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# The word order change in Dutch directional phrases\*

## from the perspective of language typology

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### **Abstract**

The current study provides an alternative explanation of the word order change observed in Dutch directional phrases from the perspective of typology. This change took place around the end of the 19<sup>th</sup> century and concerns directional phrases such as *in de kamer* ('in(to) the room') and *de kamer in* ('into the room'). On the basis of this typological research on spatial expressions in twelve languages, it can be suggested that directional phrases of the type *de kamer in* ('into the room'), which contain a postposition, better fit OV languages. The increasing rigidity of OV word order in Dutch is therefore assumed to trigger the word order change in Dutch directional phrases. This, in turn, is considered a syntactic adaption to the typology on (directional) spatial expressions that better fits the typological pattern attested in this respect.

### **Key Words**

Dutch directional phrases, preposition, postposition, language typology, spatial expressions

### **1 Introduction**

Space is organized differently in different languages, such as by prepositional phrases in, for instance, Chinese (see (1)) and English (see (2)), by overt case ending on the noun and/or the verb, such as in Finnish (see (3)) and Japanese (see (4)), or by certain types of verbs, like in Lao (see (5)), just to name a few. All spatial expressions in the sentences below are marked in bold.

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- (1) Shu     **zai**     **zhuozi** **shang.**  
 book   ESS    table   top  
 book   at     table   top  
 ‘The book is on the table.’
- (2) John is walking **on the street.**
- (3) Marjatta           **o-n**           **talo-ssa.**<sup>1</sup>  
 Marjatta           be-3SG           house-INE  
 Marjatta           is                house  
 ‘Marjatta is in the house.’
- (4) Hari -ga           **yubi-ni**           tukisasatta.<sup>2</sup>  
 needle-NOM       finger-DAT       stick.PAST  
 needle           finger           stuck  
 ‘A needle was stuck in a finger.’
- (5) Sii3-dèng3       king4   qòòk5   **caak5**           **sii3-faa4 ...**<sup>3</sup>  
 color-red       roll   exit   separate from   color-blue  
 red thing       roll   exit   separate from   blue thing  
 ‘The red thing rolls out from the blue thing...’

Similar to other linguistic domains, change occurs in expressions of spatial relations in natural languages as well. In this paper, I investigate the development of directional phrases in the history of Dutch, in particular, the change in word order in directional phrases that took place in the latter half of the 19<sup>th</sup> century, and provide an explanation for this change from the perspective of language typology.

First, I introduce Dutch directional phrases in subsection 1.1. Here, I focus on the word order change in Dutch directional phrases, as observed by Cloutier (2006 2008). Then, I address both the objectives and the research questions of this study in subsection 1.2, followed by a description of the terminology employed here. An overview of the structure of this paper concludes this section.

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<sup>1</sup> Taken from Sulkala & Karjalainen (1992: 242).

<sup>2</sup> Taken from Tsujimura (2007: 128).

<sup>3</sup> Taken from Enfield (2007: 390).

1.1 Dutch directional phrases

Modern Dutch employs prepositional phrases to express directional spatial relations. This is illustrated in the following examples. Again, all spatial expressions are marked in bold.

(6) ... dat ik **in** **de** **kamer** loop.  
 COMP 1SG ALL DET room walk.1SG.PRS  
 that I into the room walk  
 ‘... that I walk into the room.’

(7) ... dat ik **op** **de** **tafel** spring.  
 COMP 1SG ALL DET table jump.1SG.PRS  
 that I onto the table jump  
 ‘... that I jump onto the table.’

In addition to prepositions, postpositions are used to express directional spatial relations in Modern Dutch. See the examples below.

(8) ... dat ik **de** **tuin** **uit** ren.  
 COMP 1SG DET garden ALL run.1SG.PRS  
 that I the garden out-of run  
 ‘... that I run out of the garden.’

(9) ... dat ik **de** **kamer** **in** loop.  
 COMP 1SG DET room ALL walk.1SG.PRS  
 that I the room into walk  
 ‘... that I walk into the room.’

(10) ... dat ik **de** **tafel** **op** spring.  
 COMP 1SG DET table ALL jump.1SG.PRS  
 that I the table onto jump  
 ‘... that I jump onto the table.’

On the basis of examples (6) to (10), it is clear that directional phrases in Modern Dutch are headed by either a preposition or a postposition. Nevertheless, spatial expressions headed by a preposition differ from those headed by a postposition, as the former can also be interpreted as having a locative reading. This is shown below.

