Syntax of Dutch
Adpositions and Adpositional Phrases

Hans Broekhuis

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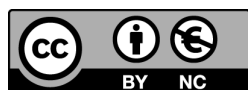Georges de Schutter
Riet Vos

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Contents

Abbreviations and symbols

This appendix contains a list of abbreviations and symbols that are used in this volume. Sometimes conventions are adopted that differ from the ones given in this list, but if this is the case this is always explicitly mentioned in the text.

°xxx — Refers to the XXX in the glossary

A+section # — A3.2 refers to Section 3.2. in Hans Broekhuis (2013). *Grammar of Dutch: Adjectives and adjective phrases*.

Domain D — Domain of discourse

N+section # — N3.2 refers to Section 3.2. in Hans Broekhuis & Evelien Keizer (2012) and Hans Broekhuis & Marcel den Dikken (2012), *Grammar of Dutch: nouns and noun phrases*, Vol. 1 & 2.

QC — Quantificational binominal construction

V+section # — V3.2 refers to Section 3.2. in Hans Broekhuis & Norbert Corver (in prep). *Grammar of Dutch: Verbs and verb phrases*.

Abbreviations used in both the main text and the examples

AP	Adjectival Phrase	PP	Prepositional Phrase
DP	Determiner Phrase	QP	Quantifier Phrase
NP	Noun Phrase*	VP	Verb Phrase
NumP	Numeral Phrase		

*) *Noun phrase* is written in full when the NP-DP distinction is not relevant.

Symbols, abbreviations and conventions used in the examples

e	Phonetically empty element
Ref	Referent argument (external °thematic role of nouns/adjectives)
Rel	Related argument (internal thematic role of relational nouns)
OP	Empty operator
PG	Parasitic gap
PRO	Implied subject in, e.g., infinitival clauses
PRO_{arb}	Implied subject PRO with arbitrary (generic) reference
t	Trace (the original position of a moved element)
XXX	Small caps indicates that XXX is assigned contrastive accent

Abbreviations used as subscripts in the examples

1p/2p/3p	1st, 2nd, 3rd person	nom	nominative
acc	accusative	pl	plural
dat	dative	poss	possessor
dim	diminutive	pred	predicate
fem	feminine	rec	recipient
masc	masculine	sg	singular

Abbreviations used in the glosses of the examples

AFF	Affirmative marker
COMP	Complementizer: *dat* 'that' in finite declarative clauses, *of* 'whether/if' in finite interrogative clauses, and *om* in infinitival clauses
prt.	Particle that combines with a particle verb
PRT	Particle of different kinds
REFL	The short form of the reflexive pronoun, e.g., *zich*; the long form *zichzelf* is usually translated as *himself/herself/itself*
XXX	Small caps in other cases indicates that XXX cannot be translated

Diacritics used for indicating acceptability judgments

*	Unacceptable
*?	Relatively acceptable compared to *
??	Intermediate or unclear status
?	Marked: not completely acceptable or disfavored form
(?)	Slightly marked, but probably acceptable
no marking	Fully acceptable
%	Not (fully) acceptable due to non-syntactic factors *or* varying judgments among speakers
#	Unacceptable under intended reading
$	Special status: old-fashioned, archaic, very formal, incoherent, etc.

Other conventions

xx/yy	Acceptable both with xx and with yy
*xx/yy	Unacceptable with xx, but acceptable with yy
xx/*yy	Acceptable with xx, but unacceptable with yy
(xx)	Acceptable both with and without xx
*(xx)	Acceptable with, but unacceptable without xx
(*xx)	Acceptable without, but unacceptable with xx
.. <xx>	Alternative placement of xx in an example
.. <*xx> ..	Impossible placement of xx in an example
$\Rightarrow$	Necessarily implies
$\nRightarrow$	Does not necessarily imply
XX ... YY	Italics indicate binding
XX_i ... YY_i	Coindexing indicates coreference
XX_i ... YY_j	Counter-indexing indicates disjoint reference
$XX_{*i/j}$	Unacceptable with index *i*, acceptable with index *j*
$XX_{i/*j}$	Unacceptable with index *j*, acceptable with index *i*
[$_{XP}$ ...]	Constituent brackets of a constituent XP

Chapter 5
R-pronominalization and R-words

Introduction

This section is devoted to R-PRONOMINALIZATION and R-EXTRACTION. The first notion refers to pronominalization of the nominal complement of a preposition by means of a so-called R-word, which must precede the preposition. In (3) we give two examples with the R-word *er*, which will be glossed as *there* for reasons that will become clear when we discuss the examples in (6).

(1) a. Jan kijkt naar de film.   a′. Jan kijkt   ernaar.
         Jan looks at the movie   the movie there.at
         'Jan is watching the movie.'   'Jan is watching it.'
     b. Jan wacht op de bus.   b′. Jan wacht erop.
         Jan waits for the bus   Jan waits there.on
         'Jan is waiting for the bus.'   'Jan is waiting for it.'

Pronominal R-words like *er* will normally be referred to as R-PRONOUNS, although we will also use the notation [+R] pronouns when they are discussed in contrast to [-R] pronouns like *hij/hem* 'he/him'. The combination of an R-pronoun and its associate adposition will be referred to as a PRONOMINAL PP.

Table 1, which is based on the classification of the pronouns developed in Section N5.2, shows that all third person, non-anaphoric [-R] pronouns that can be used independently as arguments have a [+R] counterpart. The fact that these [+R] pronouns all contain an /r/ is responsible for their name.

Table 1: Types of R-pronouns

SUBGROUP A		[−NEUTER]	[+NEUTER]	R-PRONOUN
REFERENTIAL		*hij/zij* 'he/she'	*het* 'it'	*er* 'there'
DEMON-STRATIVE	PROXIMATE	*deze* 'that'	*dit* 'this'	*hier* 'here'
	DISTAL	*die* 'this'	*dat* 'that'	*daar* 'there'
RELATIVE		*die* 'who'	*dat* 'which'	*waar* 'where'
SUBGROUP B		[+HUMAN]	[−HUMAN]	R-PRONOUN
INTERROGATIVE		*wie* 'who'	*wat* 'what'	*waar* 'where'
QUANTIFI-CATIONAL	EXISTENTIAL (POSITIVE AND NEGATIVE)	*iemand* 'someone'	*iets* 'something'	*ergens* 'somewhere'
		niemand 'no one'	*niets* 'nothing'	*nergens* 'nowhere'
	UNIVERSAL	*iedereen* 'everyone'	*alles* 'everything'	*overal* 'everywhere'

Table 1 shows that the [-R] pronouns can be divided into four main groups by means of the features [±NEUTER] and [±HUMAN]. For the referential, demonstrative and relative pronouns (group A), the gender distinction is the most prominent one, although it must be noted that most nouns that refer to [+HUMAN] entities are [-NEUTER] as well; nouns with the feature constellation [+NEUTER] and [+HUMAN] are typically diminutives (exceptions are the noun *meisje* 'girl', which has the formal characteristics of a diminutive, the noun *kind* 'child', and a number of nouns with a negative connotation like *wijf* 'bitch of a woman' and *mens* 'person'). For the

interrogative and quantificational pronouns (group B), only the distinction between [+HUMAN] and [-HUMAN] is relevant. As illustrated in (2), and to be discussed more extensively in Section 5.1, [+R] pronouns are typically, but not exclusively, used as alternative realizations of [-HUMAN] pronouns; see Table 2 in Section 5.1.7 for an overview.

(2) a. We kijken naar hem/$^{??}$er naar.
         we look   at him/there at
         'We are looking at him.'
     b. We kijken er naar/*naar het.
         we look   there at/at it
         'We are looking at it.'

In contrast to English, preposition stranding in Dutch cannot arise by extracting a full noun phrase or a regular pronoun from a prepositional phrase. This means that English constructions like (3a&b) are not possible in Dutch, as shown by the unacceptability of the primed examples in (3).

(3) a. Which book$_i$ are you looking [$_{PP}$ at t_i]?
     a′. *Welk boek$_i$ kijk je [$_{PP}$ naar t_i]?
         which book look you   at
     b. What$_i$ are you looking [$_{PP}$ at t_i]?
     b′. *Wat$_i$ kijk je [$_{PP}$ naar t_i]?
         what look you   at

Dutch does not have so-called pseudo-passives either, which is clear from the fact that English (4a) cannot be translated in Dutch by means of (4b), but must be rendered by means of the impersonal passive construction in (4b).

(4) a. These topics$_i$ have been talked [$_{PP}$ about t_i] a lot.
     b. *Deze onderwerpen$_i$ zijn   veel [$_{PP}$ over t_i] gesproken.
         these topics   have.been a.lot   about   talked
     b′. Er   is   veel over deze onderwerpen gesproken.
         there has.been a.lot about these topics   talked

Preposition stranding is often possible, however, when we are dealing with pronominal PPs. We will refer to this type of preposition stranding, which is illustrated in the primed examples in (5) by means of *wh*-movement of the R-word, as R-EXTRACTION. In order to indicate that the R-word and the stranded preposition form a semantic unit, we will often mark the discontinuous pronominal PP by means of italics.

(5) a. Jan kijkt naar de film.   a′. *Waar* kijkt Jan *naar*?
         Jan looks at the movie   where looks Jan at
         'Jan is watching the movie.'   'What is Jan looking at?'
     b. Jan wacht op de bus.   b′. *Waar* wacht Jan *op*?
         Jan waits for the bus   where waits Jan for
         'Jan is waiting for the bus.'   'What is Jan waiting for?'

Example (6) illustrates R-extraction for all R-pronouns in Table 1. We will follow the custom in the linguistic literature to gloss the R-pronouns by means of an English spatial pro-form. This custom is due to the fact, illustrated in the primed examples, that all R-words can also be used as spatial pro-forms.

(6) • R-pronouns

a. Jan keer *er* zojuist *naar*.
    Jan looked there just now at
    'Jan looked at it just now.'

b. Jan keek *hier/daar* goed *naar*.
    Jan looked here/there well at
    'Jan looked at this/that well.'

c. het boek *waar* ik *naar* keek
    the book where I at looked
    'the book that I looked at'

d. *Waar* keek je *naar*?
    what looked you at
    'What did you look at?'

e. Jan keek *ergens* goed *naar*.
    Jan looked something well at
    'Jan looked at something carefully.'

f. Jan keek *nergens* goed *naar*.
    Jan looked nothing well at
    'Jan looked at nothing carefully.'

g. Jan keek *overal* goed *naar*.
    Jan looked everywhere well at
    'Jan looked at everything carefully.'

• Spatial pro-forms

a′. Jan was er.
     Jan was there
     'Jan was there.'

b′. Jan zat hier/daar.
     Jan sat here/there
     'Jan was sitting here/there.'

c′. de stad waar Jan woont
     the city where Jan lives
     'the city where Jan is living'

d′. Waar woont Jan?
     where lives Jan
     'Where does Jan live?'

e′. Dat boek is ergens.
     that book is somewhere
     'That book is somewhere.'

f′. Dat boek is nergens.
     that book is nowhere
     'That book is nowhere.'

g′. de boeken liggen overal.
     the books lie everywhere
     'The books are lying everywhere.'

To conclude this brief introduction to R-extraction, we want to discuss a potential problem for our earlier conclusion, which was based on the examples in (3) to (5), that preposition stranding is only possible with R-pronouns, viz., the observation that examples like (7a) are more or less acceptable for many speakers. In principle, there are two possible analyses for this construction. The first analysis is given in (7b) and assumes that we are dealing with preposition stranding of the English type in the sense that it is the noun phrase that has been extracted from the PP. This analysis faces the problem that it forces us to develop some independent account for the ungrammaticality of the Dutch examples in (3) and (4b). Furthermore, it is rather surprising under this analysis that the noun phrase *bananen* cannot be moved into some position in the middle field of the clause: **Ik ben bananen dol op*. The second analysis is given in (7c) and assumes that the movement involves an R-pronoun which is subsequently deleted; in essence, we are dealing with a °left dislocation construction with a deleted resumptive pronoun.

(7) a. %Bananen ben ik dol op.
         bananas am I fond of
         'Bananas I am fond of.'
     b. Bananen$_i$ ben ik dol [$_{PP}$ op t_i].
     c. Bananen, ~~daar~~$_i$ ben ik dol [$_{PP}$ op t_i].

The analysis in (7c) has at least four advantages. First, it is in accordance with our conclusion on the basis of the examples in (3) and (4b) that preposition stranding is only possible with R-pronouns. Second, it receives some support from the fact that the resumptive pronoun can also be overt: *Bananen, daar ben ik dol op*. Third, the (b)-examples in (8) shows that the preposition *met* must surface in its stranded form *mee*, both in the construction with and without *daar*; cf. Klooster (2001:324).

(8)   a.   Ik ben blij   met dat cadeau.
           I   am   happy   with that present
       b.   Dat cadeau, daar ben ik blij   mee/*met.
           that present, there am I   happy   with/with
       b′.   Dat cadeau   ben ik blij   [%]mee/*met.
           that present, am I   happy   with/with

Fourth, the analysis in (7c) does not predict the acceptability of constructions like *Ik ben bananen dol op*. And, finally, it correctly predicts that PPs that do not allow R-extraction cannot undergo the form of preposition stranding shown in (7a) either; cf. Klooster (2001:324).

(9)   a.   *Die dagen (*daar*) werk ik nooit *op*.
           those days there work I   never on
       b.   *Amsterdam (*daar*) woon ik niet *in*.
           Amsterdam there live I   not in
       c.   *Die manier (*daar*) doet hij het niet *op*.
           that way   there does he it not in

For these reasons, we will adopt the analysis in (7c) and assume that the markedness of (7a) is due to the fact that, for many speakers of Dutch, deletion of the R-pronoun is apparently not a favored option. For more discussion, see Klooster (1989), Van der Horst & Van der Horst (1999), and Van der Horst (2008).

     Before we start our more comprehensive discussion of R-pronominalization and R-extraction, we want to point out that, besides its use as a spatial pro-form, the R-word *er* can also function as an expletive in impersonal passives and existential/presentational sentences like (10a&b), and as the licenser of the nominal gap *[e]* in so-called °quantitative *er* constructions like (10c).

(10)   a.   Er   werd gedanst.   [expletive]
            there was   danced
       b.   Er   waren drie studenten in de tuin.   [expletive]
            there were three students in the garden
       c.   Jan heeft er [$_{NP}$ drie [*e*]] gekocht.   [quantitative]
            Jan has   there three   bought
            'Jan has bought three [e.g., books].'

Realizing that *er* can perform more than one function is important because one occurrence of *er* can occasionally express more than one of these functions at the same time. In (11b), for example, *er* simultaneously performs the function of expletive, licenser of the nominal gap in the noun phrase remnant that corresponds to *drie sigaren* in (11a), and the complement of the stranded preposition *in*. We will discuss examples like these more extensively in Section 5.5.3.

(11) a. Gisteren zaten er   nog drie sigaren in de doos.
        yesterday sat   there still three cigars in the box
        'Yesterday, there were still three cigars in the box.'

    b. Gisteren zaten *er*   nog [$_{NP}$ drie [*e*]] *in*.
        yesterday sat   there still   three   in
        'Yesterday, there were still three in it.'

This chapter is organized as follows. Sections 5.1 through 5.3 will discuss the restrictions on R-pronominalization and R-extraction: Section 5.1 starts by discussing the semantic restriction that, in the general case, the R-pronoun refers to a [-HUMAN] entity; Section 5.2 continues with the lexical restrictions on the adpositions, e.g., that locational but not temporal prepositions can readily be part of a pronominal PP; Section 5.3 concludes with the discussion of a number of syntactic conditions on R-extraction. Section 5.4 provides some examples of idiomatic constructions containing pronominal PPs, and Section 5.5 finally, explores a domain that goes slightly beyond the discussion of R-pronominalization and R-extraction by discussing the co-occurrence restrictions on the R-words in (6) and (10) as well as *er*'s ability, illustrated in (11b), to simultaneously perform more than one function.

5.1. [-HUMAN] restriction on the formation of pronominal PPs

Dutch pronominal PPs have the same semantic value as prepositions followed by a pronoun in English. For example, English P + *it* would typically be translated by means of *er* + P in Dutch. This does not mean that all English P + pronoun combinations can or must be translated by means of a pronominal PP in Dutch. The discussion below will show that the formation of a pronominal PP is often blocked when the antecedent of the pronoun is [+HUMAN] (and the same may hold for pronouns referring to pets). A typical case is given in (12): whereas the pronoun *hem* in (12a) may refer to the [+HUMAN] antecedent, the R-pronoun in (12b) typically refers to a [-HUMAN] antecedent, that is, the music by Bach. Since the various functional/semantic types of pronouns differ with respect to the [-HUMAN] restriction, we will discuss them in separate sections.

(12) a. Bach, ik ben dol   op hem.
        Bach I   am fond of him
        'Bach, I am fond of him.'

    b. Bach, ik ben er   dol op.
        Bach I   am there fond of
        'Bach, I am fond of it.'

5.1.1. Referential (personal) R-pronouns

Whether a pronominal PP can arise often depends on whether the complement of the preposition is [+HUMAN] or [-HUMAN]. This is especially clear in the case of referential personal pronouns. Resumptive pronoun constructions of the type in (13) make it possible to test the restrictions on the co-occurrence of certain types of antecedents and the R-pronoun.

(13) a. *NP*, ik ben dol op *pronoun*.
      NP I   am fond of pronoun
      'NP, I am fond of *pronoun*.'
   b. *NP*, ik ben *er*   dol   *op*.
      NP I   am there fond of
      'NP, I am fond of *pronoun*.'

For completeness' sake, note that the resumptive pronoun *er* must appear in its phonetically strong form *daar* when it is placed in clause-initial position, as in (14).

(14) *NP*, *daar*/**er* ben ik dol   *op*.
      NP there   am I   fond of

This may be due to the fact that (with the exception of subject pronouns and the expletive *er*) phonetically weak elements cannot be placed in clause-initial position; the difference between (13b) and (14) is therefore similar in nature to the difference between the two examples in (15). We refer the reader to Section N5.2.1.1.5, sub II, for more detailed discussion.

(15) a. Jan, ik heb 'm   niet gezien.
      Jan I   have him not seen
      'Jan, I haven't seen him.'
   b. Jan, die/hem/*'m heb ik niet gezien.
      Jan him   have I not seen

We will discuss the behavior of [-HUMAN] and [+HUMAN] referential pronouns with respect to the resumptive pronoun test in separate subsections.

I. [-HUMAN] pronouns

This subsection discusses the [-HUMAN] personal pronouns. The singular and plural forms are discussed in separate subsections. Note that we use the weak forms of the personal pronouns in the examples below, because strong pronouns normally can only be used to refer to [+HUMAN] antecedents; cf. Section N5.2.1.1,5 sub III.

A. Singular [-HUMAN] pronouns

When a singular [-HUMAN] pronoun occurs as the complement of a preposition, the PP is obligatorily realized as a pronominal PP; this is indicated in (16a) by placing an asterisk in front of the P + pronoun sequence. The (b)- and (c)-examples show that a pronominal PP must appear in the resumptive pronoun constructions, regardless of the gender of the pronoun's antecedent.

(16)   • Singular [±NEUTER][-HUMAN] pronouns
   a. *P + 't/'m/'r ⇒ er +P
       P + it   there + P
   b. *Dat boek,   ik ben dol op 't.
       that book$_{[+neuter]}$ I am fond of it
   b'. Dat boek,   ik ben *er* dol *op*.
       that book$_{[+neuter]}$ I am there fond of
       'That book, I am fond of it.'

    c. *Die soep,   ik ben dol   op 'r.
        that soup$_{[-neuter]}$ I   am fond of her
    c′. Die soep,   ik ben *er*   dol   *op*.
        that soup$_{[-neuter]}$ I   am there fond of
        'That soup, I am fond of it.'

B. Plural [-HUMAN] pronouns

The plural [-HUMAN] pronoun *ze* 'them' cannot occur as the complement of a preposition either, regardless of the gender of the pronoun's antecedent. We illustrate this in the (b)- and (c)-examples in (17) by means of the [+NEUTER] noun *boeken* 'books' and the [-NEUTER] noun *chocoladerepen* 'chocolate bars'.

(17)   • Plural [–HUMAN] pronouns
    a.   *P + ze $\Rightarrow$ er + op
        P + them   there + on
    b.   *?Die boeken,   ik ben dol   op ze.
        those books$_{[+neuter]}$ I   am fond of them
    b′. Die boeken,   ik ben *er* dol   *op*.
        those books$_{[+neuter]}$ I   am there fond of
        'Those books, I am fond of them.'
    c.   *?Die chocoladerepen,   ik ben dol   op ze.
        those chocolate bars$_{[-neuter]}$ I   am fond of them
    c′. Die chocoladerepen,   ik ben *er* dol   *op*.
        those chocolate bars$_{[-neuter]}$ I   am there fond of
        'Those chocolate bars, I am fond of them.'

Section 5.2 will show that some prepositions do not allow R-pronominalization. Since the [-HUMAN] restriction also holds for such prepositions, [-HUMAN] noun phrases can never be pronominalized in PPs headed by such prepositions. Example (18) illustrates this for the preposition *volgens*.

(18) a.   Volgens   Jan/het weerbericht   gaat het vandaag regenen.
        according.to Jan/the weather.forecast goes it   today   rain
    b.   Volgens   hem/*'t gaat het vandaag regenen.
        according.to him/it goes it   today   rain
    c.   *Er   volgens   gaat het vandaag regenen.
        there according.to him/it goes it   today   rain

II. [+HUMAN] pronouns

This section discusses the [+HUMAN] personal pronouns. The singular and plural forms are again discussed in separate subsections.

