: A feature-geometric analysis. *Language* 78(3): 482–526.

Hein, Johannes, and Katja Barnickel. 2018. Replication of R-pronouns in German dialects. *Zeitschrift Für Sprachwissenschaft* 37(2): 171–204.

Hoeksema, Jack. 2014. Sluicing in Dutch: A problem for PF-deletion approaches. *Skase* 11(2): 30–41.

Ionova, Anastasiia. 2020. *The unbearable lightness of clitics*. Doctoral thesis, Leiden University. LOT Publications 550.

Kalin, Laura. 2019. Nominal licensing is driven by valued (phi-)features. *Nordlyd* 43(1): 15–29.

Kayne, Richard. 2004. Here and there. In *Syntax, lexis and lexicon-grammar: Papers in honour of Maurice Gross*, eds. Christian Leclère, Éric. G. Laporte, Mireille Piot, and Max Silberztein, 253–274. Amsterdam: John Benjamins.

Kluck, Marlies. 2014. Variation in the Dutch R-pronoun paradigm. Paper presented at the Workshop "Microvariation", Villa Salmi, Arezzo.

Kluck, Marlies. 2015. Merchant's Wrinkle: The ban on Dutch bare R-pronoun ellipsis remnants. In *Proceedings of the 32nd West Coast Conference on Formal Linguistics*, eds. Ulrike Steindl, Thomas Borer, Huilin Fang, Alfredo García Pardo, Peter Guekguezian, Brian Hsu, Charlie O'Hara, and Iris C. Ouyang, 248–257. Somerville, MA: Cascadilla Proceedings Project.

Koopman, Hilda. 1993. The structure of Dutch PPs. Unpublished manuscript, UCLA.

Koopman, Hilda. 2000. Prepositions, postpositions, circumpositions, and particles: The structure of Dutch PPs. In *The syntax of specifiers and heads*, ed. Hilda Koopman, 204–260. London: Routledge.

Landsbergen, Frank, Tiberius, Carole, and Dernison, Roderik. 2014: Taalportaal: An online grammar of Dutch and Frisian. In *Proceedings of the Ninth International Conference on Language Resources and Evaluation*, eds. Nicoletta Calzolari, Khalid Choukri, Thierry Declerck, Hrafn Loftsson, Bente Maegaard, Joseph Mariani, Asuncion Moreno, Jan Odijk, and Stelios Piperidis, 2206–2210. Reykjavik, Iceland: European Language Resources Association.

Leung, Tommi. 2014. The preposition stranding generalization and conditions on sluicing: Evidence from Emirati Arabic. *Linguistic Inquiry* 45(2): 332–340.

McCawley, James. 1982. Parentheticals and discontinuous constituent structure. *Linguistic Inquiry* 13: 91–106.

Merchant, Jason. 2001. *The syntax of silence: Sluicing, islands, and the theory of ellipsis*. Oxford: Oxford University Press.

Merchant, Jason. 2013. Voice and ellipsis. *Linguistic Inquiry* 44: 77–108.

Müller, Gereon. 2000. Das Pronominaladverb als Reparaturphänomen. *Linguistische Berichte* 182: 139–178.

Noonan, Máire. 2017. Dutch and German R-pronouns and P-stranding: R you sure it's P-stranding? In *The structure of words at the interfaces*, ed. Heather Newell, Máire. Noonan, Glyne Piggott, and Lisa Travis, 209–239. Oxford: Oxford University Press.

Ott, Dennis. 2016. Ellipsis in appositives. *Glossa: A Journal of General Linguistics* 1(1): 34. 1–46.

Pesetsky, David, and Esther Torrego. 2001. Tense, case, and the nature of syntactic categories. In *The syntax of time*, eds. Jacqueline Guéron and Jacqueline Lecarme, 495–538. Cambridge, MA: MIT Press.

Pesetsky, David, and Esther Torrego. 2007. The syntax of valuation and the interpretability of features. In *Phrasal and clausal architecture*, ed. Simin Karimi, Vida Samiian, and Wendy K. Wilkins, 262–294. Amsterdam: John Benjamins.