- (6') ... dat ik **in** **de** **kamer** loop.  
 COMP 1SG ESS DET room walk.1SG.PRS  
 that I in the room walk  
 '... that I walk inside the room.'
- (7') ... dat ik **op** **de** **tafel** spring.  
 COMP 1SG ESS DET tafel jump.1SG.PRS  
 that I on the table jump  
 '... that I jump on (the top of) the table.'

Although Modern Dutch employs both prepositional and postpositional phrases to express directional spatial relations, Middle Dutch was limited in this regard. According to Hogenhout-Mulder (1983: 74), postpositions did not exist in Middle Dutch. This indicates that directional phrases in Middle Dutch were headed by prepositions only. Some Middle Dutch examples of this are presented below, each of which contains a prepositional phrase introduced by *in* ('in(to)'), marked in bold.

- (11) dat ghoet dat si gheleit hebben **in** **onse** **lant**<sup>4</sup>  
 DEM good COMP 3PL lead.PER AUX.PER ALL 1PL.POSS country  
 that good that they led have into our country  
 'that good that they have led into our country'
- (12) do hi liep **in** **die haghe**<sup>5</sup>  
 when 3SG.M go.SG.Past ALL The Hague  
 when he walked into The hague  
 'when he walked into The Hague'
- (13) ick moet hier **in** **dit** **cloester** gaen<sup>6</sup>  
 1SG AUX here ALL DEM convent go.INF  
 I must here into this convent go  
 'I must go into this convent here'

Cloutier (2006 2008) confirms Hogenhout-Mulder's (1983) statement that postpositions were non-existent in Middle Dutch. Having done a corpus research on Dutch directional phrases headed by adposition *in* ('in(to)') from the 13<sup>th</sup> to the 19<sup>th</sup> century, Cloutier found merely one directional phrase, in which *in* ('in(to)') is

<sup>4</sup> Taken from Cloutier (2008): *13de eeuw, Hollands grafelijke kanselarij 1300 jan 7.*

<sup>5</sup> Taken from Cloutier (2008): *13de eeuw, Dordrecht 1284 begin mei.*

<sup>6</sup> Taken from Cloutier (2008): *16de eeuw, Exempel van een soudaensdochter.*

preceded by its complement. This first instance was attested in a text published around the end of the 19<sup>th</sup> century and is presented below.

- (14) ...dan            **Zwitserland in**    te    gaan.<sup>7</sup>  
           then        Switzerland ALL to    go.INF  
           then        Switzerland into to    go  
           ‘...then to go into Switzerland.’

On the basis of this finding, Cloutier suggests that the use of postpositions in Dutch directional phrases is possibly a late development, which started slightly over 100 years ago. This indicates a word order change in Dutch directional phrases, namely that besides the type of *in de kamer* (‘in(to) the room’), an innovative form such as *de kamer in* (‘into the room’) arose.

### 1.2 The aims of the study

What Cloutier’s (2006 2008) work suggests is that an innovation in the development of Dutch spatial expressions may have occurred around the end of the 19<sup>th</sup> century. To be more precise, this innovation concerns the emergence of postpositional phrases expressing directional spatial relations, which resulted in a word order change in Dutch directional phrases. However, the texts included and/or the methodology employed in Cloutier (2006 2008) may underlie the dearth of examples with postpositional *in* (‘in(to)’) as well. Therefore, ‘another search through the texts as well as the investigation of other adpositions are needed to clarify this development’ (Cloutier 2006: 76).

Thus, the first aim of the current study is to investigate the diachronic development of Dutch directional phrases headed by postpositions. This can be helpful in pointing out the exact time of emergence of postpositions in the history of Dutch.

Because the emergence of postpositions is associated with a word order change while pressing directional spatial relations in Dutch, the second aim of this research is to provide an explanation for this change. To put it more generally, the *trigger* for the word order change in Dutch directional phrases is investigated.

### 1.3 Terminology

Talmy’s (2002) terminology on spatial representations is used in this study, namely Figure (hereafter Fig) and Ground (hereafter Gr). The particular characterization of Fig and Gr is given as follows.

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<sup>7</sup> Taken from Cloutier (2006): *19de eeuw, Brieven en dagboek*.