A. Singular [+HUMAN] pronouns

A [+HUMAN] pronoun like *hem* 'him' or *haar* 'her' is perfectly acceptable as the complement of a preposition. The alternative realization as a pronominal PP is possible but slightly marked. This is due to a general preference to interpret the pronominal PP *er op* as involving a [-HUMAN] entity; only when the antecedent is explicitly mentioned in the discourse is a [+HUMAN] interpretation of the R-pronoun available.

(19)   • Singular [-NEUTER][+HUMAN] pronouns
   a.   P + hem/haar⇒ $^{(?)}$er + P
        P + him/her   there + P
   b.   Mijn echtgenoot,   ik ben dol   op hem.
        my husband   I am fond of him
        'My husband, I am fond of him.'
   b′. $^{(?)}$Mijn echtgenoot, ik ben *er*   dol   *op*.
        my husband   I   am there fond of

Although judgments are subtle, it might be the case that a kind of scale is involved: for at least some people, the pronominal PP *er op* is close to perfect in examples like (19b′), where the antecedent has some intrinsic relation to the speaker, but marked when it involves some other [+HUMAN] entity, as in (20a). The pronominal PP *er op* seems to be excluded when the antecedent of the R-pronoun is referred to by means of a proper noun, as in (20b).

(20) a.   Die jongen, ik ben dol   op hem.
          that boy   I   am fond of him
          'That boy, I am fond of him.'
     a′. $^?$Die jongen, ik ben *er*   dol   *op*.
          that boy   I   am there fond of
          'That boy, I am fond of him.'
     b.   Jan, ik ben dol   op hem.
          Jan I   am fond of him
          'Jan, I am fond of him.'
     b′. *Jan, ik ben *er*   dol   *op*.
          Jan I   am there fond of
          'Jan, I am fond of him.'

In contrast to the non-neuter pronouns in (19), the neuter pronoun *het* in (21) must also be replaced by an R-pronoun when it refers to a [+HUMAN] entity, which suggests that it is not the feature [±HUMAN] that is relevant here, but gender: prepositions simply cannot be followed by the pronoun *het*.

(21)   • Singular [+NEUTER][+HUMAN] pronoun
   a.   *P + het ⇒ er + P
         P + it   there + P
   b.   *Dat kind,   ik ben dol   op het.
        that child$_{[+neuter]}$ I   am fond of it
   b′. Dat kind,   ik ben *er*   dol   *op*.
        that child$_{[+neuter]}$ I   am there fond of
        'That child, I am fond of it.'

Note that in examples like these, grammatical gender can be overruled by sex. This will be clear from example (22a), in which the [+NEUTER] noun *meisje* 'girl' refers to a young female person and the [-R] pronoun used is not the neuter form *het* 'it' but the feminine form *haar* 'her'.

(22) a. Dat meisje,   ik ben dol   op haar/*het.
         that girl[+neuter] I am fond of her/it
     b. Dat meisje,   ik ben *er*   dol   *op*.
         that girl[+neuter] I am there fond of
         'That girl, I am fond of her.'

B. Plural [+HUMAN] pronouns

The phonetically weak and strong plural third person [+HUMAN] pronouns, *ze* 'them' and *hen* 'them' can both appear as the complement of a preposition, and the use of a pronominal PP is somewhat marked.

(23)   • Plural [+HUMAN] pronouns
     a. P + hen/ze ⇒ (?)er + P
         P + them   there + P
     b. Mijn dochters, ik ben dol   op ze/hen.
         my daughters   I   am fond of them
         'My daughters, I am fond of them.'
     b′. (?)Mijn dochters, ik ben *er*   dol   *op*.
         my daughters   I   am there fond of

As in the case of the singular [+HUMAN] pronouns, some scale may be involved: for at least some speakers, the pronominal PP *er op* is close to perfect in examples like (23b′), where the antecedent has some intrinsic relation to the speaker, but marked when it involves some other [+HUMAN] entity, as in (24a). The pronominal PP *er op* is excluded when the antecedent of the R-pronoun is referred to by means of a proper noun, as in (24b).

(24) a. Die jongens, ik ben dol   op ze.
         those boys   I   am fond of them
         'Those boys, I am fond of them.'
     a′. ?Die jongens, ik ben *er*   dol   *op*.
         those boys   I   am there fond of
     b. Jan en Marie, ik ben dol   op ze/hen.
         Jan and Marie I   am fond of them
     b′. *Jan en Marie, ik ben *er* dol   *op*.
         Jan and Marie I   am there fond of

The examples in (25), which should be compared to the (a)-examples in (24), show, however, that pronominal PPs are fully acceptable in generic constructions with bare plurals. Example (25b) in fact sounds more natural than example (25a).

(25) a. ?Jongens,   ik ben dol   op ze.
         boys[-neuter] I   am fond of them
     b. Jongens,   ik ben *er*   dol   *op*.
         boys[-neuter] I   am there fond of
         'Boys, I am fond of them.'

   Although (16) and (21) have shown that the neuter pronoun *het* can never appear as the complement of a preposition, the primeless examples in (26) show

that its plural counterpart *ze* can. From this we must conclude that it is only the singular [+NEUTER] pronoun *het* 'it' that is excluded as a complement of a preposition, not its plural counterpart *ze* 'them'. This is not so surprising given that the feature [±NEUTER] normally does not play a role in the plural and the pronoun *ze* can therefore be said to simply lack this feature.

(26)　　• Plural [+HUMAN] pronouns
　　a.　Die kinderen,　　ik ben dol　op ze.
　　　　that children$_{[+neuter]}$　I　am　fond　of　them
　　　　'Those children, I am fond of them.'
　　a′. $^{(?)}$Die kinderen,　　ik ben *er*　dol　*op*.
　　　　that children$_{[+neuter]}$　I　am　there　fond　of
　　b.　Die meisjes,　　ik ben dol　op ze.
　　　　those girls$_{[+neuter]}$　I　am　fond　of　them
　　　　'Those girls, I am fond of them.'
　　b′. $^{(?)}$Die meisjes,　　ik ben *er*　dol　*op*.
　　　　those girls$_{[+neuter]}$　I　am　there　fond　of

5.1.2. Demonstrative R-pronouns

The demonstrative R-pronouns *daar* 'there' and *hier* 'here' from Table 1 are also preferably interpreted as referring to [-HUMAN] antecedents. Examples like (27a) are perfectly natural when the speaker refers to some object, but distinctly odd when used to refer to a certain person. Example (27b) shows again that pronominal PPs are acceptable in generic constructions with [+HUMAN] bare plural antecedents.

(27)　a.　Die snoepjes/$^?$die jongens, ik ben *daar* dol　*op*.
　　　　those sweets/those boys　　I　am　there　fond　of
　　　　'I am fond of that.'
　　b.　Snoepjes/Jongens, ik ben *daar* dol　*op*.
　　　　sweets/boys　　　I　am　there　fond　of

Although this is perfectly possible in subject or object position, demonstrative pronouns are at least marked when used as an independent argument (= without an accompanying noun) in the complement position of a preposition.

(28)　a.　Ik ben dol　op deze/die　$^{??}$(plaat/jongen).
　　　　I　am　fond　of　that/this　　record/boy
　　b.　Ik ben dol　op dit/dat　$^{*?}$(boek/meisje).
　　　　I　am　fond　of　that/this　　book/girl

5.1.3. Relative R-pronouns

The examples in (29) show that relative pronouns with a [+HUMAN] antecedent can be realized both as regular relative personal pronouns and as relative R-pronouns. Despite the fact that normative grammars are generally opposed to (29b), it is this form that is normally found in colloquial speech. Observe that the preposition must be pied piped by the [-R] pronoun, whereas preposition stranding is possible and even slightly better in the case of an [+R] pronoun. This confirms again that preposition stranding is possible with R-pronouns only; cf. example (3).

(29) a.   de jongen op wie   ik wacht
           the boy   for whom I   wait
           'the boy I am waiting for'
  a′. *de jongen wie ik op wacht
  b.   ^(?)de jongen waarop   ik wacht
       the boy   where.for I   wait
       'the boy I am waiting for'
  b′. de jongen *waar* ik *op* wacht

The examples in (30) show that the formation of a pronominal PP is obligatory when the antecedent of the relative pronoun is [-HUMAN]. This shows that the relative pronouns *die*/*dat* cannot occur as the complement of a preposition.

(30) a. *de brief_[-neuter] op die   ik wacht
          the letter   for which I   wait
  a′. de brief *waar* ik *op* wacht
       the letter where I   for wait
       'the letter I am waiting for'
  b. *het boek_[+neuter] op dat   ik wacht
       the book   for which I   wait
  b′. de boek *waar* ik *op* wacht
       the book where I   for wait
       'the book I am waiting for'

5.1.4. Interrogative R-pronouns

Interrogative pronominal PPs can only be used when the preposition has a [-HUMAN] complement. A speaker who knows that Jan is waiting for a person will not use the construction in (31b); this construction can only be used when the speaker expects that the answer will involve a [-HUMAN] entity, or when he has no expectation at all. The primed examples show that preposition stranding is excluded with the [-R] pronoun *wie* but fully acceptable, and even preferred, with the corresponding [+R] pronoun. From this we may again conclude that preposition stranding is possible with R-pronouns only.

(31) a.   Op wie wacht je?   a′. [#]Wie wacht je op?
          for who wait   you
          'For whom are you waiting?'
  b. [?]Waarop   wacht je?   b′. *Waar* wacht je *op*?
       where.for wait   you
       'What are you waiting for?'

The examples in (32) show that the formation of a pronominal PP is strongly preferred when the speaker expects that the answer will involve a [-HUMAN] entity; examples like (32a) are only acceptable as echo-questions.

(32) a. #Op wat wacht je?
      for what wait you
   b. *Waar* wacht je *op*?
      where wait you for
      'What are you waiting for?'

5.1.5. Existentially quantified R-pronouns

Existentially quantified R-pronouns also refer strictly to [-HUMAN] entities. A speaker who uses (33b) expresses that the thing he is waiting for is not a [+HUMAN] entity. Something similar holds for the negative counterpart of this R-pronoun in (33b′).

(33) a. Ik wacht op iemand.   a′. Ik wacht op niemand.
      I wait for someone   I wait for no.one
      'I am waiting for someone.'   'I am waiting for no one.'
   b. Ik wacht *ergens*   *op*.   b′. Ik wacht *nergens op*.
      I wait somewhere for   I wait nowhere for
      'I am waiting for something.'   'I am not waiting for anything.'

It seems that, when the existentially quantified pronoun refers to a [-HUMAN] entity, the formation of the pronominal PP is more or less optional. This is shown in (34).

(34) a. Ik wacht op iets.   a′. Ik wacht *ergens*   *op*.
      I wait for something   I wait somewhere for
      'I am waiting for something.'   'I am waiting for something.'
   b. Ik wacht op niets.   b′. Ik wacht *nergens*   *op*.
      I wait for nothing   I wait nowhere/somewhere for
      'I am not waiting for anything.'   'I am not waiting for anything.'

When the complement of the preposition expresses sentence negation, it must be moved to a certain position in the °middle field of the clause. This is clear from the fact that the PP-complement of the adjective in (35a) cannot occupy its regular postadjectival position but must precede the adjective; cf. Section A2.3.1.2, sub IIB. The contrast between (35a′) and (35b′) shows that preposition stranding is possible (or, rather, obligatory) with the R-pronoun only. This again confirms our earlier claim that preposition stranding is restricted to R-pronouns.

(35) a. dat Jan [op niemand]$_i$ erg dol t_i is.
      that Jan of no.one   very fond is
      'that Jan isn't very fond of anyone.'
   a′. *dat Jan niemand$_i$ erg dol [op t_i] is.
   b. *dat Jan [nergens op]$_i$ erg dol t_i is.
   b′. dat Jan *nergens*$_i$ erg dol   [*op* t_i] is.
      that Jan nowhere very fond of   is
      'that Jan isn't very fond of anythin g.'

5.1.6. Universally quantified R-pronouns

In the case of universally quantified pronouns, pronominal PPs also refer strictly to [-HUMAN] entities. A speaker who uses (36b) expresses that the things the doctor is going to look at are not [+HUMAN] entities. So, (36a) can be used to express that the doctor will examine all patients, whereas (36b) expresses that the doctor will examine the patient(s) thoroughly.

(36) a. De dokter zal   naar iedereen kijken.
         the doctor will   at everyone   look
         'The doctor will examine everyone.'
     b. De dokter zal *overal*   *naar* kijken.
         the doctor will   everywhere at   look
         'The doctor will examine everything.'

The examples in (37) show that, as in the case of the existentially quantified pronouns, the formation of the pronominal PP is more or less optional when the universally quantified pronoun refers to a [-HUMAN] entity.

(37) a. De dokter kijkt   naar alles.
         the doctor looks at everything
         'The doctor examines everything.'
     b. De dokter kijkt *overal*   *naar*.
         the doctor looks everywhere at
         'The doctor examines everything.'

5.1.7. Summary

This section has shown that [+HUMAN] pronouns normally do not readily allow R-pronominalization, although two exceptions are attested. First, although non-neuter referential personal pronouns only marginally allow it, R-pronominalization of neuter pronouns is readily possible and even obligatory when the neuter pronoun is singular. Second, R-pronominalization of [+HUMAN] relative pronouns seems to be the preferred option in colloquial speech. R-pronominalization of [-HUMAN] pronouns, on the other hand, is normally obligatory; only the (existentially and universally) quantified pronouns behave differently in this respect. The discussion from the previous sections is summarized in Table 2, in which P stands for the preposition in question.

Table 2: Regular and pronominal PPs and the feature [±HUMAN]

			+HUMAN		-HUMAN	
			P + PRONOUN	PRONOMINAL PP	P + PRONOUN	PRONOMINAL PP
REFERENTIAL	SINGULAR	NON-NEUTER	✓P hem/haar 'P him/her'	?er P	*P hem/haar 'P it'	✓er P
		NEUTER	*P het 'P it'	✓er P	*P het 'P it'	✓er P
	PLURAL	NON-NEUTER	✓P ze/hen 'P them'	?er P	*P ze 'P them'	✓er P
		NEUTER	✓P ze/hen 'P them'	✓er P	*P ze 'P them'	✓er P
DEMON-STRATIVE	PROXI-MATE		??P deze/dit 'P this'	*hier P	*P deze/dit 'P this'	✓hier P
	DISTAL		??P die/dat 'P that'	*daar P	*P die/dat 'P that'	✓daar P
RELATIVE			✓P wie 'P whom'	✓waar P	*P wat 'P which'	✓waar P
INTERROGATIVE			✓P wie 'P whom'	*waar P	*P wat 'P what'	✓waar P
EXIS-TENTIAL	POSITIVE		✓P iemand 'P someone'	*ergens P	✓P iets 'P something'	✓ergens P
	NEGATIVE		✓P niemand 'P no one'	*nergens P	✓P niets 'P nothing'	✓nergens P
UNIVERSAL			✓P iedereen 'P everyone'	*overal P	✓P alles 'P everything'	✓overal P

5.2. Lexical restrictions on the formation of pronominal PPs

Apart from the [-HUMAN] restriction on the R-pronominalization, there are several additional restrictions that are related to the lexical properties of the adpositions heading the PPs. In order to license the formation of a pronominal adpositional phrase, the adposition must be able to take a nominal complement. This means that only pre-, post- and circumpositions are eligible for it: intransitive prepositions and particles do not take a complement. This does not mean, however, that all adpositions taking a complement can undergo R-pronominalization. The following sections will discuss the restrictions that hold for pre-, post- and circumpositions, respectively.

5.2.1. Prepositions

This section discusses the restrictions on R-pronominalization of prepositional phrases. We start with a discussion of spatial PPs in Section 5.2.1.1, which is followed by a discussion of temporal PPs in Section 5.2.1.2. We conclude with a discussion of non-spatial/temporal PPs in Section 5.2.1.3.

5.2.1.1. Spatial prepositions

Subsections I and II will discuss R-pronominalization of, respectively, locational and directional prepositional phrases. We will show that R-pronominalization is a fairly productive process for locational PPs; virtually all locational PPs have a pronominal counterpart. Directional PPs, on the other hand, generally seem unable to undergo this pronominalization process.

I. Locational prepositional phrases

Chapter 1 has shown that locational PPs typically occur in the complement of the verbs of location in (38a) and the verbs of change of location in (38b). We can therefore test whether locational PPs can be replaced by a pronominal PP by placing the pronominal form in the frames *NP Vloc PP* and *NP Vloc NP PP*.

(38)   a.   Verbs of location (monadic: NP V_{loc} PP):
            hangen 'to hang', *liggen* 'to lie', *staan* 'to stand', *zitten* 'to sit'
      b.   Verbs of change of location (dyadic: NP V_{loc} NP PP):
            hangen 'to hang', *leggen* 'to lay', *zetten* 'to put'

A. Deictic and inherent prepositions

A PP headed by a deictic or an inherent preposition can always be replaced by a pronominal PP. In (39), we give an example for all deictic/inherent prepositions from Table 17 in Section 1.3.1.2.4. Note that for many speakers the pronominal form *er tegen* in (39g′) seems less preferred than the form *er tegen aan* which is formed on the basis of the circumpositional phrase *tegen de muur aan*.

(39)   a.   De auto staat   voor/achter/naast/tegenover   de kerk.
            the car   stands   in.front.of/behind/next.to/opposite the church
      a′.   De auto staat er voor/achter/naast/tegenover.
      b.   Het huis staat   net   binnen/buiten de stadsgrens.
            the house stands   just   within/outside the city border
      b′.   Het huis staat er net binnen/buiten.
      c.   De huizen staan vlak bij/langs   de rivier.
            the houses stand just near/along   the river
      c′.   De huizen staan er vlak bij/langs.
      d.   De naald   steekt   in/uit/door   het speldenkussen.
            the needle sticks   in/out.of/through   the pincushion
      d′.   De naald steekt er in/uit/door.
      e.   Het amulet   hangt   aan een kettinkje.
            the amulet   hangs   on a necklace
      e′.   Het amulet hangt er aan.
      f.   Het kleed   ligt   op/over   de tafel.
            the cloth   lies   on/over   the table
      f′.   Het kleed ligt er op/over.
      g.   De ladder staat   tegen de muur   (aan).
            the ladder   stands   against the wall ᴀᴀɴ
      g′.   De ladder staat er tegen $^{??}$(aan).

The examples in (39) all involve locational verbs, but the results with verbs denoting a change of location are exactly the same. This is shown in the examples in (40), which provide the change of location counterparts of the primed examples in (39).

(40) a. Jan zet   de auto er   voor/achter/naast/tegenover.
         Jan puts   the car there in.front.of/behind/next.to/opposite
     b. De architect zet   het huis   er   net binnen/buiten.
         the architect puts the house   there just within/outside
     c. De architect zet   de huizen er   vlak bij/langs.
         the architect puts the houses there just near/along
     d. Jan steekt de naald   er   in/uit/door.
         Jan sticks the needle there in/out.of/through
     e. Jan hangt het amulet er   aan.
         Jan hangs the amulet there on
     f. Jan legt   het kleed er   op/over.
         Jan puts   the cloth there on/over
     g. Jan zet de ladder er   tegen $^{??}$(aan).
         Jan puts the ladder there against AAN

B. Absolute prepositions

The absolute prepositions from Table 17 in Section 1.3.1.2.4 show mixed behavior. The prepositions *boven* 'above', *onder* 'under' and *tussen* 'between' can readily be part of a pronominal PP.

(41) a.   De lamp hangs boven de tafel.
          the lamp hangs above the table
     a′. De lamp hangt er boven.
     b.   De brief ligt onder/tussen   die papieren.
          the letter lies under/between those papers
     b′. De brief ligt er onder/tussen.

However, R-pronominalization seems more problematic in the case of *om/rond* 'around'; the pronominal form *er om heen*, which is based on the circumposition *om … heen* 'around', is much preferred over the form *er om*; judgments on the acceptability of *er rond* seem to vary, but to us this form seems degraded. With the compound *rondom* 'around', on the other hand, the result of R-pronominalization seems a bit formal but acceptable.

(42) a.   De meisjes staan om het kampvuur   (heen).
          the girls   stand around the campfire HEEN
     a′. De meisjes staan er om $^{??}$(heen).
     b.   De meisjes staan rond het kampvuur.
          the girls   stand around the campfire
     b′. $^{%}$De meisjes staan er rond.
     c.   De meisjes staan rondom het kampvuur.
          the girls   stand around the campfire
     c′. De meisjes staan er rondom.

The examples in (41) and (42) all involve locational verbs but the results with verbs denoting a change of location are exactly the same. This is shown in (43) and (44), which give the change of location counterparts of the primed examples in (41) and (42).

(43) a.   Jan hangt de lamp er   boven.
           Jan hangs the lamp there above
     b.   Jan legt de brief er   onder/tussen.
           Jan puts the letter there under/between

(44) a.   Marie zet   de meisjes er   om   ^{??}(heen).
           Marie puts the girls   there around   HEEN
     b.   [%]Marie zet   de meisjes er   rond.
           Marie puts the girls   there around
     c.   Marie zet   de meisjes er   rondom.
           Marie puts the girls   there around

II. Directional prepositional phrases

Directional PPs typically occur in the complement of verbs of traversing, as in (45a). These verbs differ from the corresponding activity verbs by not taking the auxiliary *hebben* 'to have' in the perfect tense, but the auxiliary *zijn* 'to be'. We can therefore test whether a directional PP can be replaced by a pronominal PP by placing the pronominal form in the PP-position in frame (45b).