Philippova, Tatjana. 2014. P-omission under sluicing, [P clitic] and the nature of p-stranding. In *ConSOLE XXII: Proceedings of the 22nd conference of the Student Organisation of Linguistics in Europe*, ed. Martin Kohlberger, Kate Bellamy, and Eleanor Dutton, 133–155. Leiden: LUCL.

Rodrigues, Cilene, Andrew Nevins, and Luis Vicente. 2009. Cleaving the interactions between sluicing and P-stranding. In *Romance languages and linguistic theory* 2006, eds. Danièle Torck and Leo Wetzels, 245–270. Amsterdam: John Benjamins.

Ross, Haj. 1969. Guess who? In *Papers from the 5th regional meeting of the Chicago Linguistic Society*, ed. Robert Binnick, Alice Davison, Georgia Gree, and Jerry Morgan, 252–286. Chicago, IL: Chicago Linguistic Society.

Sato, Yosuke. 2011. P-stranding under sluicing and repair by ellipsis: Why is Indonesian (not) special? *Journal of East Asian Linguistics* 20: 339–382.

Schwarzschild, Roger. 1999. Givenness, AvoidF and other constraints on the placement of accent. *Natural Language Semantics* 7: 141–177.

Stigliano, Laura. 2019. P-stranding in ellipsis in Spanish does not arise from copular sources: Evidence from non-exhaustive readings. In *NELS49: Proceedings of the 49th annual meeting of the North East Linguistic Society*, ed. Maggie Baird and Jonathan Pesetsky, 183–192. Amherst, MA: Graduate Student Linguistic Association.

Stjepanović, Sandra. 2008. P-stranding under sluicing in a non-P-stranding language? *Linguistic Inquiry* 39: 179–190.

Stjepanović, Sandra. 2012. Two cases of violation repair under sluicing. In *Sluicing: Cross-linguistic perspectives*, ed. Jason Merchant and Andrew Simpson, 68–82. Oxford: Oxford University Press.

Svenonius, Peter. 2010. Spatial P in English. In *Mapping spatial PPs: The cartography of syntactic structures 6*, ed. Guglielmo Cinque and Luigi Rizzi, 127–160. New York: Oxford University Press.

Szczegielniak, Adam. 2008. Islands in sluicing in Polish. In *Proceedings of the 27th West Coast Conference on Formal Linguistics*, eds. Natasha Abner and Jason Bishop, 404–412. Somerville, MA: Cascadilla Proceedings Project.

Tancredi, Chris. 1992. *Deletion, deaccenting and presupposition*. Doctoral thesis, MIT.

van Craenenbroeck, Jeroen. 2004. *Ellipsis in Dutch dialects*. Doctoral thesis, Leiden University.

van Craenenbroeck, Jeroen. 2010. *The syntax of ellipsis: Evidence from Dutch dialects*. New York, NY: Oxford University Press.

van Craenenbroeck, Jeroen, and Marcel den Dikken. 2006. Ellipsis and EPP repair. *Linguistic Inquiry* 37(4): 653–664.

van Riemsdijk, Henk. 1978. *A case study in syntactic markedness: The binding nature of prepositional phrases*. Dordrecht: Foris.

Vicente, Luis. 2008. *Syntactic isomorphism and non-isomorphism under ellipsis*. Ms.: University of California, Santa Cruz.

Wesseling, Franca. 2018. There is more: Variation in expletive constructions in Dutch. Doctoral thesis, Utrecht University. LOT Publications 515.

Wilder, Chris. 1999. Right Node Raising and the LCA. In. *Proceedings of WCCFL 18*, ed. Sonya Bird, Andrew Carnie, Jason D. Haugen, and Peter Norquest, 586–598. Somerville, MA: Cascadilla Proceedings Project.

Zeijlstra, Hedde. 2012. There is only one way to Agree. *The Linguistic Review* 29(3): 491–539.

Zwart, Jan-Wouter. 2011. *The Syntax of Dutch*. Cambridge: Cambridge University Press.

Zwarts, Joost. 1997. Complex prepositions and P-stranding in Dutch. *Linguistics* 35: 1091–1112.