- (15) *'The Figure is a moving or conceptually movable entity whose site, path, or orientation is conceived as a variable, the particular value of which is the relevant issue.*  
*The Ground is a reference entity, one that has a stationary setting relative to a reference frame, with respect to which the Figure's site, path or orientation is characterized.'*<sup>8</sup>

With respect to semantic functions in spatial representations, Lehmann's terminology (Lehmann 1992) is applied. The Spatial Relations (hereafter Srel) that are relevant in the current research are Allative (hereafter ALL) referring to *to region* and Essive (hereafter ESS) referring to *at region*. This is because the Dutch target adpositions *in* ('in(to)') and *op* ('on(to)') restrict the possible Srel to either *to region* (ALL) or *at region* (ESS) only. *To region* (ALL) can be referred to as directional spatial relation as well, and *at region* (ESS) is also known as locative spatial relation. Spatial Regions (hereafter Sreg) can vary from e.g. *interior*, to *exterior*, *superior*, *lateral*, etc. However, Sreg is not (always) phonologically realized separately from Srel in Dutch. For instance, instead of saying *op de bovenkant van de tafel* ('on the top of the table'), native speakers usually utter *op de tafel* ('on the table'), where they omit the Sreg *de bovenkant* ('the top') but only realize the Srel by adposition *op* ('on'). Other examples in this respect are *in het huis* ('in the house') instead of *aan de binnenkant van het huis* ('at the inner side of house') and *langs het water* ('along the river') instead of *langs de zijkant van het water* ('along the bank of the river').

In the current research, it is assumed that both Sreg and Srel are phonologically realized in one single adposition in Dutch (represented by Sreg+Srel). Due to the limited scope of this study, this is not discussed in detail.

Employing the terminology of both Talmy (2002) and Lehmann (1992), Dutch spatial expressions can be represented as in (16) through (18) below, which are adapted versions of (11), (8) and (9) above.

- (16) dat ghoet dat si gheleit hebben **in** **onse** **lant**<sup>9</sup>  
 DEM good COMP 3PL lead.PER AUX.PER ALL 1PL.POSS country  
 Fig Srel+Sreg Gr  
 that good that they led have into our country  
 'that good that they have led into our country'  
 Allative-Interior

<sup>8</sup> Adopted from Leonard (2002:184: (6)).

<sup>9</sup> See footnote 4.

- (17)    dat    ik        **de**        **tuin**    **uit**        ren.  
           COMP 1SG    DET        garden ALL        run.1SG.PRS  
                   Fig        Gr                    Srel+Sreg  
           that    I            the        garden out-of    run  
           ‘that I run out of the garden  
           Allative-Exterior
- (18)    dat    ik        **op**        **de**        **tafel**    spring.  
           COMP 1SG    ESS        DET        table    jump.1SG.PRS  
                   Fig        Srel        Gr  
           that    I            on        the        table    jump  
           ‘that I jump on the table’  
           Essive -Superior

In the following section, I provide a brief overview of the corpus research executed in order to provide a precise developmental pattern of Dutch directional phrases headed by postpositions. Here, I describe the corpus itself, the methodology, as well as present the corpus results. Section 3 discusses some previous approaches to Dutch postpositional phrases, which are the semantic approach (Cloutier 2006, Beliën 2008), the particle approach (Beliën 2008) and the syntactic approach (Helmantel 2002). After that, an alternative explanation for the word order change in Dutch directional phrases from the perspective of language typology is given. Section 5 concludes the paper and provides suggestions for further research.

## 2 Corpus research

In order to examine the emergence time and the development of Dutch directional phrases headed by postpositions, a corpus study was carried out. A brief overview of the texts included in this corpus research as well as the methodology is introduced in 2.1. In 2.2, the corpus results are presented, by means of which the emergence time of Dutch postpositions is determined and the word order change in Dutch directional phrases confirmed.

### 2.1 Corpus and methodology

The present corpus research included two adpositions in Dutch, namely *in* (‘in(to)’), the only target adposition in Cloutier (2006 2008), as well as *op* (‘on(to)’). In order to help clarify the development of adposition *in* (‘in(to)’), a different corpus was used in this study. Adposition *op* (‘on(to)’) was included to meet Cloutier’s condition (see 1.2) that ‘the investigation of other adpositions’ is necessary to draw a



clear developmental pattern of the use of Dutch postpositions. Moreover, this contributes to meeting higher frequency requirements.