(45) a.   Verbs of traversing: *rijden* 'to drive', *fietsen* 'to cycle', *wandelen* 'to walk', etc.
     b.   Marie is PP gereden/gefietst/gewandeld.
           Marie is PP driven/cycled/walked

It seems that most directional PPs from Table 17 in Section 1.3.1.2.4 cannot be part of a pronominal PP. This is illustrated for the directional preposition *naar* 'to' in the (a)-examples in (46); the (b)-examples show that a pronominal PP based on the directional circumposition *naar ... toe* is much preferred.

(46) a.   Marie is helemaal   naar Groningen gewandeld.
           Marie is completely to Groningen   walked
     a′. *Marie is *er*   helemaal   *naar* gewandeld.
           Marie is there completely to   walked
     b.   Marie is helemaal   naar Groningen toe gewandeld.
           Marie is completely to Groningen   TOE walked
     b′. Marie is *er*   helemaal   *naar toe* gewandeld.
           Marie is there completely to   TOE walked

A similar contrast, with perhaps slightly less absolute judgments, can be observed in (47) with the directional preposition *over* 'across' and the directional circumposition *over ...heen* 'across'.

(47) a. Marie is over de brug   gefietst.
         Marie is over the bridge cycled
      a′. ??Marie is *er*   *over* gefietst.
         Marie is there over   cycled
      b. Marie is over de brug   heen gefietst.
         Marie is over the bridge HEEN cycled
      b′. Marie is *er*   *over heen* gefietst.
         Marie is there over HEEN cycled

Note in passing that the directional prepositions *naar* and *over* differ sharply in this respect from the functional prepositions *naar* and *over* in (48), which can readily occur as part of pronominal PPs.

(48) a. Marie keek   naar de schilderijen.
         Marie looked   at the paintings
      a′. Marie keek   *er*   *naar*.
         Marie looked there at
      b. Zij hebben urenlang over dat probleem gedebatteerd.
         they have   for.hours about that problem debated
      b′. Zij hebben *er*   urenlang *over* gedebatteerd.
         they have   there for.hours about debated

Like *naar* and *over*, the directional prepositions *van* 'from' and *via* 'via' do not allow the formation of a pronominal PP, and in this case no circumpositional variant is possible either.

(49) a. Marie is van/via Utrecht   (naar Groningen) gereden.
         Marie is from/via Utrecht to Groningen   driven
      b. *Marie is *er*   *van*/*via* (naar Groningen) gereden.
         Marie is there from/via   to Groningen   driven

At first sight, the directional preposition *voorbij* 'past' in (50) does seem to be able to occur in a pronominal PP, but we probably have to put this example aside as irrelevant; the fact that the R-pronoun *hier* 'here' can be dropped indicates that it does not act as the complement of the preposition *voorbij* but as an independent adverbial phrase, so that *voorbij* is actually an intransitive preposition or a verbal particle in this example.

(50)   Marie is (hier) een momentje geleden voorbij gereden.
         Marie is there a moment ago   past   driven

The prepositions *langs* 'along' and *door* 'through', which can be used both as locational PPs and as directional PPs, seem to allow R-pronominalization not only in the locational constructions in (39c&d), but also in the directional constructions in (51). Note that the use of the pronominal PP *er door* in (51b′) has more or less the same degree of acceptability as the use of the pronominal circumpositional phrase *er door heen*.

(51) a.   Marie is gisteren   langs het kanaal gereden.
         Marie is yesterday   along the canal   driven
    a′. Marie is er   gisteren   langs gereden.
         Marie is there yesterday   along driven
    b.   Marie is twee keer   door de tunnel   (heen) gefietst.
         Marie is two times   through the tunnel   HEEN   cycled
    b′. Marie is er   twee keer door   (heen) gefietst.
         Marie is there two times through HEEN   cycled

5.2.1.2. Temporal prepositions

The formation of pronominal PPs with the temporal prepositions from Table 25 in Section 1.3.2.1, sub I, is very restricted. Only the prepositions *voor* 'before' and *na* 'after' seem to allow it. This is illustrated in (52).

(52) a.   Jan moest voor/na   de vergadering telefoneren.
         Jan must   before/after the meeting   phone
         'Jan had to make a phone call before/after the meeting.'
    b.   Jan moest er   voor/na   telefoneren.
         Jan must   there before/after phone
         'Jan had to make a phone call before/after it.'

The other temporal prepositions in (53) categorically resist the formation of pronominal PPs. For completeness' sake, note that the pronominal PP *er tussen* in (53e) is acceptable when it is interpreted locationally, and that *er ... vanaf* in (53f) is possible as a locational pronominal circumpositional phrase. The last column of the table shows that the restriction that the complement of a preposition cannot be a [-HUMAN] pronoun also holds. This means that pronominalization of the complement of these temporal prepositions is completely impossible.

(53) Pronominalization of/in temporal PPs

	EXAMPLE	PRONOMINAL PP	PRONOUN
a.	*tijdens de boottocht* during the boat trip	*er tijdens there during	**tijdens 'm* during it[-human]
b.	*gedurende de vergadering* during the meeting	*er gedurende here during	**gedurende 'r* during it[-human]
c.	*sinds het einde van de vakantie* since the end of the holiday	*er sinds there since	**sinds 't* during it[-human]
d.	*tot het einde van de vakantie* until the end of the holiday	**er tot/toe* there until	**tot 't* during it[-human]
e.	*tussen de lessen* between the lessons	#*er tussen* here between	*tussen ze between them[-human]
f.	*vanaf het begin* since the beginning	#*er vanaf* there since	**vanaf 't* during it[-human]

5.2.1.3. Non-spatial/temporal prepositions

Section 1.3.3.2 has made a distinction between three types of non-spatial/temporal prepositions: (i) prepositions introducing a specific semantic role, (ii) prepositions heading PP-complements, and (iii) prepositions heading non-spatial/temporal adverbial phrases. Below, we will see that only the first two groups can be involved in the formation of pronominal PPs.

I. Prepositions introducing a specific semantic role

Section 1.3.3.2 has discussed several prepositional phrases that are not selected by the verb (or the head of some other phrase they are part of) but introduce a referent that plays a certain semantic role in the clause (or other relevant phrase). Such PPs generally allow the formation of a pronominal PP. This will be illustrated below for the individual prepositions that may head such phrases.

A. Door *'by'*

The first preposition is *door* 'by', which introduces an agent in a passive clause or a cause in an active clause. The primed examples in (54) illustrate that R-pronominalization is possible by means of relative pronominal PPs.

(54)　　• Passive/causal *door*-phrase
　　a.　Jan is　　　　door　deze automobilist aangereden.
　　　　Jan has.been　by　　this car.driver　　　over.run
　　　　'Jan was run over by this car driver.'
　　a′.　de automobilist *waar* Jan *door* aangereden is
　　　　the car.driver　that　Jan by　　over.run　　has.been
　　b.　Het raam　　brak　　door de explosie.
　　　　the window broke　by the explosion
　　　　'The explosion caused the window to break.'
　　b′.　de explosie　　*waar* het raam　*door* brak
　　　　the explosion　that　the window by　　broke

B. Aan *'to' and* voor *'for'*

The prepositions *aan* 'to' and *voor* 'for' introduce, respectively, a recipient and a beneficiary. The primed examples in (55) show that PPs headed by these prepositions allow R-pronominalization.

(55)　　• Recipient *aan*- and beneficiary *voor*-phrases
　　a.　Ik heb　het boek　aan de jongen　gegeven.
　　　　I　have　the book　to the boy　　given
　　　　'I gave the book to the boy.'
　　a′.　de jongen *waar* ik het boek *aan* gegeven heb
　　　　the boy　　where I　the book to　given　　have
　　b.　Ik heb　een trui　voor mijn kleindochter gebreid.
　　　　I　have　a sweater for my granddaughter　knitted
　　　　'I knitted a sweater for my granddaughter.'
　　b′.　mijn kleindochter *waar* ik een trui *voor* gebreid heb
　　　　my granddaughter where I　a sweater for　knitted have

The preposition *voor* can also head a purpose clause and in this case, too, the formation of a pronominal PP is possible. It is not clear whether this use of *voor* is similar to the use of *voor* in the beneficiary PP.

(56) • Purpose *voor*-phrase
  a. Jan doet het voor het geld.
    Jan does it because.of the money
  b. Het geld, *daar* doet Jan het *voor*.
    the money there does Jan it because.of
    'The money, that is what Jan is doing it for.'

C. Met *'with' and* zonder *'without'*

The complement of the preposition *met* 'with' can denote an instrument (57a), a co-agent (57b), or a located object (57c), and R-pronominalization is possible in all these cases.

(57) • *Met*-phrases
  a. Jan opende de kist   met een breekijzer.   [instrumental]
    Jan opened the box with a crowbar
  a′. het breekijzer *waar* Jan de kist *mee* opende
    the crowbar where Jan the box with opened
  b. Marie speelde met Jan.   [comitative]
    Marie played with Jan
  b′. de jongen *waar* Marie *mee* speelde
    the boy where Marie with played
  c. Jan belaadde de wagen met hooi.   [located object]
    Jan loaded the wagon with hay
  c′. het hooi *waar* Jan de wagen *mee* belaadde
    the hay where Jan the wagon with loaded

This does not hold for all *met*-PPs, however. When the *met*-PP expresses an accessory circumstance, as in (58), R-pronominalization is excluded, and the same thing holds when *met* is the head of an absolute *met*-construction; cf. Section 2.5.1.

(58) a. Jan slaapt met   het raam open.   [accessory circumstance]
    Jan sleeps with   the window open
  b. *het raam *waar* Jan *mee* open slaapt
    the window where Jan with open sleeps

Judgments on the preposition *zonder* 'without' sometimes seem to vary; although the interrogative counterpart of (59a) is ungrammatical for most speakers, some of our informants do accept it and we also found a number of at least marginally acceptable examples on the internet in which the string *[er zonder]* clearly functions as a pronominal PP, e.g., *Water heeft de eigenschap dat je er zonder niet kunt leven* 'Water has the property that one cannot live without it'. In most cases, however, R-pronominalization of a *zonder*-PP leads to a severely degraded result. This is shown in (59b′), which can be compared with example (57a′).

(59) a.   Jan zit   zonder geld.
           Jan sits without money
           'Jan has no money.'
      a′. %*Waar* zit je *zonder*?
      b.   Jan opende de kist   zonder het breekijzer.
           Jan opened the box   without the crowbar
      b′. *het breekijzer *waar*   Jan de kist *zonder* opende
           the crowbar   where Jan the box without opened

D. Bij *'with'*

Example (60) shows that possessive *bij*-phrases in locational constructions can also be pronominalized.

(60)   • The possessive *bij*-phrase
      a.   Marie zit   graag   bij hem   op schoot.
           Marie sits with pleasure with him on lap
           'Marie is sitting on his lap with pleasure.'
      b.   de jongen *waar* Marie graag   *bij*   op schoot zit
           the boy   where Marie with pleasure with on lap   sits

E. Van *'of'*

Van-PPs may express a possessor, an agent, or a theme in a nominal construction. The primed examples in (61) show that possessive and agentive *van*-PPs cannot undergo R-pronominalization.

(61)   • Possessive or agentive *van*-phrases
      a.   het boek   van de bibliotheek   [possessive]
           the book of the library
      a′. *?het boek ervan
      b.   het dansen   van de kinderen   [agentive]
           the dance_{inf} of the children
      b′. *?het dansen ervan

Van-PPs expressing a theme, on the other hand, may be pronominalized. The two examples in (62) differ in that the nominal infinitives *lezen* and *vallen* are derived from, respectively, a transitive and an °unaccusative verb.

(62)   • *Van*-phrases expressing a theme
      a.   het lezen   van het boek   [theme of transitive verb]
           the read_{inf} of the book
      c′. het lezen ervan
      d.   het vallen van de bladeren   [theme of unaccusative verb]
           the fall_{inf}   of the leaves
      d′. het vallen ervan

II. Functional prepositions (PP-complements)

PP-complements of verbs, adjectives, nouns and adpositions all allow R-pronominalization. Since we discuss this more extensively in Section 5.3.2.1, we will only give an example of each case here.

(63) a. Jan verlangt erg   naar vakantie. aʹ. Jan verlangt *er*   erg   *naar.*
          Jan longs   much for holiday   Jan longs   there much for

     b. Jan is nieuwsgierig naar je werk bʹ. Jan is *er*   nieuwsgierig *naar.*
          Jan is curious   to your work   Jan is there curious   to

     c. de jacht op ganzen cʹ. de jacht *er*   *op*
          the hunt on geese   the hunt there on

     d. voor bij de maaltijd dʹ. voor *er*   *bij*
          for   with the meal   for   there with

III. Prepositions heading non-spatial/temporal adverbial phrases

Adverbial phrases headed by a non-spatial/temporal preposition cannot undergo R-pronominalization, that is, the prepositions in Table 30 in Section 1.3.3.2.3 cannot head a pronominal PP. The last column of Table (64) shows that these prepositions cannot be followed by a weak pronoun either, irrespective of whether the pronoun is [-HUMAN] or [+HUMAN]. The examples with *dankzij*, *namens*, *ondanks*, *vanwege*, *volgens* and *zonder* become acceptable when the weak pronoun is replaced by a phonetically strong [-NEUTER] one, which is always used to denote a [+HUMAN] entity.

(64) Pronominalization of/in non-spatial/temporal PPs

	EXAMPLE	PRONOMINAL PP	PRONOUN
a.	*dankzij de computer* thanks.to the computer	**er dankzij* there thanks.to	**dankzij ’m* thanks.to it
b.	*gezien deze problemen* in.view.of these problems	**er gezien* there in.view.of	**gezien ze* in.view.of them
c.	*namens de firma* in.name.of the firm	**er namens* there in.name.of	**namens ’r* in.name.of it
d.	*ondanks zijn tegenzin* despite his reluctance	**er ondanks* there despite	**ondanks ’m* despite it
e.	*ongeacht de kosten* irrespective.of the costs	**er ongeacht* there irrespective.of	**ongeacht ze* irrespective.of them
f.	*per post/auto/kilo* by mail/car/the.kilo	**er per* there by	**per ’r/’m/’t* by it
g.	*vanwege de kosten* because.of the costs	**er vanwege* there because.of	**vanwege ze* because.of them
h.	*volgens het nieuws* according.to the news	**er volgens* there according.to	**volgens ’t* according.to it
i.	*wegens het slechte weer* because.of the bad weather	**er wegens* there because.of	**wegens ’t* because.of it
j.	*zonder het geld* without the money	**er zonder* there without	**zonder ’t* without it

Apparent counterexamples to the claim that non-spatial/temporal PPs do not allow R-pronominalization are *daaromtrent* 'as to that' and *hieromtrent* 'hereabout'. These formations are, however, better considered fossilized lexical items, because they are in a severely limited paradigm. The formation *eromtrent*, for example, is not possible. Note in this connection that the morpheme *daar* also occurs in formations like *daarentegen* 'on the other hand' and *daarenboven* 'moreover', which are based on the medieval prepositions *entegen* and *enboven* (*Woordenboek der Nederlandsche Taal*).

5.2.2. *Postpositions*

This section discusses the question of whether postpositional phrases may undergo R-pronominalization, and it will show that it is not easy to answer this question. In view of the fact, illustrated in (65b), that nominal complements of postpositions can be pronominalized by means of a [-R] pronoun, one might expect R-pronominalization to be blocked. However, constructions like (65b) often occur alongside constructions like (65c), which involve R-pronominalization.

(65) a. dat hij die boom in   is geklommen.
        that he that tree into is climbed
        'that he has climbed into that tree.'

      b. de boom die hij in   is geklommen
        the tree   that he into is climbed

      c. de boom waar hij in   is geklommen
        the tree   where he into is climbed

Of course, this may be accidental given that *waar ... in* in (65c) may be the pronominalized counterpart of the prepositional phrase *in de boom* in the change of location construction *dat hij in die boom is geklommen*, but speakers' intuitions concerning the semantic difference between the two examples in (65b&c) are generally not sharp enough to be conclusive.

    One test that may help to determine whether the pronominal PP in examples like (65c) can be postpositional in nature or not is based on the observation that, like verbal particles, postpositions can permeate clause-final verb clusters, whereas (stranded) prepositions are not able to do this. This is illustrated in (66).

(66) a. dat Jan op het bericht   heeft gewacht.
        that Jan for the message has   waited
        'that Jan has waited for the message.'

     a′. dat Jan *er*   lang <*op*> heeft <*op> gewacht.   [stranded preposition]
        that Jan there long   for   has   waited

      b. dat Jan de berg   <op> is <op> gelopen.   [postposition]
        that Jan the mountain onto is   walked

      c. dat Jan Marie <op> heeft <op> gebeld.   [verbal particle]
        that Jan Marie prt. has   called
        'that Jan called Marie up.'

However, using permeation of the clause-final verb cluster as a test is problematic for various reasons. First, permeation of the verb cluster by a stranded preposition is perfectly acceptable in certain southern varieties of Dutch: see Section V4.3 and V4.5. The test will therefore only provide reliable results when we restrict ourselves to speakers of the northern part of the Netherlands.

A second problem is that even those speakers who give the judgments in (66a′) are often not very sure about their judgments on the relevant relative constructions, which may furthermore vary from case to case. Consider the examples in (67). Most northern speakers we consulted strongly prefer the use of a regular relative pronoun in (67a&b); the use of the relative R-pronoun *waar* in the corresponding primed examples is generally considered marked. The two alternatives in (67c&c′), on the other hand, are generally judged equally well and some speakers even prefer the use of the relative R-pronoun *waar*.

(67) a.   de weg die hij is in   gewandeld
            the road that he is into walked
            'the road he walked into'
      a′   *?de weg waar   hij is in   gewandeld
            the road where he is into walked
      b.   de berg   die hij is op   geklommen
            the mountain that he is onto climbed
            'the mountain he climbed onto'
      b′. ?de berg   waar hij is op   geklommen
            the mountain where he is onto climbed
      c.   de boom die hij is in   geklommen
            the tree   that he is into climbed
            'the tree he climbed into'
      c′. de boom waar hij is in   geklommen
            the tree   where he is into climbed

If the proposed test is reliable, we should conclude that the adpositions *in* and *op* in (67) are postpositional; they all permeate the verb cluster consisting of the auxiliary *is* and the past participle. This shows that we cannot account for the acceptability judgments in the (a)- and (b)-examples by assuming that some lexical restriction on the postposition itself is involved; R-pronominalization gives rise to a severely degraded result with the postposition *in* in (67a′), but to a fully grammatical result with the same postposition in (67c′).

A third problem is that there is evidence that goes against the claim that we are dealing with pronominalized postpositional phrases in the primed examples in (67). The examples in (68) show that the judgments on the use of the relative R-pronoun *waar* in the primed examples in (67) are more or less identical to those on the use of prepositional phrases in the primed examples in (68). This strongly suggests that the primed examples in (67) involve pronominalized prepositional phrases after all, which would imply in turn that postpositional phrases cannot undergo R-pronominalization.

(68) a. dat hij die weg in   is gewandeld.
          that he that road into is walked
      a′. *dat hij in die weg is gewandeld.
      b. dat hij die berg   op   is geklommen.
          that he that mountain onto   is climbed
      b′. ?dat hij op die berg is geklommen.
      c. dat hij die boom in   is geklommen.
          that he that tree into is climbed
      c′. dat hij in die boom is geklommen.

This conclusion is also supported by the minimal pairs in (69) with the complex postposition *achterna* 'after' and circumposition *achter ... aan* 'after'. The primed examples show that the nominal complement of the postposition *achterna* can only be pronominalized by a [-R] pronoun, whereas it must be pronominalized by means of a [+R] pronoun in the case of the circumposition *achter ... aan*.

(69)   • Circumpositions vs. postpositions
      a. Jan rent   de kat achterna.   a′. Jan rent   hem/*er achterna.
          Jan runs the cat after   Jan runs it/there after
          'Jan is chasing the cat.'   'Jan is chasing it.'
      b. Jan rent   achter de kat aan.   b′. Jan rent   er/*hem   achter aan.
          Jan runs after   the cat AAN   Jan runs there/him after   AAN
          'Jan is chasing the cat.'   'Jan is chasing it.'

    The discussion above seems to show that the permeation test is not fully reliable and that, despite the fact that the stranded adpositions permeate the clause-final verb cluster, we are dealing with pronominalized prepositional phrases in the primed examples of (67). There is, however, also a problem with the claim that postpositional phrases do not allow R-pronominalization. Consider the resultative construction in (70), in which the postpositional phrase *de haven in* cannot be replaced by the prepositional phrase *in de haven*. Although pronominalization of the nominal complement of the postposition does not seem readily possible, the judgments on the relative construction in (70b) show that the relative pronoun must be an R-word: whereas the use of *waar* gives rise to a marked but reasonably acceptable result, the use of the regular pronoun *die* is (surprisingly) rejected by most speakers.

(70) a. dat de kapitein het schip de haven in   gevaren   heeft.
          that the captain the ship   the harbor into navigated has
          'that the captain steered the ship into the harbor.'
      a′. ??dat de kapitein het schip in de haven   gevaren   heeft.
          that the captain the ship   into the harbor navigated has
      b. De haven ?waar/*die de kapitein het schip in   gevaren   heeft.
          the harbor that   the captain the ship   into navigated has

A second potential problem is constituted by example (71b). Since the adposition *af* cannot be used as a preposition, this example may involve a pronominalized postpositional phrase. In this case, however, there is also an alternative analysis,

according to which the R-word does not act as a pronoun corresponding to the noun phrase *de berg* in (71a) but as a pro-form of the adpositional phrase *van de berg*.

(71) a. Ik ben (van) de berg af geskied.
        I am from the mountain AF skied
        'I have skied from the mountain.'
   b. de berg waar/die ik ben af geskied
        the mountain where/that I am AF skied

It will be clear from the discussion above that we are not yet able to provide an unambiguous answer to the question whether postpositional phrases can undergo R-pronominalization or not. If there really is a general ban on stranded prepositions within the verb cluster, we must conclude that R-pronominalization of postpositional phrases is possible (which will leaves us without an account for the relative grammaticality judgments in (67)). If it turns out that stranded prepositions can sometimes permeate the verb cluster, the answer depends on whether one is willing to declare (70b) grammatical with the R-word *waar*. If so, we may have to conclude that R-pronominalization of postpositional phrases is possible; if not, we can maintain that R-pronominalization of postpositional phrases is impossible (and thus account for the grammaticality judgments on the examples in (67) by referring to the similar judgments on the examples in (68)). Since we are not able to shed more light on this issue at this point, we must leave this topic to future research, and simply conclude, despite the problematic cases discussed above, that postpositional phrases normally do not allow R-pronominalization.

5.2.3. *Circumpositions*

Circumpositional phrases are generally spatial in nature, and R-pronominalization is quite productive. Below, we will group the examples according to the second member of the circumposition. As is shown in (72), circumpositional phrases with *aan* as their second member can readily be pronominalized.

(72)   • P ... *aan*
   a. De kinderen liepen achter de optocht aan.
        the children walked behind the parade AAN
        'The children followed the parade.'
   a′. De kinderen liepen *er achter aan*.
   b. Jan liep tegen de ladder aan.
        Jan walked against the ladder AAN
        'Jan ran into the ladder.'
   b′. Jan liep *er tegen aan*.

Adpositional phrases headed by *van ... af* 'from' also allow pronominalization; it must however be noted that the *van* + NP part of the construction can also be replaced by an R-word, as in the perhaps slightly marginal example (73c).

(73)   • *Van ... af*
    a.   Jan sprong   van het dak   af.
        Jan jumped from the roof   AF
        'Jan jumped from the roof.'
    b.   Jan sprong *er van af*.
    b′. ^(?)Jan sprong *er af*.

The examples in (74) show that R-pronominalization of circumpositional phrases with *door* as their second member give rise to fully acceptable results.

(74)   • P … *door*
    a.   Jan reed   onder de brug   door.
        Jan drove under the bridge DOOR
        'Jan drove underneath the bridge.'
    a′. Jan reed *er onder door*.
    b.   Jan reed   tussen de bomen   door.
        Jan drove between the trees DOOR
        'Jan drove through the trees.'
    b′. Jan reed *er tussen door*.

Circumpositional phrases with *heen* as their second member, on the other hand, show mixed behavior: normally R-pronominalization is fine, but in the case of *langs ... heen* 'along', which is somewhat marked anyway, the result is severely degraded. Recall that the circumposition *om ... heen* 'around' differs from the preposition *om* 'around' in that the latter cannot undergo R-pronominalization; cf. example (42).

(75)   • P … *heen*
    a.   Jan liep   door/om/[?]langs   het huis   heen.
        Jan walked   through/around/along the house   HEEN
        'Jan walked through/around/along the house.'
    a′. Jan liep *er door*/*om*/^{*?}*langs heen*.
    b.   Jan sprong   over het hek heen
        Jan jumped over the gate HEEN
        'Jan jumped over the gate.'
    b′. Jan sprong *er over heen*.

The examples in (76) show that circumpositional phrases with *in* as their second member are again fully compatible with R-pronominalization.

(76)   • P … *in*
    a.   Jan zwom tegen de stroom   in.
        Jan swam against the current   IN
        'Jan swam against the current.'
    a′. Jan zwom *er tegen in*.
    b.   Jan zit   tussen   twee meisjes in.
        Jan sits   between two girls   IN
        'Jan is sitting between two girls.'
    b′. Jan zit *er tussen in*.

The same thing seems to hold for circumpositional phrases with *langs* as their second member, although the resulting structures in (77b′) feel perhaps somewhat uncomfortable; this may be due to the fact that the circumpositions *boven/onder ... langs* are not very commonly used.

(77)   ● P … *langs*

    a.   Jan liep   achter/voor   het huis   langs.
        Jan walked behind/in.front.of the house LANGS
        'Jan walked along the back/front of the house.'

    a′. Jan liep *er achter/voor langs*.

    b.   Jan liep   boven/onder de brug   langs.
        Jan walked   above/under the bridge LANGS
        'Jan walked above/down along the bridge.'

    b′. ^(?)Jan liep *er boven/onder langs*.

Circumpositional phrases with *om* as their second member seem exceptional in not readily allowing R-pronominalization; the primed examples in (78) are marginally acceptable at best. In passing, note that these examples become fully acceptable when *er* is omitted, which shows that *achterom*, *voorom* and *buitenom* can be used as intransitive adpositions; it is not clear to us whether this is related to the degraded status of the primed examples.

(78)   ● P … *om*

    a.   Jan liep   achter/voor   het huis   om.
        Jan walked behind/in.front.of the house OM
        'that Jan walked around the back/front of the house.'

    a′. ^{*?}Jan liep *er achter/voor om*.

    b.   De waterleiding loopt buiten het huis   om.
        the waterworks   go   outside the house OM
        'The waterworks go around the exterior of the house.'

    b′. ^{*?}De waterleiding loopt *er buiten om*.

Circumpositional phrases with *tegen ... op* 'against' are again fully compatible with R-pronominalization.

(79)   ● *Tegen ... op*

    a.   Marie klom   tegen de muur   op.
        Marie climbed against the wall OP
        'Marie climbed up against the wall.'

    a′. Marie klom *er tegen op*.

Circumpositional phrases with *toe* as their second member in (80) behave ambiguously. Whereas R-pronominalization of circumpositional phrases headed by *naar ... toe* 'to' is perfectly acceptable, it is not possible when *tot (aan) ... toe* 'up to' is the head. Recall that directional PPs headed by the preposition *naar* 'to' do not allow R-pronominalization; cf. example (46).

(80)   • P ... *toe*
    a. Marie gaat   naar die film   toe.
       Marie goes to that movie TOE
       'Marie goes to that movie.'
    a′. Marie gaat *er naar toe*.
    b. De stenen liggen tot de heg   toe.
       the stones lie   until the hedge TOE
       'The stones are lying until the hedge.'
    b′. *De stenen liggen *er toe toe*.

For completeness' sake, note that Section 2.2.1, sub III, has argued that example (81a) does not involve a circumposition *tot aan ... toe*; instead, we are dealing with the preposition *tot*, which takes as its complement a circumpositional positional phrase headed by the circumposition *aan... toe*. Example (81b) shows that this circumpositional phrase does allow R-pronominalization, albeit that the strong form *daar* in (81b) cannot be replaced by the phonetically weak form *er*. However, extraction of the R-word from the *tot*-phrase, as a result of which *tot* would get the stranded form *toe*, leads to an unacceptable result. This is shown in (81b′).

(81) a. De stenen liggen tot   aan de heg   toe.
       the stones lie   until to the hedge TOE
    b. De stenen liggen tot daar aan toe.
    b′. *De stenen liggen daar toe aan toe.

    R-pronominalization is fully productive for circumpositional phrases with *uit* as their second member. We give some examples in (82); R-pronominalization of PPs headed by *achter/tussen/voor ... uit* (lit.: behind/between/in.front.of ... OUT) leads to equally acceptable results.

(82)   • P ... *uit*
    a. De vlag stak   boven de huizen uit.
       the flag stuck above the houses out
       'The flag stuck out above the houses.'
    a′. De vlag stak *er boven uit*.
    b. De jurk   stak   onder de jas   uit.
       the dress stuck under the coat out
       'The dress protruded from under (was slightly longer than) the coat.'
    b′. De jurk stak *er onder uit*.

    The (a)- and (b)-examples in (83) show that circumpositional phrases with *vandaan* as their second member are normally compatible with R-pronominalization. The circumposition *om ... vandaan* is perhaps an exception, which may be due to the fact that this formation is restricted to the (somewhat marginal) phrase *om de hoek vandaan*.

(83)　　• P ... *vandaan*

    a.　De muis　kwam　achter/voor/onder　　　de kast　　　vandaan.
    　　the mouse　came　behind/in.front.of/under　the cupboard　VANDAAN
    　　'The mouse came from behind/in front of/under the cupboard.'

    a′.　De muis kwam *er achter/voor/onder vandaan*.

    b.　Marie haalde het geheime document　tussen de rommel　vandaan.
    　　Marie got　　the secret document　　between the trash　VANDAAN
    　　'Marie got the secret document from between the trash.'

    b′.　Marie haalde het geheime document *er tussen vandaan*.

    c.　?Jan kwam　om de hoek　　　vandaan.
    　　Jan came　around the corner　VANDAAN
    　　'Jan came around the corner.'

    c.　*?Jan kwam *er om vandaan*.

For completeness' sake note that Section 2.2.1, sub I, has argued that example (84a) does not involve a circumposition *van achter ... vandaan*; instead, we are dealing with the preposition *van*, which takes as its complement a circumpositional positional phrase headed by the circumposition *achter ... vandaan*. The (b)-examples show that this circumpositional phrase does allow R-pronominalization, but that the R-word must remain within the PP headed by *van*.

(84)　a.　De muis　kwam　van　achter de kast　　　vandaan.
    　　the mouse　came　from　behind the cupboard　VANDAAN
    　　'The mouse came from behind the cupboard.'

    b.　De muis kwam van er/daar achter vandaan.

    b′.　??De muis kwam er/daar van achter vandaan.

5.3. Syntactic restrictions on R-extraction

Section 5.2 has discussed the lexical restrictions on the formation of pronominal PPs. The ability to form a pronominal PP is not sufficient, however, to allow R-extraction; additional syntactic conditions must be met in order to license preposition stranding. These conditions will be discussed in this section.

5.3.1. General introduction

The examples in (85) show that R-extraction is possible when the adpositional phrase acts as a PP-complement or as a °complementive. Example (85a) shows that R-extraction from the complement of the verb *wachten* 'to wait' is possible; witness the fact that the adverbial phrase *de hele dag* 'the whole day' can intervene between the R-pronoun and the preposition *op*. Example (85b) shows that R-extraction is also possible from PPs that act as complementives, as is clear from the fact that the accusative object *het boek* 'the book' can intervene between the R-pronoun and the preposition *in*.

(85) a.   Jan heeft de hele dag   op een bericht gewacht.   [PP-complement]
        Jan has   the whole day for a message waited
        'Jan waited for a message the whole day.'
    a′.   Jan heeft *er* de hele dag *op* gewacht.
    b.   Jan zette het boek in de kast.   [complementive]
        Jan put   the book in the bookcase
    b′.   Jan zette *er* het boek *in*.

Adverbially used adpositional phrases, on the other hand, generally do not allow R-extraction, which is illustrated by the examples in (86); the (b)-examples show that, despite the fact that R-pronominalization of the temporal *voor*-PP is fully acceptable, R-extraction gives rise to an unacceptable result.

(86) a.   Jan komt   waarschijnlijk voor zijn vakantie nog even   langs.   [adjunct]
        Jan comes probably   before his holiday PRT. briefly along
        'Jan will probably visit (us) briefly before his holiday.'
    b.   Jan komt waarschijnlijk ervoor nog even langs.
    b′.   *Jan komt *er* waarschijnlijk *voor* nog even langs.

The examples in (85) and (86) suggest that R-extraction is only possible with PP-complements and complementives. This would be in line with a generalization from the generative literature (which was formulated as part of Huang's (1982) Condition on Extraction Domains) according to which adjuncts are islands for extraction. There is, however, a group of adpositional phrases that are traditionally analyzed as adverbial clauses that do nevertheless allow R-extraction. This is illustrated in (87), for an instrumental PP headed by *met* 'with'; see Section 5.2.1.3, sub I, for more PPs of this sort.

(87) a.   Jan opende de kist   met een breekijzer.
        Jan opened the box with a crowbar
    b.   Jan opende *er* de kist *mee*.

This may give rise to two possible conclusions: either we assume the generalization that only PP-complements and complementives can undergo R-extraction is wrong, or we have to assume that instrumental PPs actually function as a kind of complement of the verb, albeit that they differ from PP-arguments like *op een bericht* in (85a) or predicative complements like *in de kast* in (85b) in not being obligatorily. Here we will leave the question of which alternative is correct open.

    Besides the requirement that the adpositional phrase must be a complement, a complementive, or involve a specific semantic role (like instrumental *met*), it must also occupy a certain position in the clause in order to license R-extraction: the stranded preposition must be left-adjacent to the verb(s) in clause-final position (with some qualifications that will follow below). This is illustrated in (88) by means of the pronominalized form of the instrumental PP *met een breekijzer* from (87); R-extraction is possible when the pronominalized PP *daarmee* is left-adjacent to the clause-final verbs but not when it precedes the negative adverb *niet* or when it is placed in a position following the clause-final verbs.

(88) a. dat je   de kist niet daarmee mag   openen.
             that you the box not with.that be.allowed open
             'that you are not allowed to open the box with it.'

      a′. dat je *daar* de kist niet *mee* mag openen.

      b. dat je   de kist daarmee niet mag   openen.
             that you the box with.that not be.allowed open
             'that you are not allowed to open the box with it.'

      b′. *dat je *daa*r de kist *mee* niet mag openen.

      c. dat je   de kist   niet mag   openen daarmee.
             that you the box   not be.allowed open   with.that
             'that you are not allowed to open the box with it.'

      c′. *dat je *daa*r de kist niet mag openen *mee*.

5.3.2. The syntactic function of the adpositional phrase

This section successively discusses R-extraction from adpositional phrases functioning as complements, as complementives, and as adverbial phrases.

5.3.2.1. PP-complements

Adpositional phrases that act as a complement generally allow the formation of a pronominal PP. Whether R-extraction (the split pattern) is also allowed depends on the category of the head selecting the PP: complements of verbs and adjectives normally do allow the split pattern, whereas complements of nouns generally do not. R-extraction is categorically excluded in the rare cases in which the selecting head is a preposition itself.

I. Complements of verbs

Prepositional complements of verbs are always headed by a functional preposition, that is, a preposition that has relatively little semantic content and is selected by the verb; see Table 29 in Section 1.3.3.2.3 for a representative set of examples. All prepositional complements of verbs allow R-extraction. We illustrate this in (89) for some of the examples in Table 29.

(89) a. Jan lijdt   al jaren   aan slapeloosheid.
          Jan suffers already years   from insomnia

      a′. Jan lijdt   *er*   al jaren   *aan*.
          Jan suffers there already years from

      b. Die schoenen passen heel goed bij die jurk.
          those shoes   fit   very well with that dress

      b′. Die schoenen passen *er*   heel goed *bij*.
          those shoes   fit   there very well with

      c. Jan verlangt erg   naar vakantie.
          Jan longs   very for holiday

      c′. Jan verlangt *er*   erg *naar*.
          Jan longs   there very for

    d.   Jan klaagt   voortdurend over de kou.
          Jan complains continuously about the cold
    d′.   Jan klaagt   *er*   voortdurend *over*.
          Jan complains there continuously about
    e.   Jan zwicht   natuurlijk voor dat aanbod.
          Jan knuckles of course   under that offer
    e′.   Jan zwicht   *er*   natuurlijk *voor*.
          Jan knuckles there of course   under

II. Complements of adjectives

The set of functional prepositions heading prepositional complements of adjectives seems slightly smaller than the set of functional prepositions heading prepositional complements of verbs; cf. Table 29 in Section 1.3.3.2.3. All prepositional complements of adjectives allow R-extraction. In (90), we illustrate this for some of the examples in Table 29.

(90) a.   Jan is erg bedreven in voetballen.
          Jan is very skilled   in soccer
    a′.   Jan is *er*   erg bedreven *in*.
          Jan is there very skilled   in
    b.   Jan is erg nieuwsgierig naar je vorderingen.
          Jan is very curious   to your progress
    b′.   Jan is *er*   erg nieuwsgierig *naar*.
          Jan is there very curious   to
    c.   Jan is erg verontwaardigd over dat aanbod.
          Jan is very indignant   about that offer
    c′.   Jan is *er*   erg verontwaardigd *over*.
          Jan is there very indignant   about

III. Complements of nouns

The set of functional prepositions heading prepositional complements of nouns also seems slightly smaller than the set of functional prepositions heading prepositional complements of verbs (cf. Table 29 in Section 1.3.3.2.3). Although the adpositional complements do allow the formation of a pronominal PP, the possibilities for R-extraction (the split pattern) are limited: movement of *er* preferably targets some position within the noun phrase; movement to a position external to the noun phrase normally gives rise to a marked result. We illustrate this In (91) for some of the examples in Table 29.

(91) a.   Jan uitte   zijn behoefte aan genegenheid.
          Jan expressed his need   of affection
    a′.   Jan uitte   <$^{??}$er> zijn behoefte <er> aan.
          Jan expressed   there his need   of
    b.   Jan verloor zijn geloof in de mensheid.
          Jan lost   his belief   in mankind
    b′.   Jan verloor <$^{??}$er> zijn geloof <er> in.
          Jan lost   there his belief   in

   c.   De minister verbood   de jacht op ganzen.
          the minister prohibited the hunt on geese
   c′.   De minister verbood   <$^{??}$er> de jacht <er> op.
          the minister prohibited there   the hunt   on

The only cases in which R-extraction seems to be fully acceptable involve indefinite/demonstrative noun phrases taking an adpositional complement headed by the prepositions *over* and *van*. Some examples are given in (92).

(92) a.   Ik heb een/dat/het boek over ruimtevaart gelezen.
           I have a/that/the book   on space.travel read
     a′.   Ik heb een/dat/het boek *er over* gelezen.
           I have a/that/the book   there on read
     a″.   Ik heb *er* een/dat/$^{*?}$het boek *over* gelezen.
     b.   Ik heb een/die/de foto   van de berg   gezien.
           I have a/that/the picture of the mountain   seen
     b′.   Ik heb een/die/de foto   *er*   *van* gezien.
           I have a/that/the picture there of   seen
     b″.   Ik heb *er* een/die/$^{??}$de foto *van* gezien.

Further, there are poorly understood restrictions governing the possibility of R-extraction in examples like (92). For example, when the main verbs are replaced by a verb like *verbranden* 'to burn', the split pattern gives rise to a degraded result. It is therefore not obvious whether the split pronominal PPs in (92) indeed function as complements of the nouns, or whether they are functioning as, e.g., restrictive adverbial phrases. For an extensive discussion of this issue we refer the reader to Section N2.2.1 and subsequent discussions.

IV. Complements of adpositions

Section 2.2 has shown that only a few prepositions take adpositional complements. The list is exhausted by *van* 'from', *tot* 'until' and *voor* 'for' in (93). The singly primed examples in (93) show that the adpositional complements of these prepositions may be replaced by pronominal PPs. The doubly-primed examples show, however, that these pronominal PPs cannot readily be split; leftward movement of the R-word is impossible, irrespective of whether the landing site is internal or external to the PP.

(93) a.   van   vlak achter de kast   b. tot   vlak voor de deur
          from just behind the cupboard   until just in.front.of the door
     a′. van   vlak <er> achter   b′. tot   vlak <er> voor
          from just there behind   until just there in.front.of
     a″. <*er> van <*er> vlak achter   b″. <*er> tot <$^{??}$er> vlak voor
     c.   voor direct   na de maaltijd
          for   immediately after the meal
     c′. voor direct   <er> na
          for   immediately there after
     c″. <*er> voor <$^{??}$er> direct na

5.3.2.2. Complementives

The (a)-examples in (94) illustrate that locational predicative PPs readily allow R-extraction. Since the (b)-examples show that directional predicative PPs categorically reject R-pronominalization, they, of course, do not allow R-extraction either; see Section 5.2.1.1 for discussion and more examples.

(94) a.   Jan zet de bloemen in de vaas.
           Jan puts the flowers into the vase
    a′.   Jan zet *er*   de bloemen *in*.
           Jan puts there the flowers into
    b.   Marie is naar de bibliotheek gewandeld.
           Marie is to the library   walked
           'Marie has walked to the library.'
    b′. *Marie is *er*   *naar* gewandeld.
           Marie is there to   walked

The question of whether predicatively used postpositional phrases can undergo R-pronominalization and R-extraction has already been discussed in Section 5.2.2, where it is shown that the answer depends on certain assumptions that are not relevant here. We therefore refer the reader again to this section for discussion.

    Predicatively used circumpositional phrases do allow R-pronominalization and R-extraction, regardless of whether they are locational or directional. One example of each type is given in (95); see Section 5.2.3 for more examples and discussion.

(95) a.   De ladder staat   al   tegen de muur aan.
           the ladder stands already against the wall AAN
           'The ladder is already standing against the wall.'
    a′.   De ladder staat *er*   al   *tegen   aan*.
           the ladder stands there already against AAN
    b.   Marie is gisteren   naar de bibliotheek toe gewandeld.
           Marie is yesterday to the library   TOE walked
           'Marie has walked to the library yesterday.'
    b′.   Marie is *er*   gisteren   *naar toe* gewandeld.
           Marie is there yesterday to   TOE walked

5.3.2.3. Adverbial adpositional phrases

Although R-pronominalization is occasionally possible with adverbially used adpositional phrases, they do not allow R-extraction. Before we can illustrate this, it must be noted that prepositional phrases introducing specific semantic roles, such as instrumental *met*-PPs or passive *door*-phrases, which are often also counted as adverbial phrases, do allow R-extraction. We will not discuss PPs of this sort here, but refer the reader to Sections 5.2.1.3, sub I, and 5.3.1 for further discussion.

I. Adverbially vs. predicatively used locational phrases

When an adverbially used locational phrase is pronominalized, it is generally replaced by a locational pro-form like *daar* 'there', as in (96b). R-pronominalization and R-extraction, on the other hand, normally lead to ungrammaticality, although it

must be noted that speakers tend to have varying judgments in the case of relative constructions: *de zolder waar Jan vaak ([%]op) speelt*.

(96) a. Jan speelt vaak op zolder.
           Jan plays   often in the attic
           'Jan is playing in the attic often.'
    b. Jan speelt daar vaak.
           Jan plays   there often
           'Jan is playing there often.'
    c. *Jan speelt *<er>* vaak *<er>* op*.
           Jan plays   there often   on

The examples in (97) show that although predicatively used adpositional phrases can sometimes also be replaced by the pro-form *daar*, R-pronominalization is generally possible as well.

(97) a. Het boek ligt   op de keukentafel.
           the book lies   on the kitchen table
    a′. Het boek ligt daar (op).
           the book lies there on
    b. Jan legt het boek op de keukentafel.
           Jan puts the book on the kitchen table
    b′. Jan legt het boek daar (op).
           Jan puts the book there on

In some cases, R-pronominalization is even the only available option for predicatively used PPs. Consider the examples in (98). As we have already argued several times, (98a) is ambiguous between an activity reading, in which case the PP is interpreted as an adverbial phrase, and a change of location reading, in which case the PP is interpreted as a predicative phrase. The examples in (98b&c) show that the choice between the pro-form *daar* and the pronominal PP *daar in* disambiguates the sentence; in (98b) the verb can only be interpreted as an activity verb, and in (98c) it can only be interpreted as a change of location verb.

(98) a. Jan springt in de sloot.
           Jan jumps   in/into the ditch
    b. Jan springt daar.   [unacceptable with a change of location reading]
           Jan jumps   there
    c. Jan springt daar in.   [only acceptable with a change of location reading]
           Jan jumps   there into

This finding is confirmed by the examples in (99). In the perfect tense, the activity verb *springen* takes the auxiliary *hebben*, and (99a′) shows that the perfect tense construction with *hebben* is only compatible with the pro-form *daar*. The change of location verb, on the other hand, takes the auxiliary *zijn*, and (99b′) shows that the perfect tense construction with *zijn* is only compatible with the pronominal PP *daar in*.

(99) a.   Jan heeft in de sloot   gesprongen.
           Jan has   in the ditch jumped
     a′.   Jan heeft daar   (*in) gesprongen.
           Jan has   there   in   jumped
     b.   Jan is in de sloot   gesprongen.
           Jan is into the ditch jumped
     b′.   Jan is daar   *(in) gesprongen.
           Jan is there   into   jumped

II. Temporal prepositions

Section 5.2.1.2 has shown that only the temporal prepositions *voor* 'before' and *na* 'after' allow the formation of a pronominal PP, which is illustrated again by means of the contrast between (100b&c) and (100d). This does not imply, however, that R-extraction is also allowed with these prepositions. The examples in (100b′&c′) show that it is not; the R-pronoun must be adjacent to (the modifier of) the preposition, and the split pattern leads to ungrammaticality.

(100) a.   Hij heeft het boek (vlak) voor/na/tijdens   de vakantie gelezen.
            he   has   the book just before/after/during the holiday read
            'He has read the book (just) before/after/during the holiday.'
      b.   Hij heeft het boek *er* (vlak) *voor* gelezen.
      b′. *Hij heeft *er* het boek (vlak) *voor* gelezen.
      c.   Hij heeft het boek *er na* gelezen.
      c′. *Hij heeft *er* het boek *na* gelezen.
      d.   *Hij heeft het boek *er tijdens* gelezen.
      d′. *Hij heeft *er* het boek *tijdens* gelezen.

The impossibility of R-extraction is probably due to the fact that temporal PPs normally have an adverbial function, and thus falls under the general prohibition on extraction from adverbial phrases.

III. Other cases

Section 5.2.1.3, sub III, has shown that adverbial PPs headed by non-spatial/temporal prepositions do not allow R-pronominalization. For obvious reasons they therefore they do not allow R-extraction either.

5.3.3. Cases of obligatory R-extraction

The previous sections have investigated the syntactic contexts that allow R-extraction. This does not mean that R-extraction *must* be applied in those cases. The examples in (101) show that the preposition can also be pied piped by movement of the R-pronoun; in the primeless examples in (101), the preposition is stranded by the moved R-word, whereas in the primed examples the preposition is pied piped.

(101) a. Jan heeft *daar*/*hier* de hele dag   *naar* gezocht.
          Jan has   there/here the whole day for   looked
     a′. Jan heeft daar/hier naar de hele dag gezocht.
     b. *Daar*/*Hier* heeft Jan de hele dag *naar* gezocht.
     b′. Daarnaar/Hiernaar heeft Jan de hele dag gezocht.

This option of pied piping seems to be most common with demonstrative R-pronouns. As is shown in (102a), scrambling of the referential R-pronoun *er* must strand the preposition. The topicalization examples in (102b) are of course inconclusive, since topicalization of the unstressed R-pronoun *er* is excluded anyway.

(102) a. Jan heeft *er*   de hele dag   *naar* gezocht.
            Jan has   there the whole day for   looked
     a′. *Jan heeft ernaar de hele dag gezocht.
     b. *De* heeft Jan de hele dag *naar* gezocht.
     b′. *Ernaar heeft Jan de hele dag gezocht.

The examples in (103) show that the interrogative and relative R-pronouns preferably strand the preposition; the primed, pied piping examples are acceptable, but marked with respect to the primeless, stranding examples.

(103) a. *Waar* heeft Jan de hele dag   *naar* gezocht?
            where has   Jan the whole day for   looked
            'What did Jan look for all day long?'
     a′. [(?)]Waarnaar heeft Jan de hele dag gezocht?
     b. het pakje *waar* Jan de hele dag   *naar* gezocht heeft
            the parcel where Jan the whole day for   looked has
            'The parcel that Jan was looking for all day long.'
     b″. [(?)]het pakje waarnaar Jan de hele dag gezocht heeft

The examples in (104) and (105) show that scrambling and topicalization of quantified R-pronouns require, or at least strongly prefer, preposition stranding.

(104) a. Jan heeft *overal*   al   *naar* gezocht.
            Jan has everywhere already for   looked
            'Jan has already looked for everything.'
     a′. *Jan heeft overal naar al gezocht.
     b. *Overal* heeft Jan al *naar* gezocht.
     b′. *Overal naar heeft Jan al gezocht.

(105) a. Jan heeft *ergens*/*nergens*   lang *naar* gezocht.
            Jan has somewhere/nowhere long   for   looked
            'Jan has looked for something a long time.'
     a′. *Jan heeft ergens/nergens naar lang gezocht.
     b. *Ergens*/*Nergens* heeft Jan lang *naar* gezocht.
     b′. *Ergens/[??]Nergens naar heeft Jan lang gezocht.

We therefore may conclude that, with the exception of the demonstrative R-pronouns *daar* and *hier*, movement of R-pronouns at least preferably strand the preposition; in some cases, pied piping of the preposition even leads to unacceptable results.

5.3.4. *The position of stranded prepositions*

Example (106b) shows that stranded prepositions are normally left-adjacent to the verb(s) in clause-final position; when, for example, an adverbial phrase intervenes between the stranded preposition and the verb(s), the result is unacceptable. The same thing holds when the stranded preposition occurs in post-verbal position.

(106) a.   Jan heeft <op de brief> lang <op de brief > moeten wachten <op de brief >.
         Jan has   for the letter long   have.to wait
         'Jan had to wait for the letter a long time.'
    b.   Jan heeft er   <*op> lang <op> moeten wachten <*op>.
         Jan has there   for   long   have.to wait
         'Jan had to wait for it a long time.'

An example like (107b) is only an apparent exception to this general rule, since it does not involve R-extraction but movement of a complete pronominal PP. This is clear from the fact illustrated in (107c) that *daar over* cannot be split by, e.g., an adverbial phrase; this example contrasts sharply with the example in (107d) that does involve R-extraction.

(107) a.   Jan heeft met Peter   over dat probleem   gesproken.
         Jan has   with Peter about that problem talked
         'Jan talked with Peter about that problem.'
    b.   Jan heeft [PP daar over]   met Peter   gesproken.
         Jan has   there about with Peter talked
    c.   *Jan heeft daar$_i$ gisteren [PP t_i over] met Peter   gesproken.
         Jan has   there yesterday   about with Peter talked
    d.   Jan heeft daar$_i$ gisteren   met Peter [PP t_i over]   gesproken.
         Jan has   there yesterday with Peter   about talked

There are, however, two true exceptions to the general rule that stranded prepositions are left-adjacent to the verb(s) in clause-final position: first, a predicatively used AP or PP may intervene between the stranded preposition and the verb(s); second, when more than one stranded preposition is present at least one of them cannot be adjacent to the verb(s).

I. Predicative complements

Predicative complements, which must generally also be left-adjacent to the verb(s) in clause-final position, can intervene between the stranded preposition and the verb. As is shown in (108), generally two orders are possible; either the predicate or the stranded preposition may be adjacent to the verb. Various factors may influence the grammaticality judgments; we refer the reader to Section A6.2.4.3 for a discussion of some of the factors that force an adjectival predicate to precede the stranded preposition.

(108) a. dat Jan het zakje met zijn zakmes open maakte.
           that Jan the bag   with his pocketknife open made
           'that Jan opened the bag with his pocketknife.'
    a′. dat Jan *er* het zakje <*mee*> open <*mee*> maakte.
    b.   dat Jan de spijker met een hamer in de muur   sloeg.
           that Jan the nail   with a hammer into the wall hit
    b′. dat Jan *er* de spijker <*mee*> in de muur <*mee*> sloeg.

Section 1.3.1.5.2 has argued that verbal particles also act as a kind of predicate. This correctly predicts that they can also intervene between the stranded preposition and the verbs in clause-final position. Unlike the predicative phrases in (108), however, the particle cannot precede the stranded preposition.

(109) a. dat Jan Marie steeds   tot diefstal aanzet.
           that Jan Marie all.the.time to theft   prt.-puts
           'that Jan is putting Marie up to theft all the time.'
    a′. dat Jan Marie *er* steeds <*toe*> aan <**toe*> zet.
    b.   dat zij   graag   voor zijn kundigheid instaat.
           that she gladly for his competence   prt.-vouches
           'that she gladly vouches for his competence.'
    b′. dat zij *er* graag <*voor*> in <**voor*> staat.

II. Multiple stranded prepositions

When more than one stranded preposition is present, the two compete for the position left-adjacent to the verb(s) in clause-final position. The order that is well-formed generally reflects the unmarked order of the two full prepositional phrases. This is easiest to see when one of the stranded prepositions heads a predicatively used PP, as in (110a); since the predicative phrase must be adjacent to the verb in clause-final position, the stranded preposition must also be adjacent to it. Observe that the R-word *er* in (110b) is interpreted as the pronominal R-word associated to both *mee* and *in*. This conflation of syntactic functions is more extensively discussed in Section 5.5.3.

(110) a. dat Jan de schroef met een schroevendraaier in de muur   draaide.
           that Jan the screw with a screwdriver   into the wall turned
           'that Jan put the screw into the wall with a screwdriver.'
    a′. *dat Jan de schroef in de muur met een schroevendraaier draaide.
    b.   dat Jan *er*   de schroef *mee in*   draaide.
           that Jan there the screw with into turned
    b′. *dat Jan *er* de schroef *in mee* draaide.

5.4. Idiomatic pronominal PPs

In some cases, pronominal PPs with *er* are part of an idiomatic construction. The examples in (111) show that replacement of *er* by one of the other R-pronouns normally leads to ungrammaticality; for a more extensive discussion of the construction in (111a), we refer the reader to Section A10.1.3.

(111) a.　Ze ziet er/*daar goed uit.
　　　　 she looks there nice UIT
　　　　 'She is looking well/good.'

　　 b.　Marie is er/*daar gloeiend bij.
　　　　 Marie is there glowing BIJ
　　　　 'Marie has been caught in the act.'

　　 c.　Hij is er/*daar met mijn spullen van door.
　　　　 he is there with my things VAN DOOR
　　　　 'He made off with my things.'

　　 d.　We trokken er/*daar op uit.
　　　　 we went there OP UIT
　　　　 'We went on a trip.'

　　 e.　Hij kreeg er/*daar van langs
　　　　 he got there VAN LANGS
　　　　 'Somebody severely hit him.'

In the examples in (112) replacement of *er* by one of the other R-pronouns results in the loss of the idiomatic reading, as is clear from the fact that the primed examples can only be interpreted literally; *hier* in (112a) must be construed as a place adverb and in (112b&c) the pronominal PPs *daar .. op* and *hier ..in* must be construed referentially.

(112) a.　De trein komt er aan.
　　　　 the train comes there AAN
　　　　 'The train is arriving (soon).'

　　 b.　Hij sloeg er meteen op.
　　　　 he hit there immediately OP
　　　　 'He was immediately violent.'

　　 c.　Marie trapte er niet in.
　　　　 Marie kicked there not IN
　　　　 'Marie wasn't fooled by that.'

　　 a′.　De trein komt hier aan.
　　　　 the train comes here at
　　　　 'The train arrives here.'

　　 b′.　Hij sloeg er/daar meteen op.
　　　　 he hit there immediately on
　　　　 'He hit on it/that immediately.'

　　 c′.　Marie trapte er/daar niet in.
　　　　 Marie stepped there not into
　　　　 'Marie didn't step into it/that.'

5.5. Appendix: The syntax of R-words

This section concludes the discussion on R-pronominalization and R-extraction by delving more deeply into the behavior of R-words, which, strictly speaking, goes beyond the limited domain of R-pronouns. The examples in (113) start by showing that R-pronouns can also be used as locational pro-forms.

(113)　　• R-pronouns

　　 a.　Jan keer *er* zojuist *naar*.
　　　　 Jan looked there just now at
　　　　 'Jan looked at it just now.'

　　 b.　Jan keek *hier/daar* goed *naar*.
　　　　 Jan looked here/there well at
　　　　 'Jan looked at this/that well.'

　　 c.　het boek *waar* ik *naar* keek
　　　　 the book where I at looked
　　　　 'the book that I looked at'

　　 d.　*Waar* keek je *naar*?
　　　　 what looked you at
　　　　 'What did you look at?'

　　　　 • Locational pro-forms

　　 a′.　Jan was er.
　　　　 Jan was there
　　　　 'Jan was there.'

　　 b′.　Jan zat hier/daar.
　　　　 Jan sat here/there
　　　　 'Jan was sitting here/there.'

　　 c′.　de stad waar Jan woont
　　　　 the city where Jan lives
　　　　 'the city where Jan is living'

　　 d′.　Waar woont Jan?
　　　　 where lives Jan
　　　　 'Where does Jan live?'

    e.   Jan keek   *ergens*   goed *naar*.   e′. Dat boek is ergens.
        Jan looked something well at   that book is somewhere
        'Jan looked at something carefully.'   'That book is somewhere.'

    f.   Jan keek   *nergens* goed *naar*.   f′. Dat boek is nergens.
        Jan looked nothing well at   that book is nowhere
        'Jan looked at nothing carefully.'   'That book is nowhere.'

    g.   Jan keek   *overal*   goed *naar*.   g′. de boeken liggen overal.
        Jan looked everywhere well at   the books lie   everywhere
        'Jan looked at everything carefully.'   'The books are lying everywhere.'

In addition, it is shown there that the R-word *er* is also used as an expletive in impersonal passive and existential/presentational constructions, and as the indicator of a nominal gap in quantitative *er* constructions. This is shown again in (114).

(114) a.   Er   werd gedanst.   [expletive *er* in impersonal passive]
          there was danced

     b.   Er   waren drie studenten in de tuin. [expletive *er* in presentational constr.]
          there were   three students in the garden

     c.   Jan heeft er [$_{NP}$ drie [*e*]] gekocht.   [quantitative *er*]
          Jan has   there three bought
          'Jan has bought three [e.g., books].'

The distribution of the types of R-words in (113) and (114) interacts in various intricate ways. This interaction will be the topic of this section. Section 5.5.1 starts by discussing the difference between *er* and the other R-words. Section 5.5.2 continues with a discussion of the co-occurrence restrictions on the different types of R-words. Section 5.5.3 concludes this appendix by discussing the typical property of *er* that it can perform more than one function at the same time.

5.5.1. *Weak and strong R-words*

The R-word *er* behaves like a phonetically weak pronoun, whereas the other R-words behave like strong pronouns. This is illustrated in (115): spatial *er* behaves like the weak personal subject and object pronouns *ze* 'she' and *'m* 'him' in that it cannot be used in coordinated structures; the other spatial R-words, on the other hand, can be used in this context, just like the strong personal pronouns *zij* 'she' and *hem* 'him'.

(115) a.   zij/*ze en   Jan
          she   and Jan

     b.   Marie en   hem/*'m
          Marie and him

     c.   hier en   daar/*er
          here and there

The assumption that *er* is a weak pro-form also accounts for the fact that, as a general rule, it cannot be placed in sentence-initial position; the (a)-examples in (116) show that the normal position of weak object pronouns is right-adjacent to the finite verb in second or the subject in non-topicalized position, and the (b)-, (c)- and

(d)-examples show that the same thing holds for the locational pro-form *er* as well as prepositional and quantitative *er*.

(116) a.   Jan heeft 'm gisteren   bezocht.   [weak object pronoun]
         Jan has   him yesterday   visited
         'Jan visited him yesterday.'
    a′.   Gisteren heeft Jan 'm bezocht.
    a″ Hem/*'M heeft Jan gisteren bezocht.
    b.   Jan heeft er   jaren   gewerkt.   [locational pro-form]
         Jan has   there for.years worked
         'Jan has worked there for years.'
    b′.   Jaren heeft Jan er gewerkt.
    b″. Daar/*er heeft Jan jaren gewerkt.
    c.   Jan heeft *er*   gisteren   *op* gewacht.   [prepositional *er*]
         Jan has there yesterday   for waited
         'Jan waited for it yesterday.'
    c′.   Gisteren heeft Jan *er op* gewacht.
    c″. *Daar*/**Er* heeft Jan gisteren *op* gewacht.
    d.   Jan had er   gisteren [_{NP} drie [*e*]].   [quantitative *er*]
         Jan had there yesterday   three
         'Jan had three (e.g., books) yesterday.'
    d′.   Gisteren had Jan er [_{NP} drie [*e*]].
    d″. *Er had Jan gisteren [_{NP} drie [*e*]].

Weak subject pronouns (with the exception of the weak third person masculine pronoun *-ie* 'he') behave markedly differently in this respect and, as is shown in (117a), they may either occur in sentence-initial position or follow the finite verb in second position. Since it is generally assumed that expletive *er* acts as a place-holder of the subject position, it is not really surprising that it exhibits the same behavior as the weak subject pronouns.

(117) a.   Gisteren   heeft zij/ze het boek gelezen.   [subject pronoun]
         yesterday has   she   the book read
    a′.   Zij/Ze heeft gisteren het boek gelezen.
    b.   Gisteren   heeft er   iemand   tegen mij gelogen.   [expletive *er*]
         yesterday has   there someone to me   lied
         'Yesterday, someone lied to me.'
    b′.   Er heeft gisteren iemand tegen mij gelogen.

Note in passing that the generalization that non-expletive *er* cannot occur in sentence-initial position does not hold when it is part of a larger constituent occupying the sentence-initial position. This is especially the case when the first constituent is a (nominalized) infinitival clause; in (118), we give examples involving the locational pro-form *er* as well as prepositional and quantitative *er*.

(118) a.　[Er　drie maanden per jaar wonen] zou　ik wel willen.　　[locational]
　　　　　there　three months a year　live　　would I PRT want
　　　　　'I would like to live there for three months a year.'

　　 b.　[*Er*　alleen *over* klagen]　helpt niet.　　　　　　　[prepositional]
　　　　　there only　about complain helps not
　　　　　'It doesn't help to just complain about it.'

　　 c.　[Er [~NP~ zes *e*]　achter elkaar　opeten] is wat overdreven.　[quantitative]
　　　　　there　six　　after each.other prt.-eat　is a.bit excessive
　　　　　'To eat six [e.g., buns] one after the other is a little excessive.'

Example (119a) shows that weak object pronouns are obligatorily moved into a position preceding clause adverbs like *waarschijnlijk* 'probably'. Example (119b) shows that the same thing holds for the prepositional *er* (unless one of the syntactic restrictions discussed in Section 5.3 prohibits movement of *er*), and (119c) provides a similar example with quantitative *er*. We do not give an example with locational *er* given that place adverbs can be base-generated in a position preceding the clause adverbs.

(119) a.　Jan heeft <hem/'m> waarschijnlijk <hem/*'m> bezocht.　　[object pronoun]
　　　　　Jan has　him　　probably　　　　　　　　visited
　　　　　'Jan probably visited him.'

　　 b.　Jan heeft <daar/er>　waarschijnlijk <daar/*er> op gewacht.　[prepositional]
　　　　　Jan has　there　　probably　　　　　　　for waited
　　　　　'Jan probably has waited for it.'

　　 c.　Jan heeft <er> waarschijnlijk <*er> [~NP~ drie [*e*]].　　　　[quantitative]
　　　　　Jan has there　probably　　　　　　three
　　　　　'Jan has probably three [e.g., books].'

Note that the strong form *daar* in (119b) may occupy a position within PP since the complete sequence *daar op* can be scrambled or be placed in sentence-initial position, as is shown in the primed (a)-examples in (120). The primed (b)-examples show that scrambling or topicalization is not possible with *er op*; this follows from the property of *er* illustrated in (119b) that it must be moved into some position external to the PP in the middle field of the clause.

(120) a.　Jan heeft waarschijnlijk [daar op] gewacht.
　　　 a′.　Jan heeft [daar op] waarschijnlijk gewacht.
　　　 a″.　[Daar op] heeft Jan waarschijnlijk gewacht.
　　　 b.　*Jan heeft waarschijnlijk [er op] gewacht.
　　　 b′.　*Jan heeft [er op] waarschijnlijk gewacht.
　　　 b″.　*[Er op] heeft Jan waarschijnlijk gewacht.

The discussion above has shown that the R-word *er* behaves like a weak pro-form that must be moved into the position indicated by means of [+R] in (121); the only exception is expletive *er*, which, like weak subject pronouns, may also occupy the first position in the sentence, indicated by XP. The other R-words are more like strong pronouns in that they need not move into [+R], that is, they may remain in their original position, and they may also occupy the sentence-initial position XP.

(121)   XP V$_{+fin}$ (Subject) [+R] ... ADV$_{clause}$ ... V$_{-fin}$

There are two further remarks that can be made with respect to the position of the R-words. First, it must be noted that what holds for the "pure" expletive form *er* in (122a) also holds for the occurrence of *er* in (122b), which functions simultaneously as expletive and as prepositional *er*. This shows that prepositional *er* is possible in clause-initial position, as long as it also performs the function of expletive. Note that example (122c) shows that quantitative *er* behaves differently in this respect: it can never precede the finite verb in second position. We will return to these cases in Section 5.5.3.

(122) a.   Er$_{expl}$ zitten vier sigaren in de sigarenkist.
            there are   four cigars   in the cigar box
      b.   *Er$_{expl+prep}$ zitten vier sigaren *in*.
            there   are   four cigars in
      b′.   *Er$_{expl}$ zitten *er*$_{prep}$ vier sigaren *in*.
      c.   Er$_{expl}$ zitten er$_{quant}$ [$_{NP}$ vier *e*] in de sigarenkist.
            there are   there   four   in the cigar box
      c′.   *Er$_{expl+quant}$ zitten [$_{NP}$ vier *e*] in de sigarenkist.

Second, it can be observed from the (b)- and (c)-examples in (123) that movement of weak R-words is clause-bounded, that is, the landing site must be in the same clause as its original position. The (a)-examples show that R-words again behave similarly to weak pronouns in this respect.

(123) a.   Jan zegt [dat Peter 'm$_i$ waarschijnlijk *t*$_i$ zal bezoeken].   [pronoun]
            Jan says   that Peter him probably   will visit
            'Jan says that Peter will probably visit him.'
      a′.   *Jan zegt 'm$_i$ [dat Peter waarschijnlijk *t*$_i$ zal bezoeken].
      b.   Jan zegt [dat hij er$_i$ zeker [*t*$_i$ op] zal wachten].   [prepositional]
            Jan says that he there certainly for will wait
            'Jan says that he will certainly wait for it.'
      b′.   *Jan zegt er$_i$ [dat hij zeker [*t*$_i$ op] zal wachten].
      c.   Els zegt [dat Jan er   waarschijnlijk [$_{NP}$ drie [*e*]] heeft].   [quantitative]
            Els says that Jan there probably   three   has
            'Els says that Jan has probably three [e.g., books].'
      c′.   Els zegt er [dat Jan waarschijnlijk [$_{NP}$ drie [*e*]] heeft]

5.5.2. Co-occurrence of R-words

It is possible to have more than one R-word in a single clause, but there are several restrictions on their co-occurrence. Sections 5.5.2.1 and 5.5.2.2 show that, in the general case, a clause can never contain more than one weak or more than one strong R-word, whereas Section 5.5.2.3 will show that a weak and a strong form can co-occur. Before we start a caveat is in order. The data in this section are very complex, and it is hard sometimes for native speakers to give their judgments on the examples discussed; it is not surprising, therefore, that conflicting judgments can be found in the literature. Moreover, many additional factors seem to play a role in the acceptability of certain sentences, some of which have scarcely been investigated. It

is therefore virtually impossible to give an exhaustive review of this topic. We therefore recommend that the reader also consult the existing literature (e.g., Bech 1952, Van Riemsdijk 1978, Bennis 1980/1986, Huybregts 1991, Odijk 1993 and the references cited therein) if one wants to investigate this topic more thoroughly.

5.5.2.1. Co-occurrence of multiple weak R-words

In the general case, a clause can contain at most one weak R-word, which will be demonstrated below by means of examples of clauses with two weak R-words with distinct functions. We start with a discussion of the distribution of weak R-words in embedded clauses, which is followed by a discussion of their distribution in main clauses.

I. Embedded clauses

Consider the examples in (124). Since the (a)- and the (b)-example are impersonal passives, the first occurrence must be expletive *er*; and the same thing holds for the (c)-example since the associate noun phrase *[twee [e]]* of quantitative *er* is an indefinite noun phrase. As is shown in these three examples, expletive *er* cannot co-occur with the other uses of *er*. The function of the occurrences of *er* are indicated by the following abbreviations: expl = expletive, loc = locational, quant = quantitative, and pron = pronominal.

(124) a. *dat er   er   gedanst wordt.   [.. expl .. loc ..]
        that there there danced is
        Intended reading: 'People are dancing there.'
    b. *dat er   er   over gesproken wordt.   [.. expl .. pron ..]
        that there there about spoken   is
        Intended reading: 'People are talking about it.'
    c. *dat er   er [NP twee [e]] gestolen zijn.   [.. expl .. quant ..]
        that there there two   stolen   have.been
        Intended reading: 'Two [e.g., computers] have been stolen.'

The pattern in (124) has given rise to the idea that *er* must be placed into a unique, designated [+R]-position in the middle field of the clause, that is, the [+R]-position in (121). The postulation that this position is unique accounts for the fact that only one occurrence of *er* is allowed; [+R] can be occupied by one R-word only, so that the other occurrence(s) would violate Axiom I.

(125)   Axiom I: *Er* must be moved into a unique [+R]-position in the middle field of the clause.

Axiom I also gives the correct predictions for the examples in (126): the examples in (126a&b) show that an R-pronoun cannot be combined with a locational pro-form or quantitative, and (126c) shows that the co-occurrence of quantitative *er* and a locational pro-form is also correctly excluded. Since the grammaticality judgments on the examples in (126) remain the same when we reverse the interpretations (e.g., when we interpret the first occurrence of *er* in (126c) as locational and the second as quantitative), we have discussed all possible combinations.

(126) a. *dat Jan *er*   er   *over* praatte.   [.. pron .. loc ..]
            that Jan there there about talked
            'that Jan talked about it there.'

     b. *dat Jan *er*   er   drie *in*   stopte.   [.. pron .. quant ..]
            that Jan there there three into put
            'that Jan put three [e.g., cigars] in it.'

     c. *dat Jan er   er [$_{NP}$ twee [*e*]] gezien heeft.   [.. quant .. loc ..]
            that Jan there there two   seen   has
            'that Jan saw two [e.g., rats] there.'

Note that axiom I is overruled for occurrences of *er* that must be adjacent to the preposition, like *er* in the temporal phrase *er voor/na* 'before/after it'; cf. (127). This exception to Axiom I follows from the fact, discussed in Section 5.3.1, that these temporal PPs do not allow R-extraction; since *er* remains PP-internal, it is correctly predicted that the clause may contain two occurrences of *er* in such cases.

(127) a. dat Jan *er*   misschien [er voor]   iets   *over* zal zeggen.
            that Jan there maybe   there before something about will say
            'that maybe Jan will say something about it before it.'

     b. dat er   waarschijnlijk [er na]   nog iets   werd gedronken.
            that there probably   there after prt. something was drunk
            'that people probably drank something afterwards.'

II. Main clauses

The pattern of grammaticality judgments is slightly different when we are dealing with main clauses. When expletive *er* occupies the regular subject position after the finite verb, as in (128), the pattern we find is identical to the one in (124).

(128) a. *Morgen   wordt er   er   gedanst.   [.. expl .. loc ..]
            tomorrow is   there there danced

     b. *Morgen   wordt er   *er*   *over* gesproken.   [.. expl .. pron ..]
            tomorrow is   there there about spoken

     c. *Gisteren   zijn   er   er [$_{NP}$ twee [*e*]] gestolen. [.. expl .. quant ..]
            yesterday have.been there there two   stolen

However, when expletive *er* occupies the clause-initial position, as in (129), it can co-occur with quantitative *er* (but not with pronominal or locational *er*). Whereas the pattern in (128) follows directly from axiom I, the pattern in (129) is somewhat mysterious; we will not provide an explanation here for this deviant pattern.

(129) a. *Er   wordt er   morgen   gedanst.   [.. expl .. loc ..]
            there is   there tomorrow danced

     b. *Er   wordt *er*   morgen   *over* gesproken.   [.. expl .. pron ..]
            there is   there tomorrow about spoken

     c. Er   zijn   er   gisteren [$_{NP}$ twee [*e*]] gestolen. [.. expl .. quant ..]
            there have.been there yesterday two   stolen

Similar problems do not arise with the other types of *er* given that these never occur in sentence-initial position; they therefore invariably exhibit the pattern in (126) in main clauses as well.

III. Conclusion

We conclude from the discussion in the previous subsections that Axiom I provides an apt description of the attested facts; the only problem is the grammaticality judgment on example (129c). In order not to confuse the reader at a later stage in the discussion, we want to note here that the ungrammaticality of the examples in (124), (126), (128), and (129a&b) does not necessarily mean that the intended meanings cannot be expressed. Some of them can, due to the fact that *er* is able to perform more than one function at the same time. Discussion of this is postponed to Section 5.5.3.

5.5.2.2. Co-occurrence of multiple strong R-words

This section discusses the co-occurrence restrictions on strong R-forms like *hier* and *daar*. In what follows we can ignore the expletive or quantitative uses of R-words, given that these uses always involve the weak form *er*, which leaves us with the locational and pronominal R-words. The examples in (130) show that strong demonstrative pronominal and locational R-forms cannot co-occur. Example (130a) is the reference sentence. The examples in (130b) and (130c) illustrate, respectively, that it is possible to replace the adverbial phrase *op dit congres* by the locational pro-form *daar* and to pronominalize the prepositional complement of the verb *over de oorlog*. The (d)-examples in (130) show, however, that it is impossible for a clause to simultaneously contain a locational pro-form and a pronominalized PP; this holds regardless of the order of the R-words.

(130) a. Zij   heeft op dit congres   vaak over de oorlog gesproken.
            she   has   at this conference often about the war   spoken
            'She spoke often about the war at this conference.'
        b. Zij heeft daar vaak over de oorlog gesproken.   [.. loc ..]
        c. Zij heeft *hier* op dit congres vaak *over* gesproken.   [.. pron ..]
        d. *Zij heeft *hier* daar vaak *over* gesproken.   [.. pron .. loc ..]
        d′. *Zij heeft daar *hier* vaak *over* gesproken.   [.. loc .. pron ..]

The pattern in (124) has given rise to the idea that the strong demonstrative R-words can also be placed into a unique, designated [+R]-position in the middle field of the clause. The postulation that the position is unique again accounts for the fact that only one occurrence of a strong demonstrative R-word is allowed.

(131)   Axiom II: A strong demonstrative R-word may be moved into a unique
           [+R]-position in the middle field of the clause.

Axiom II is phrased slightly more weakly than Axiom I in (125) in that it does not require that a strong demonstrative R-word be moved into the [+R]-position. This is needed to account for examples like (132). Given the fact that the pronominal R-word follows the (optional) clause adverb *vaak*, we may claim that it occupies its base-position within PP (an option independently argued for in Section 5.5.1), so that we correctly predict this example to be grammatical: the unique [+R]-position is occupied by the locational R-word *daar* only, while the pronominal R-word *hier* is still PP-internal.

(132) Zij heeft daar (vaak) [PP hier over] gesproken.   [.. loc .. pron ..]
       she has   there often   here about spoken
       'She often spoke about this there.'

It must be noted, however, that example (133), provided by Hans Bennis (p.c.), is a potential problem for axiom II; presumably, the locational pro-form *hier* occupies the [+R]-position, but even so the pronominal R-word *daar* can be moved out of its PP. Our informants provide somewhat diverging judgments on this example, which seems best when the pronominal R-word is assigned contrastive accent; theories that postulate a designated focus position in the clause may perhaps account for the relative acceptability of (133) by claiming that the pronominal R-word occupies this focus position.

(133) [%]Jan heeft hier met mij *daar* vaak *over* gesproken.   [.. loc .. pron ..]
       Jan has   here with me there often about spoken
       'Jan often talked with me about that here.'

     Note that Axiom II is restricted to demonstrative R-words and is not concerned with quantified R-words. Examples that contain both a demonstrative and a quantified R-word are ambiguous: the demonstrative pronoun *daar* in (134a-c) can either be interpreted as a locational pro-form or as a pronominal R-word (with perhaps a slight preference for the latter). This suggests that quantified R-words need not move into the [+R]-position, which is confirmed by the fact that an adverbial phrase may occur between the two R-words.

(134) a. Jan heeft daar (gisteren) ergens   over gesproken.
          Jan has   there yesterday somewhere about spoken
          'Jan spoke there about something yesterday.'
          'Jan spoke about that somewhere yesterday.'
      b. Jan heeft daar (gisteren) nergens over gesproken.
          Jan has   there yesterday nowhere about spoken
          'Jan spoke there about nothing yesterday.'
          'Jan spoke nowhere about that yesterday.'
      c. Jan heeft daar (gisteren) overal   over gesproken.
          Jan has   there yesterday everywhere about spoken
          'Jan spoke there about everything yesterday.'
          'Jan spoke about that everywhere yesterday.'

5.5.2.3. Co-occurrence of weak and strong R-words
Axioms I and II give rise to the expectation that weak and strong R-words cannot co-occur either. This expectation is not borne out, however, as can be seen in the examples in (135), which correspond to the examples in (124a&b).

(135) a. dat er   hier gedanst wordt.   [.. expl .. loc ..]
          that there here danced is
          Intended reading: 'People are dancing here.'
      b. dat er   *hier* vaak *over* gesproken wordt.   [.. expl .. pron ..]
          that there here often about spoken   is
          Intended reading: 'People are talking about this.'

The examples in (136) show that strong R-words can also co-occur with quantitative *er*.

(136) a. dat Jan er   hier [$_{NP}$ twee [*e*]] gezien heeft.   [.. quant .. loc ..]
          that Jan there here   two   seen has
          'that Jan saw two [e.g., rats] here.'

      b. dat Jan er   *hier* [$_{NP}$ drie [*e*]] *in*   stopte.   [.. quant .. pron ..]
          that Jan there here   three   into put
          'that Jan put three [e.g., cigars] in this.'

Example (137a) shows that a weak pronominal R-word can also be combined with a strong locational R-word. A strong pronominal R-word, on the other hand, cannot be combined with a weak locational R-word, as is shown in (137b).

(137) a. dat Jan *er*   hier vaak *over* praatte.   [.. pron .. loc ..]
          that Jan there here often about talked
          'that Jan often talked about it here.'

      b. *dat Jan er *hier* vaak *over* praatte.   [.. loc .. pron ..]

Note that the examples in (135b) and (136b) are actually ambiguous and also allow a reading in which *hier* acts as a locational pro-form. In (135b) *er* then simultaneously performs the functions of expletive and pronominal R-word, and in (136b) it functions then both as licenser of the nominal gap *[e]* and as part of the pronominal PP; cf. Section 5.5.3.1.

In view of the data in (135) to (137) it seems clear that we cannot maintain the idea that the designated [+R]-positions in Axiom I and II can be identified, but that we need two distinct [+R]-positions. Given the fact that the weak R-pronoun always precedes the strong one, we postulate that the weak [+R]-position precedes the strong one. This gives rise to the clause structure in (138). Axioms I and II are now rephrased as in (138a&b).

(138)   XP V$_{+fin}$ (Subject) [+R]$_{weak}$ ... [+R]$_{strong}$ ... CLAUSE ADVERB ... V$_{-fin}$
      a. Axiom I: *Er* must be moved into the unique weak [+R]-position.
      b. Axiom II: A strong demonstrative R-word may be moved into the unique strong [+R]-position.

The axioms in (138) still leave the ungrammaticality of (137b) unexplained. The fact that the locational phrase is always the second (strong) R-word in the examples above has given rise to the idea that the second [+R]-position in (138) must *always* be used as a landing site for a demonstrative locational R-word, if there is one. From this two predictions follow. First, it is correctly predicted that only weak R-pronouns can be used in the presence of a locational R-word (but see example (133) for a potential problem); the strong R-position is occupied by the locational R-word and hence inaccessible to other strong R-words. Second, it is predicted that the locational R-word must be strong in the presence of another R-word; if the locational R-word were weak, it would have to move to the weak [+R]-position *via* the strong [+R]-position so that all landing sites for R-pronouns are occupied, the weak one by the phonetically realized locational R-word and the strong one by a

°trace of it. This gives an exhaustive account of the data discussed so far with the exception of (129c), which we have put aside.

5.5.2.4. Wh-*movement and topicalization in multiple R-word constructions*

This section will discuss *wh*-movement and topicalization in multiple R-word constructions and show that there is a restriction on the co-occurrence of demonstrative and interrogative/topicalized R-words. Subsection I will show that *wh*-movement and topicalization seem to be blocked by the presence of certain demonstrative R-words; we will account for this in terms of the two [+R]-positions in (138). Subsection II will discuss an example in which *wh*-movement and topicalization of a [-R] word seems to be blocked by the presence of an R-word.

I. Wh-*movement and topicalization in double R-word constructions*

In some cases, *wh*-movement of an R-word is blocked by the presence of another R-word. Consider examples (139a), which is ungrammatical under the interpretation that *waar* is part of the pronominal PP. This has been accounted for by assuming that the *wh*-word *waar* cannot be moved into clause-initial position in one fell swoop, but must first be placed into one of the [+R]-positions in (138). However, since we have seen that the locational R-word *er* is moved via the strong [+R]-position into the weak one, these positions are no longer available for the *wh*-word, so that movement of *waar* into the clause-initial position is blocked. When the locational R-word is strong, as in (139b), it does not move into the weak [+R]-position. Hence, this weak position is accessible to the *wh*-phrase and *wh*-movement is predicted to be possible.

(139) a. *$*Waar$ heeft Jan er   vaak *over* gepraat?   [.. pron$_{wh}$ .. loc ..]
           where has Jan there often about talked
     a′.   .... V$_{+fin}$ ... [$_{+R}$ er$_i$] ... [$_{+R}$ t_i] t_i vaak [waar over] ...
     b.   *Waar* heeft Jan hier vaak *over* gepraat?   [.. pron$_{wh}$ .. loc ..]
          where has   Jan here often about talked
          'What did Jan talk often about here?'
     b.   waar$_j$ V$_{+fin}$ ... [$_{+R}$ t_j] ... [$_{+R}$ hier$_i$] t_i vaak [t_j over] ...

The examples in (140) show that the same contrast can be found in the case of topicalization of demonstrative R-words.

(140) a. *$*Daar$ heeft Jan er   vaak *over* gepraat.   [.. pron$_{demonstr}$ .. loc ..]
           there has   Jan there often about talked
     b.   *Daar* heeft Jan hier   vaak *over* gepraat.   [.. pron$_{demonstr}$ .. loc ..]
           there has   Jan here   often about talked
           'Jan talked often about that here.'

The judgments on the examples in (139) change under the reverse interpretation, that is, with the preposed interrogative R-word as locational and the second R-word as pronominal. In (141a), pronominal *er* can be placed in the weak [+R]-position, and the locational phrase can be moved via the strong [+R]-position into the clause-initial position. In (141b), however, the locational R-word has been moved via the strong R-position into clause-initial-position, so there is no landing position for the

demonstrative R-word *hier* (the empty weak [+R]-position is of course not accessible to *hier* since it is not a weak R-word).

(141) a. Waar heeft Jan *er*   vaak *over* gepraat?   [.. loc$_{wh}$ .. pron ..]
        where has   Jan there often about talked
        'Where did Jan talk about it often?'
   a′. waar$_i$ V$_{+fin}$ ... [$_{+R}$ er$_j$] ... [$_{+R}$ t_i] t_i vaak [t_j over] ...
   b. $^{??}$Waar heeft Jan *hier* vaak *over* gepraat?   [.. loc$_{wh}$ .. pron ..]
        where has   Jan here often about talked
   b′. waar$_i$ V$_{+fin}$ ... [$_{+R}$ ..] ... [$_{+R}$ t_i] t_i vaak [hier over] ...

The examples in (142) show that the same thing seems to hold for demonstrative pronominal R-words.

(142) a. Daar heeft Jan *er*   vaak *over* gepraat.   [.. loc$_{demonstr}$ .. pron ..]
        there has   Jan there often about talked
        'Jan talked about it often there.'
   b. $^{??}$Daar heeft Jan *hier* vaak *over* gepraat.   [.. loc$_{demonstr.}$ .. pron ..]
        there has   Jan here often about talked

The judgments on the examples in (141b) and (142b), which are the ones given in Huybregts (1991), are disputed by Bennis (p.c), who considers (141b) and (142b) fully acceptable and suggests that the relevant reading can be forced in relative clauses like (143). Although a locational interpretation of the relative pro-form *waar* seems more or less acceptable to us, the pronominal reading of *waar* remains the more prominent one, which would be in line with Huybregts' judgments on (141b) and (142b).

(143)   de universiteit waar   Jan hier vaak over gesproken heeft
       the university where Jan here often about spoken   has
       preferred reading: 'the university that John spoke often about here'
       possible reading: 'the university where John spoke a lot about this'

    The suggested analysis correctly predicts that expletive and quantitative *er* never block *wh*-movement of a locational or pronominal R-word: the latter can be moved via the strong [+R]-position into the clause-initial position. The examples in (144) and (145), which are the *wh*-movement counterparts of (135) and (136), show that this prediction is indeed borne out. Note in passing that, like (135b) and (136b), (144b) and (145b) also allow a reading in which *waar* 'where' acts as a locational pro-form; the weak R-word *er* then simultaneously performs the functions of expletive and pronominal R-word; cf. Section 5.5.3.1.

(144) a. Waar wordt er   gedanst?   [.. loc$_{wh}$ .. expl ..)]
        where is   there danced
        'Where do people dance?'
   b. *Waar* wordt er   vaak *over* gesproken?   [.. pron$_{wh}$ .. expl ..]
        where is   there often about talked
        'What are people often talking about?'

(145) a. Waar heeft Jan er   twee gezien?   [.. loc$_{wh}$ .. quant ..]
         where has Jan there two   seen
         'Where did Jan see two [e.g., rats]?'
    b. Waar stopte Jan *er*   drie *in*?   [.. pron$_{wh}$ .. quant ..]
        where put   Jan there three into
        'Where did Jan put three [e.g., cigars] into?'

It has been reported, however, that topicalization differs from *wh*-movement; examples like (146) with topicalized demonstrative *daar* differ sharply from the examples in (144), which involve interrogative *waar*.

(146) a. *Daar wordt er   gedanst.   [.. loc$_{demonstr}$ .. expl ..)]
         there is   there danced
         'People are dancing there.'
    b. *Daar* wordt er   vaak *over* gesproken.   [.. pron$_{demonstr}$ .. expl ..]
        there is   there often about talked
        'People are talking about that?'

The unacceptability of the examples in (146) is probably not due to the fact that the expletive blocks movement of the topicalized R-word, but to the fact that the presence of expletive *er* depends not only on whether a (definite) subject is present but also on whether the clause contains material that belongs to the presupposition of the clause; see Section N8.1.4 and Bennis (1986) for more discussion on this restriction on expletive *er*. For instance, example (147a), in which both the subject and the direct object are (nonspecific) indefinite, must contain the expletive, whereas (147b), which contains a definite direct object, is marginal at best when expletive *er* is present; when the direct object is a pronoun, as in (147c), *er* must definitely be absent. The contrast between (144) and (146) can therefore be traced back to the fact that interrogative elements like *waar* are indefinite by definition, whereas demonstrative elements like *daar* are definite.

(147) a. dat *(er) iemand   gisteren   iets   vertelde.
         that there someone yesterday something told
         'that someone told a story yesterday.'
    b. dat (??er) iemand   het verhaal gisteren   vertelde.
        that there someone the story   yesterday told
    c. dat (*er) iemand   het gisteren   vertelde.
        that there someone it   yesterday told

The examples in (148) show that replacement of *waar* by *daar* does not affect the grammaticality judgments when we are dealing with quantitative *er*; the judgments on the examples in (148) are similar to those in (145).

(148) a. Daar heeft Jan er   twee gezien?   [.. loc$_{demonstr}$ .. quant ..]
         there has Jan there two   seen
         'Jan saw two [e.g., rats] there?'
    b. *Daar* stopte Jan er   drie *in*?   [.. pron$_{demonstr}$ .. quant ..]
        there put   Jan there three into
        'Jan put three [e.g., cigars] into that ?'

That the judgments on (145) and (148) are similar is consistent with the fact, illustrated in (149), that quantitative *er* must be realized irrespective of the presence of presuppositional material.

(149) a.   Jan heeft er   [$_{NP}$ twee *e*] een verhaal verteld.
          Jan has   there   two   a story   told
          'Jan told a story to two [e.g., children].'
     b.   Jan heeft er   [$_{NP}$ twee *e*] het verhaal verteld.
          Jan has there   two   the story   told
     c.   Jan heeft het er   [$_{NP}$ twee *e*] verteld.
          Jan has it there   two   told

    A problem for the hypothesis developed above are multiple *wh*-questions like (150), in which the first [+WH] R-word must be interpreted as locational and the second one as pronominal. When the locational *wh*-phrase must be *wh*-moved via the strong R-position, the landing site of the pronominal *wh*-phrase should be occupied by a trace, so that we wrongly predict (150a) to be ungrammatical. Example (150b), on the other hand, is predicted to be possible, since the pronominal R-word can in principle be moved via the weak R-position. We leave these data for future research.

(150) a.   Waar$_i$ heeft zij waar$_j$ t_i vaak [$_{PP}$ t$_j$ over] gepraat?   [.. loc$_{wh}$ .. pron ..]
          where has she where often   about talked
          'Where did she talk often about what?'
     b.   *Waar$_j$ heeft zij waar$_i$ t_i vaak [$_{PP}$ t$_j$ over] gepraat?   [.. pron$_{wh}$ .. loc ..]
          where has she where often   about talked
          'Where did she talk often about what?'

Note that is (150b) much improved when emphatic accent is assigned to the second occurrence of *waar*. This suggests that focused locational pro-forms need not be moved into the strong [+R]-position when they are contrastively focused. Section 5.5.2.6 will provide more evidence in favor of this conclusion.

II. Wh-*movement and topicalization of [-R] phrases across R-words*

R-words can sometimes also block *wh*-movement and topicalization of [-R] phrases. We will illustrate this by means of *wh*-movement and topicalization of predicative locational phrases. Subsection A will show that the blocking effect arises especially when the R-word is a pronominal R-word, and Subsection B will argue that it cannot be established whether locational R-words have a similar blocking effect. Subsection C will show that expletive and quantitative *er* do not have this blocking effect. Subsection D, finally, shows that non-predicative phrases can freely cross R-words.

A. Wh-*movement and topicalization across a pronominal R-word*

Consider the reference sentences in (151a&a′). Although the examples in (151b&c) are perhaps slightly marked, *wh*-movement and topicalization of the predicatively used locational phrase seems to be possible. In the corresponding primed examples, on the other hand, *wh*-movement and topicalization are completely blocked.

Apparently, the pronominal R-word *daar/er* blocks the movements in question; these examples are also marked when the R-word is adjacent to the preposition.

(151) a. Jan sloeg de spijker met een hamer in de muur.
          Jan hit   the nail   with a hammer into the wall
          'Jan hit the nail into the wall with a hammer.'
    a′. Jan sloeg er/daar de spijker mee in de muur.
          Jan hit   there   the nail   with into the wall
          'Jan hit the nail into the wall with it/that.'
    b. ^(?)In welke muur sloeg Jan de spijker met een hamer?
          into which wall hit   Jan the nail   with a hammer
    b′. *In welke muur sloeg Jan daar/er de spijker mee?
          into which wall hit   Jan there   the nail   with
    c. ^(?)In de muur sloeg Jan de spijker met een hamer.
          into the wall hit   Jan the nail   with a hammer
    c′. *In de muur sloeg Jan daar/er de spijker mee.
          into the wall hit   Jan there   the nail   with

B. Wh-*movement and topicalization across a locational R-word*

When the clause contains an adverbial locational phrase, as in (152), movement of the predicative locational PP is also blocked; since this blocking effect occurs regardless of whether the adverbial phrase is a full PP or an R-word, the examples in (152) do not shed any further light on the issue of whether R-words may block *wh*-movement and topicalization of [-R] phrases.

(152) a. Jan sloeg in de huiskamer/daar de spijker in de muur.
          Jan hit   in the living room/there the nail   into the wall
          'In the living room/There Jan hit the nail into the wall.'
    b. *In welke muur sloeg Jan in de huiskamer/daar de spijker?
          into which wall hit   Jan in the living room/there the nail
    c. *In de muur sloeg Jan in de huiskamer/daar de spijker.
          into the wall hit   Jan in the living room/there the nail

C. Wh-*movement and topicalization across expletive and quantitative* er

The examples in (153) show that movement across expletive *er* is possible. Note that when *wh*-movement or topicalization applies the expletive can be optionally dropped; in (153c), the presence of expletive *er* is even somewhat marked.

(153) a. Er stonden twee grammatica's in de kast.
          there stood two grammars   in the bookcase
          'There were two grammars in the bookcase.'
    b. In welke kast   stonden (er) twee grammatica's?
          in which bookcase stood there two grammars
    c. In die kast   stonden ([?]er) twee grammatica's.
          in that bookcase stood   there two grammars

Quantitative *er* does not have a blocking effect either; the examples in (154b&c) show that *wh*-movement and topicalization are possible across quantitative *er*.

(154) a.   Jan zette er   [_{NP} twee *e*] in de kast.
           Jan put   there   two   into the bookcase
           'Jan put two [e.g., grammars] into the bookcase.'
     b.   In welke kast   zette Jan er   twee?
           into which bookcase put   Jan there two
           'Into which bookcase did Jan put two [e.g., grammars]?'
     c.   In de kast   zette Jan er   twee.
           into the bookcase put   Jan there two
           'Into the bookcase Jan put two [e.g., grammars].'

D. Wh-*movement and topicalization of non-predicative PPs*

Subsection A has shown that a pronominal R-word may block *wh*-movement and topicalization of a [-R] phrase. This does not imply, however, that it always blocks such movements. The examples in (155), for instance, show that movement of the adverbial phrase *met wie*/*Peter* may cross the pronominal R-word *daar*.

(155) a.   Jan heeft *daar* gisteren   met Peter   *over* gepraat.
           Jan has   there yesterday with Peter about   talked
           'Jan talked about it with Peter yesterday.'
     b.   Met wie   heeft Jan *daar* gisteren   *over* gepraat?
           with whom has   Jan there yesterday about talked
           'With whom did Jan talk about it yesterday?'
     c.   Met Peter heeft Jan *daar* gisteren   *over* gepraat.
           with Peter has   Jan there yesterday about talked

The data in (151) and (155) therefore suggest that the pronominal R-word only blocks movement of predicative locational phrases, which may give rise to the hypothesis that the strong [+R]-position is also relevant for movement of such locational phrases. The question of whether this suggestion can be upheld, we leave as a topic for future research.

5.5.2.5. *Co-occurrence of multiple pronominal PPs*

So far, we have only discussed the co-occurrence of two R-words with different functions. It is, however, also possible to have more than one pronominal PP. Consider the examples in (156), in which (156a) is the reference sentence. In (156b&c) it is shown that both the PP *voor dat boek* and the circumpositional phrase *naar de bibliotheek toe* allow pronominalization. Example (156d) shows that it is not possible to have two occurrences of *er*, which follows from the claim expressed by axiom I in (138a) that there is only one weak [+R]-position available. However, when the second occurrence of *er* is replaced by a strong demonstrative form, as in (156d′), the result is fully acceptable; this would follow from Axiom II in (131), according to which demonstrative R-words can be placed in the strong [+R]-position.

(156) a.　Jan is gisteren　　voor dat boek　naar de bibliotheek toe　gegaan.
　　　　　Jan is yesterday　for that book　to the library　　　　TOE went
　　　　　'Jan went to the library for that book yesterday.'
　　　b.　Jan is *er*　　gisteren　*voor* naar de bibliotheek toe　gegaan.
　　　　　Jan is there　yesterday　for　to the library　　　TOE went
　　　　　'Jan went to the library for it yesterday.'
　　　c.　Jan is *er*　　gisteren　　voor dat boek *naar toe* gegaan.
　　　　　Jan is there　yesterday　for that book　to　　TOE went
　　　　　'Jan went there (to it) for that book yesterday.'
　　　d.　*Jan is er　　er　　gisteren　　voor naar toe　gegaan.
　　　　　Jan is there　there　yesterday　for　to　　TOE went
　　　　　'Jan went there (to it) for it yesterday.'
　　　d′.　Jan is er　　hier　gisteren　　voor naar toe　gegaan.
　　　　　Jan is there　there　yesterday　for　to　　TOE went
　　　　　'Jan went to it for this yesterday.' or 'Jan went to this (place) for it yesterday.'

In fact, (156d′) seems to be ambiguous: the pronoun *er* can either be construed as the complement of the preposition *voor* or as the complement or the circumposition *naar ... toe*; judgments are subtle, though, and it might be the case that speakers of Dutch prefer one of the two readings, possibly also depending on the intonation pattern of the example.

Given the assumptions so far, we predict that *wh*-movement is possible when we are dealing with two pronominal PPs, and that the resulting example will be ambiguous. Although giving judgments on the data is somewhat tricky, we have the impression that this prediction is indeed correct.

(157) a.　Waar　is Jan er　　gisteren　　voor naar toe　gegaan?
　　　　　where　is Jan there　yesterday　for　to　TOE went
　　　b.　Waar$_i$ is Jan [$_{+R}$ er$_j$] ...[$_{+R}$ t_i] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gegaan?
　　　　　'Where (to what place) did Jan go to for it yesterday?'
　　　b′.　Waar$_j$ is Jan [$_{+R}$ er$_i$] ...[$_{+R}$ t_j] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gegaan?
　　　　　'What did Jan go there (to it) for yesterday?'

The ambiguity of example (157a) is also supported by the fact that, despite their complexity, the two relative constructions in (158) are reasonably acceptable.

(158) a.　het boek　waar　Jan *er*　　gisteren　　voor *naar toe* is gegaan
　　　　　the book　where　Jan there　yesterday　for　to　　TOE is gone
　　　　　'the book for which Jan went to it yesterday'
　　　b.　de bibliotheek waar　Jan *er*　　gisteren　*voor* naar toe　is gegaan
　　　　　the library　　where　Jan there　yesterday　for　to　TOE is gone
　　　　　'the library to which Jan went for it'

The judgments on (157a) do not seem to change when we replace *er* by a strong form, as in (159a). The derivation then takes place as indicated in the (b)-examples.

(159) a.   Waar is Jan daar gisteren voor naar toe gegaan?
          where is Jan there yesterday for to   TOE gone/come

     b.   Waar$_i$ is Jan [$_{+R}$ t_i]... [$_{+R}$ daar$_j$] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gegaan?
         'Where did Jan go for that yesterday?'

     b′. Waar$_j$ is Jan [$_{+R}$ t_j]... [$_{+R}$ daar$_i$] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gegaan?
         'What did Jan go there for yesterday?'

Note that the reading in (160b′), with the strong R-word *hier* 'here', is not readily available with the verb *gaan* 'to go' but requires *komen* 'come'. This is due to the fact that the verb *komen* 'to come' can, but the verb *gaan* 'to go' cannot be readily combined with the locational pronominal PP *hier ... naar toe*: *Jan komt/$^{??}$gaat hier naar toe* 'Jan comes/goes to this place'. The fact that the choice of verb tends to disambiguate example (160a) provides additional evidence for the claim that the ambiguity reported for (157a) and (159a) is real.

(160) a.   Waar is Jan hier gisteren voor naar toe gegaan/gekomen?
          where is Jan here yesterday for to   TOE gone/come

     b.   Waar$_i$ is Jan [$_{+R}$ t_i]... [$_{+R}$ hier$_j$] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gegaan?
         'Where did Jan go for this yesterday?'

     b′. Waar$_j$ is Jan [$_{+R}$ t_j]... [$_{+R}$ hier$_i$] gisteren [$_{PP}$ t_j voor] [$_{PP}$ t_i naar toe] gekomen?
         'What did Jan come here for yesterday?'

5.5.2.6. Co-occurrence of multiple locational pro-forms

Example (161a) shows that clauses may contain two locational phrases, and (161b) shows that both locational phrases can be replaced by a locational pro-form. Since the two pro-forms in (161b) seem to require emphatic accent, it is not surprising that the pro-forms must both be strong; (161c) shows that using a weak pro-form gives rise to a severely degraded result.

(161) a.   Jan slaapt thuis   altijd   op de zolderkamer.
          Jan sleeps at.home always   in the attic
          'At home Jan is always sleeping in the attic.'

     b.   Jan slaapt hier altijd   daar.
         Jan sleeps here always   there

     c.   *Jan slaapt er   altijd   daar/hier.
         Jan sleeps there always   there/here

The unacceptability of (161c) is as expected, given our earlier conclusion that the weak locational pro-form *er* is moved into the weak [+R]-position via the strong [+R]-position, so that the latter is no longer accessible to the demonstrative locational pro-form. The acceptability of (161b) is surprising, however, since we have seen that only one strong [+R]-position is available. Perhaps this shows that emphatic focus exempts the strong locational pro-form from moving to the strong [+R]-position, which would be consistent with the fact that placement of the second strong R-word in front of the adverb *altijd* gives rise to a marked result: $^{??}$*Jan slaapt hier daar altijd*. See also the discussion of (150b) in Section 5.5.2.4, sub I.

Given the ungrammaticality of (161c) it is not surprising that (162a) is unacceptable as well: *wh*-movement must proceed through the [+R]-positions, but these are occupied by the weak locational pro-form *er* and its trace. Example (161b) seems marked, which would follow if *hier* occupies the strong [+R]-position; note that this example is hard to pronounce with emphatic accent on the locational pro-form *hier*.

(162) a. *Waar slaapt Jan er   altijd?
          where sleeps Jan there always
      b. ??Waar slaapt Jan hier altijd?
          where sleeps Jan here always

5.5.2.7. Summary

This section has discussed various restrictions on the co-occurrence of R-words. First, it is impossible to combine two weak or two strong R-words in the middle field of the clause. This has been accounted for by assuming that there are two unique [+R]-positions, one for weak and one for strong R-words. Under the assumption that the weak [+R]-position precedes the strong one, we correctly predict that only (163c) is possible.

(163) a. *... er ... er ...
      b. *... R_{strong} ... R_{strong}
      c.   ... er ... R_{strong}

From (163), it also follows that the expletive and the quantitative R-word cannot co-occur in the middle field of the clause, since they only appear in the weak form *er*; when an expletive or a quantitative R-word is present, it always occurs in the first [+R]-position, so that the second occurrence of the R-word is either locational or pronominal. The weak locational and pronominal R-words differ in that only the latter can be combined with a second strong R-word. This has been accounted for by assuming that all locational forms must be placed in the strong [+R]-position even when they do not occupy it in the surface structure of the clause; when we are dealing with a weak locational R-word both positions are filled—the weak one by the morphologically realized R-word, the strong one by a °trace left by movement of the R-word. In Table 3 we give the predicted judgments, and a reference to the relevant examples.

Table 3: Co-occurrence of weak and strong R-words

WEAK [+R]-POSITION	STRONG [+R]-POSITION	JUDGMENT	EXAMPLE
expletive	locational	✔	(135a)
	pronominal	✔	(135b)
quantitative	locational	✔	(136a)
	pronominal	✔	(136b)
locational	locational	*	(161c)
	pronominal	*	(137b)
pronominal	locational	✔	(137a)
	pronominal	✔	(156d′)

In cases of *wh*-movement, the interrogative R-word must be moved via one of the two R-positions into the clause-initial *wh*-position. The intermediate landing site is indicated by "t_{+wh}" in Table 4. Examples (139a) and (162b) are excluded for the same reason (137b) in Table 3 is; the strong [+R]-position is occupied by a trace of the locational R-word, so that the interrogative R-word cannot use it as an intermediate landing site. Examples (162b) and (141b) are excluded because the non-interrogative R-words occupy the strong [+R]-position so that, by assumption, the interrogative locational R-word must be moved through on its way to the sentence-initial position. Table 4 can be reduplicated for topicalization.

Table 4: Wh-*movement in double R-word constructions*

WH-WORD	WEAK [+R]-POSITION	STRONG [+R]-POSITION	JUDGMENT	EXAMPLE
locational	expletive	t_{+wh}	✓	(144a)
pronominal		t_{+wh}	✓	(144b)
locational	quantitative	t_{+wh}	✓	(145a)
pronominal		t_{+wh}	✓	(145b)
pronominal	locational	t_{-wh} (trace of R_{loc})	*	(139a)
	t_{+wh}	locational	✓	(139b)
locational	locational	t_{+wh}	*	(162a)
		locational	??	(162b)
locational	pronominal	t_{+wh}	✓	(141a)
		pronominal	??	(141b)
pronominal	pronominal	t_{+wh}	✓	(157)
	t_{+wh}	pronominal	✓	(159)

5.5.3. *Conflation of functions of* er

One occurrence of *er* can simultaneously perform more than one function. However, not all functions of *er* can be conflated. It is generally accepted that *er* cannot simultaneously perform the functions of locational and pronominal *er*, and according to us (but not others), the functions of locational and quantitative *er* cannot be conflated either. If this is indeed true, than only the seven meaning combinations given in Table 5 in Section 5.5.3.2.3 can be simultaneously expressed by *er*. Section 5.5.3.1 starts by discussing cases in which *er* expresses more than one function. Section 5.5.3.2 continues with a discussion of cases in which *er* expresses the same functions more than once.

5.5.3.1. *Conflation of two or more different functions of* er

This section discusses the conflation of two or more different functions of *er*. Since embedded and main clauses differ somewhat in this respect, we devote separate sections to these two syntactic environments. We start, however, with a general discussion of the question of which functions of *er* can be conflated.

I. Which functions of er *can be conflated?*

The R-word *er* can perform four different functions. It can be used as an expletive in, e.g., an existential construction (164a), as the pronominal R-part of a pronominal

PP (164b), as a locational pro-form (164c), and as the indicator of the nominal gap in quantitative constructions (164d).

(164) a.   Er   loopt   een man   op straat.   [.. expl ..]
           there walks a man   in the.street
      b.   Jan wacht *er*   al tijden *op*.   [.. pron ..]
           Jan waits   there for ages for
      c.   Jan staat   er   al.   [.. loc ..]
           Jan stands there already
      d.   Jan heeft   er   [NP drie [*e*]]   [.. quant ..]
           Jan has   there three

Sometimes the element *er* can be used to express more than one of these functions at the same time. In (165d), for example, *er* performs the function of both the noun phrase *de sigarenkist* 'the cigar box' and the noun *sigaren* 'cigars' in (165a). This can be proved very easily: in (165b), *er* must be part of the pronominal PP *er ... in*, and since it cannot be dropped, we conclude that it is obligatorily present; in (165d), we are dealing with quantitative *er*, and since it cannot be dropped, we again conclude that it is obligatorily present; since both pronominal and quantitative *er* are obligatorily present, *er* must perform both functions in (165d).

(165) a.   Marie stopte drie sigaren in de sigarenkist.
           Marie put   three cigars into the cigar.box
      b.   Marie stopte *(er) drie sigaren in.   [.. pron ..]
           Marie put   there three cigars into
      c.   Marie stopte *(er) [NP drie [*e*]] in de sigarenkist.   [.. quant ..]
           Marie put   there   three   into the cigar.box
      d.   Marie stopte er [NP drie [*e*]]   in.   [.. quant+pron ..]
           Marie put   there three   into

It seems not to be the case, however, that all functions can be conflated. First, example (166b) shows that locational *er* cannot be conflated with pronominal *er* given that *er* can only be interpreted as part of the pronominal PP *er ... op*; pronominalization of the locational PP *op het bal* in (166a) requires that a strong locational R-word like *daar* 'there' be used.

(166)   • Pronominal and locational *er* cannot be conflated:
      a.   Zij   vertelde Jan gisteren   op het bal over haar jeugd.
           she told   Jan yesterday at the ball about her youth
           'Yesterday she told Jan about her youth at the ball.'
      b.   Zij   vertelde *er*   (daar) Jan gisteren   *over*.   [.. pron ..)]
           she told   there there Jan yesterday about
           'Yesterday, she told Jan about it.'

Second, example (167b) shows that the same thing holds for quantitative and locational *er*. According to us, *er* can only be interpreted as the licenser of the nominal gap *[e]*; pronominalization of the locational PP *in Amsterdam* in (167a) requires that a strong locational R-word like *daar* 'there' or *hier* 'here' be used.

(167)   • Locational and quantitative *er* cannot be conflated:
  a.   Zij   bezit drie huizen   in Amsterdam.
       she owns three houses in Amsterdam
  b.   Zij   bezit er   (daar/hier) [$_{NP}$ drie [*e*]].   [.. quant ..]
       she owns there there/here   three
       'She owns three (here).'

By claiming that the functions of locational and quantitative *er* cannot be conflated, we go against a long-standing tradition starting with Bech (1952) that claims otherwise. Examples that are given in support of the assumption that these two functions can be conflated generally take the form in (168), where the context, provided in (168a), restricts the contention of (168b) to students that are in the class. The question we have to ask, however, is whether the fact that the students referred to in (168b) are situated in the class is expressed by the element *er* or is simply an inference made from the context. In order to answer that question, we have to look at example (168c), where *er* can only be taken to be the locational pro-form: according to us, this example sounds pretty forced with *er* present (due to its redundancy). This suggests that *er* does *not* express the locational meaning in (168b) and that we are simply dealing with an inference made from the context.

(168) a.   Gewoonlijk heb   ik twintig leerlingen in de klas, ...
            usually   have I   twenty students   in the class
  b.   ... maar vandaag heb ik er   maar vijf.
            but   today   have I   there only five
  c.   ... maar vandaag heb ik ($^{??}$er) maar vijf studenten.
            but   today   have I   there   only five students

Our claim that quantitative and locational *er* cannot be conflated also contradicts the claim in Bennis (1986: 180) that the primeless examples in (169) are acceptable: since *wonen* 'to live' and *doorbrengen* 'to spend time' require the presence of a locational phrase, these examples would provide evidence in favor of the assumption that the quantitative and locational functions of *er* can be conflated. However, we believe that in these cases the presence of a strong locational R-word, as in the primed examples, is much preferred; the primeless examples are marginal at best.

(169) a. $^{\%}$dat er   maar [$_{NP}$ twee *e*] wonen.
            that there only   two   live
  a′. dat er   hier maar [$_{NP}$ twee *e*] wonen.
            that there here only   two   live
            'that only two [e.g., students] live here.'
  b. $^{\%}$Hij bracht er   [$_{NP}$ twee *e*] door.
            he spent   there   two   prt.
  b′. Hij bracht er   hier [$_{NP}$ twee *e*] door.
            he   spent   there here   two   prt.
            'He spent two [e.g., vacation days] here.'

We leave it to the reader to decide whether our arguments against the traditional view are conclusive, but in the following we will assume they are. Therefore, when we put aside for the moment the possibility that *er* performs the same function more

than once (see Section 5.5.3.2 for cases in which *er* is part of two pronominal PPs or quantitative noun phrases at the same time), we predict the following conflations of functions to be possible: all other combinations are excluded by the two observational generalizations in (166) and (167).

(170) a.   Single function: expletive; locational; pronominal; quantitative
      b.   Dual function: expletive + pronominal ; expletive + quantitative;
           quantitative + pronominal ; expletive + locational
      c.   Triple function: expletive + pronominal + quantitative

The possibilities in (170a) are of course trivial: no conflation has taken place, as in the examples in (164). In the following sections, we will therefore focus on the options in (170b&c) and show that these combinations do indeed occur.

II. Embedded clauses

This section will show that the predicted conflations of functions in (170b&c) do indeed arise. The dual functions expletive + pronominal and expletive + quantitative are illustrated in (171b&c), and in (171d) the only possibility of combining three functions is illustrated.

(171) a.   dat er   gisteren drie potloden op tafel   lagen.   [.. expl ..]
           that there yesterday three pencils on the.table lay
           'that there were three pencils lying on the table yesterday.'
      b.   dat er   gisteren   drie potloden op lagen.   [.. expl+pron ..]
           that there yesterday   three pencils   on lay
           'that there were three pencils lying on it yesterday.'
      c.   dat er   gisteren drie op tafel   lagen.   [.. expl+quant ..]
           that there yesterday three on the table lay
           'that there were three lying on the table yesterday.'
      d.   dat er   gisteren   drie op lagen.   [.. expl+pron+quant ..]
           that there yesterday three on lay
           'that there were three lying on it yesterday.'

The dual function quantitative + pronominal has already been demonstrated in (165), and we simply repeat the examples here.

(172) a.   Marie stopte drie sigaren in de sigarenkist.
           Marie put   three cigars into the cigar.box
      b.   Marie stopte *(er) drie sigaren in.   [.. pron ..]
           Marie put   there three cigars into
      c.   Marie stopte *(er) [NP drie [*e*]] in de sigarenkist.   [.. quant ..]
           Marie put   there   three   into the cigar.box
      d.   Marie stopte er [NP drie [*e*]] in.   [.. quant+pron ..]
           Marie put   there three   into

Example (173c) demonstrates the final option in (170b). That we are dealing here with a conflation of the expletive and locational functions of *er* is clear from the examples in (173a&b): (173a) shows that (in the absence of some other locational phrase or qualifying adjectival phrase) locational *er* is obligatorily present in this

construction, and (173b) shows that an indefinite noun phrase requires the presence of expletive *er*. As a consequence, we must conclude that *er* performs both functions in (173c).

(173) a.   dat Jan *(er) woont.   [.. loc ..]
             that Jan there lives
             'that Jan lives there.'

     b.   dat *(er) veel mensen wonen in Amsterdam.   [.. expl ..]
             that there many people live   in Amsterdam
             'that many people walk.'

     c.   dat er   veel mensen wonen.   [.. expl+loc ..]
             that there many people live
             'that many people live there.'

III. Main clauses

Section 5.5.1 has shown that the behavior of the weak R-word *er* resembles that of weak object pronouns in that it is normally not able to occupy the clause-initial position in main clauses. The only exception to this generalization is expletive *er*, which behaves like weak subject pronouns in that it may occur in first position. This exceptional status of expletive *er* raises the question whether the placement of expletive *er* affects the conflation of the functions of *er*. In order to establish this, we will investigate the main clauses corresponding to (171) and (173).

    The examples in (174) show that when expletive *er* occupies the regular subject position after the finite verb in second position, the judgments are just the same as in the embedded clauses in (171).

(174) a.   Gisteren lagen er   drie potloden op tafel.   [.. expl ..]
             yesterday lay   there three pencils   on the table
             'Yesterday there were lying three pencils on the table.'

     b.   Gisteren lagen er   drie potloden op.   [.. expl+pron ..]
             yesterday lay there three pencils   on

     c.   Gisteren lagen er   drie op tafel.   [.. expl+quant ..]
             yesterday lay   there three on the table

     d.   Gisteren lagen er   drie op.   [.. expl+pron+quant ..]
             yesterday lay   there three on

Example (175a) just illustrates that expletive *er* can also occupy the first position in the clause. The two examples in (175b) show that conflation of the expletive and pronominal functions of *er* is not affected by the sentence-initial placement of the expletive; expressing the pronominal function by means of a separate occurrence of *er*, as in (175b′), leads to ungrammaticality.

(175) a.   Er lagen gisteren drie potloden op tafel.   [.. expl ..]
     b.   Er lagen gisteren drie potloden op.   [.. expl+pron ..]
     b′. *Er lagen er gisteren drie potloden op.   [.. expl .. pron ..]

Things are different, however, in the case of expletive and quantitative *er*. The (b)-examples in (176) shows that conflation of the two functions is not possible; the

quantitative function must be expressed by means of a separate occurrence of *er* in the regular position of non-expletive *er*, as in (176c′).

(176) a. Er lagen gisteren drie potloden op tafel.   [.. expl ..]
    b. *Er lagen gisteren drie op tafel.   [.. expl+quant ..]
    b′. Er lagen er gisteren drie op tafel.   [.. expl .. quant ..]

When we are dealing with three functions, as in (177), one additional occurrence of *er* is again required. In view of the data in (175) and (176), it seems we are justified in assuming that the first occurrence of *er* expresses the expletive and the pronominal functions, whereas the second one only expresses the quantitative function, but it must be noted that we do not have independent evidence bearing on this claim.

(177)   Er lagen er gisteren drie op.   [.. expl+pron .. quant ..]

The examples in (178), finally, provide the main clause counterpart of (173c) and show that the locational pro-form behaves like pronominal *er* in that conflation with the expletive is also required when *er* occupies the sentence-initial position.

(178) a. Toen woonden er   nog veel mensen.   [.. expl+loc ..]
         then lived   there still many people
         'Many people lived there then.'
    b. Er   wonen veel mensen.   [.. expl+loc ..]
         there live   many people
         'There live many people there.'
    b′. *Er   wonen er   veel mensen.   [.. expl .. loc ..]
         there live   there many people

5.5.3.2. *Conflation of two similar functions of* er

Section 5.5.3.1 has discussed the conflation of two or more *different* functions of *er*. It is, however, also possible that two *similar* functions of *er* are conflated. This is not possible with expletive *er* for the obvious reason that a clause contains at most one expletive. It does not occur with locational *er* either, but it is possible with pronominal and quantitative *er*.

5.5.3.2.1. *Conflation of two pronominal R-words*

Example (179a) contains two PPs that both allow R-extraction; cf. (179b&c). The (d)-examples show that two stranded prepositions must occur with just a single occurrence of pronominal *er*, which shows that two occurrences of pronominal *er* are obligatorily conflated. Similar examples are given in (180).

(179) a. Jan is speciaal   voor dat boek naar de bibliotheek toe gegaan.
         Jan is especially for that book   to the library   went
         'Jan went to the library for that book especially.'
    b. Jan is er speciaal *voor* naar de bibliotheek toe gegaan.
    c. Jan is er speciaal voor dat boek *naar toe* gegaan.
    d. Jan is er speciaal voor naar toe gegaan.
    d′. *Jan is er er speciaal voor naar toe gegaan.

(180) a.   Jan heeft de sleutel met een tang   uit het slot   gehaald
            Jan has   the key   with a pair of tongs out.of the lock   taken
            'Jan took the key out of the lock with pliers.'
     b.   Jan heeft *er* de sleutel *mee* uit het slot gehaald.
     c.   Jan heeft *er* de sleutel met een tang *uit* gehaald.
     d.   Jan heeft er de sleutel mee uit gehaald.
     d'. *Jan heeft er er de sleutel mee uit gehaald.

However, constructions in which *er* is construed with two stranded adpositions are not always available. Examples like (181d) and (182d), for example seem ungrammatical, despite the fact that the (b)- and (c)-examples show that the two PPs both allow R-extraction on their own.

(181) a.   Jan heeft net   met de lepel   in de soep   geroerd.
            Jan has   just.now with the spoon in the soup stirred
            'Jan has stirred the soup with that spoon.'
     b.   Jan heeft *er* net met de lepel *in* geroerd.
     c.   Jan heeft *er* net *mee* in de soep geroerd.
     d.   [*?]Jan heeft er net mee in geroerd.
     d'. *Jan heeft er er net mee in geroerd.

(182) a.   Jan keek   net   met zijn verrekijker naar een bootje.
            Jan looked just. now with his binoculars   to a small boat
            'Jan looked at a small boat with his binoculars.'
     b.   Jan keek *er* net met zijn verrekijker *naar*.
     c.   Jan keek *er* net *mee* naar een bootje.
     d. *Jan keek er net mee naar.
     d'. *Jan keek er er net mee naar.

The difference between (179) and (180), on the one hand, and (181) and (182), on the other, has not been discussed in the literature and therefore we can only speculate about what causes the difference in judgments on the two sets of examples. The most conspicuous difference is that the former set involves complementive locational/directional PPs (*naar de bibliotheek toe* and *uit het slot*, respectively), whereas the latter two examples do not. Our conjecture is therefore that this type of conflation is possible only when one of the two pronominal PPs is a complementive, that is, acts a predicatively used locational or directional phrase. Future research must show whether this conjecture is on the right track.

    Given that R-words other than *er* may also strand prepositions, the question arises whether the possibility of conflation is a typical property of *er* or a more general property of R-words. The data in (183) suggest that the former is the case; note that we are not able to give examples with relative pronouns since their reference is determined by their (unique) antecedent.

(183) a. *Jan heeft *hier/daar* de sleutel *mee   uit*   gehaald.
        Jan has   here/there the key   with out.of taken
        Intended reading: 'Jan took the key out of this/that with this/that.'

    b. *Jan heeft *ergens*   de sleutel *mee   uit*   gehaald.
        Jan has   somewhere the key   with out.of taken
        Intended reading: 'Jan took the key out of something with something.'

    c. *Jan heeft *overal*   de sleutel *mee   uit*   gehaald.
        Jan has   everywhere the key   with out.of taken
        Intended reading: 'Jan took the key out of everything with everything.'

    d. **Waar* heeft Jan de sleutel *mee   uit*   gehaald?
        where has   Jan the key   with out.of taken
        Intended reading: 'With what did Jan take the key out of what?'

In order to have two stranded prepositions, in general two R-words must be present as in (184). The examples are somewhat hard to process but it seems that the first R-word in each of the examples in (184) must be interpreted as the pronominal object of the locational preposition *uit* 'out of'; the reading in which the first R-word is construed as the pronominal object of the stranded preposition *mee* 'with' seems to be excluded. This also holds for the interrogative R-word in (184d), where *waar* is construed as the pronominal object of *uit*. These examples therefore all have a similar structure involving a nested dependency: .. R-word$_i$ ... R-word$_j$ .. P$_j$ .. P$_i$, where the indices indicate which R-word is construed with which adposition.

(184) a. Jan heeft er   hier/daar de sleutel mee uit   gehaald.
        Jan has   there here/there the key   with out.of taken
        Intended reading: 'Jan took the key out of it with this/that.'

    b. ?Jan heeft er   ergens   de sleutel mee uit   gehaald.
        Jan has   there somewhere the key   with out.of taken
        Intended reading: 'Jan took the key out of it with something.'

    c. ?Jan heeft er   overal   de sleutel mee uit   gehaald.
        Jan has   there everywhere the key   with out.of taken
        Intended reading: 'Jan took the key out of it with everything.'

    d. Waar heeft Jan er   de sleutel mee uit   gehaald?
        where has   Jan there the key   with out.of taken
        Intended reading: 'What did Jan take the key out of with it?'

To conclude this section, we want to discuss one more example, taken from Haeseryn (1997:488). As in (179) and (180), the example in (185) involves one complementive PP, viz. *in de krant*, so that this example falls under the earlier hypothesis that one of the two PPs involved must be a complementive. What is special about this example, however, is that the *over*-PP seems to function as the modifier of a subject noun phrase. Since the subject noun phrase is indefinite, *er* in (185a) is an expletive. In (185b&c), *er* simultaneously functions as an expletive and as a pronominal R-word. In (185d), *er* is construed with two stranded prepositions. We have added (185e) just to illustrate how complex constructions like these can become: in addition to the three functions it already has in (185d), *er* also functions as quantitative *er* in this example.

(185) a.   Vandaag staan er   twee artikelen over zure regen in de krant.
        today   stand there two articles about acid rain   in the newspaper
        'Today, there are two articles about acid rain in the paper.'
    b.   Vandaag staan *er*   twee artikelen *over* in de krant.
        today   stand there two articles about   in the newspaper
    c.   Vandaag staan *er*   twee artikelen over zure regen *in*.
        today   stand there two articles about acid rain   in
    d.   Vandaag staan *er*   twee artikelen *over* in.
        today   stand there two articles about   in
    e.   Vandaag staan er   [NP twee [*e*] over] in.
        today   stand there   two   about in

5.5.3.2.2. *Conflation of two occurrences of quantitative* er

Example (186a) shows that it is also possible to conflate two instances of quantitative *er*. That we are dealing with conflation here is clear from the examples in (186b&c): when the direct object is a full noun phrase, as in (186b), *er* is obligatorily present to indicate the nominal gap in the subject; when the subject is a full noun phrase, *er* is present to indicate the nominal gap in the direct object: consequently, *er* in (186a) must simultaneously perform both functions. Note that a subject with a nominal gap may precede quantitative *er*; see Section N6.3 for further discussion.

(186)   Iedere student heeft een onvoldoende   gekregen ...
        every student has   an unsatisfactory mark gotten
        'Every student got an unsatisfactory mark ...'
    a.   ... en [NP drie *e*] hebben er   zelfs [NP twee *e*].
        and   three   have   there even   two
        '... and three even got two.'
    b.   ... en [NP drie *e*] hebben *(er) zelfs twee onvoldoendes.
        and   three   have   there even two unsatisfactory marks
        '... and three even got two unsatisfactory marks.'
    c.   ... en   drie studenten hebben *(er) zelfs [NP twee *e*].
        and three students have   there even   two
        '... and three students even got two.'

5.5.3.2.3. *Summary*

This section has discussed the conflation of functions of *er*. We have shown that all functions of *er* can be conflated with the exception of (i) the locational and the pronominal function and (ii) the locational and the quantitative function; cf. (166) and (167). Consequently, *er* can simultaneously express up to three different functions; cf. (170). A single occurrence of *er* can also be construed with more than one pronominal PP or quantitative noun phrase. Table 5 gives an overview of the possibilities, with references to the examples in question that illustrate them. Recall that main clauses with expletive *er* in first position exhibit a slightly deviant pattern; cf. (176).

Table 5: Conflation of functions of er

FUNCTION			EXAMPLE
expletive	pronominal		(171b)
	quantitative		(171c)
	locational		(173c)
	pronominal	quantitative	(171d)
quantitative	pronominal		(165d)
	quantitative		(186a)
pronominal	pronominal		(179d)/(180d)

More complex examples can be constructed by combining conflation of different and similar functions. We conclude this section by giving one such example. In (187a), *er* only has an expletive function. In (187b), there are two quantitative noun phrases, so *er* simultaneously performs the expletive function once and the quantitative function twice. In (187c), R-pronominalization has been applied to the PP *uit de boekenkast*, so that *er* performs the pronominal function on top of the other functions in (187b).

(187) a. dat er   twee studenten drie boeken uit de boekenkast   gehaald hebben.
         that there two students   three books out.of the bookcase   fetched have
         'that two students fetched three books out of the bookcase.'
      b. dat er [$_{NP}$ twee *e*] [$_{NP}$ drie *e*] uit de boekenkast gehaald hebben.
      c. dat er [$_{NP}$ twee *e*] [$_{NP}$ drie *e*] uit gehaald hebben.

5.6. Bibliographical notes

The discussion of R-pronominalization and R-extraction in this section is mainly based on the seminal PhD theses by Van Riemsdijk (1978), Bennis (1986) as well as a lesser known (Dutch) paper on the distribution of *er* by Huybregts (1991). Other important works that contain relevant discussions are Bech (1952), Coppen (1991), Geerts (1984), Beeken (1993), Odijk (1993), Zwart (1993), Barbiers (1995), and Haeseryn (1997). Quantitative and expletive *er* are more extensively discussed in Section N6.3 and N8.1.4.