Because Cloutier (2006 2008) suggests postpositions arose around the end of the 19<sup>th</sup> century, the current study focusses on the period between 1850 and 1950. This 100-year period ranges from 50 years before to 50 years after the time of emergence of Dutch postpositions mentioned in Cloutier. For the present study, I divided this period into 10 decades and analyzed a text of approximately 13,000 words for each of these. The analyzed texts were both fiction (i.e. *proza* ('prose'), including the subgenres *Roman* ('novel'), *Historische Roman* ('historical novel') and *Novellen* ('short stories')) and non-fiction (i.e. *geschiedenis*, ('history')), and are available in the *Digitale Bibliotheek voor de Nederlandse Letteren* (www.dbnl.nl). Investigated texts were exclusively digital and did not include scanned texts, since they lack the character recognition necessary to search for the adpositions of interest here. All selected texts were written in standard Modern Dutch.

In order to filter out the appearance of postpositions *in* and *op*, a pre-search was done in which all cases with the adpositions *in* ('in(to)') and *op* ('on(to)') were highlighted by the command 'Find and Replace' in a *Word 97 -2004* document on an Apple MacBook. After this pre-search, each adpositional phrase containing *in* ('in(to)') or *op* ('on(to)') was examined for the position of the adposition relative to its complement. Since the position of the adposition with respect to its complement cannot be influenced by the position of the finite verb in a clause, all cases in both matrix and subordinate clauses were included (compare (18) to (19)). Moreover, because the finiteness of verbs is irrelevant to the position of the adposition within directional phrases, the cases in non-finite clauses were included as well, next to those in finite clauses (compare (19) and (20) to (21)). All spatial expressions are marked in bold and the verbs are marked in italics.

(19) ...*keek* eens... **den** **hof** **in...**<sup>10</sup>  
 look.SG.PST once... DET.ACC/DAT court ALL...  
 looked once the court into  
 '...looked once into the court...'

(20) *toen* *wij* **den** **breeden** **stroom** **op** *voeren*<sup>11</sup>  
 COMP 1PL DET.ACC wide.ACC river ALL sail.PL.PST  
 when we the wide river onto sailed  
 'when we sailed onto the wide river'

<sup>10</sup> Ernest Claes, *De Witte* (1920: I: 12)

<sup>11</sup> J.P. Valkema Blouw, *Op zoek naar de schatten van Bidoux* (1925: Hoofdstuk XV: 171)

- (21) ...zijwaarts **het veld in te vluchten**<sup>12</sup>  
 sideward DET field ALL to escape.INF  
 sideward the field into to escape  
 ‘...to escape sideward into the field’

2.2 Results

In the first four decades included in the current corpus study, i.e., from 1850 until 1890, only directional phrases headed by prepositional *in* (‘in(to)’) and *op* (‘on(to)’) are attested. Some examples in this respect are given below. During this period, no instance containing postpositional *in* (‘into’) and *op* (‘onto’) are found.

- (22) ...moest hij de vuist **in den**  
 must.SG.PST 3SG.M DET fist ALL DET.ACC  
 Fig Srel+Sreg Gr  
 must he the fist into the  
**mond** steken<sup>13</sup>  
 mouth put.INF  
 mouth put  
 ‘...he must put the fist into the mouth’

- (23) ...en viel er een vrucht **op den grond**<sup>14</sup>  
 and fall.SG.PST DEM DET fruit ALL DET.ACC ground  
 Fig Srel+Sreg Gr  
 and fell there a fruit onto the ground  
 ‘...and there feel a (piece of) fruit onto the ground’

- (24) ...en leunde **in den hoek**<sup>15</sup>  
 and lean.SG.PST ALL DET.ACC corner  
 (Fig) Srel+Sreg Gr  
 and leaned into the corner  
 ‘...and leaned into the corner’

The very first directional phrase headed by a postposition attested in the current research was found at the end of the 19<sup>th</sup> century, similar to what Cloutier observes

<sup>12</sup> E. Molt, *Alewijn, de lijfeigene* (1901: Hoofdstuk 15: 118)

<sup>13</sup> Eduard Gerdes, *In de duinen* (1858: Hoofdstuk 2: 34)

<sup>14</sup> J.S.G. Gramberg, *Madjapahit: historisch-romantisch tafereel uit de geschiedenis van Java* (1868: Hoofdstuk 9: 114)

<sup>15</sup> Virginie Loveling, *Polydoor en Theodoor en andere novellen en schetsen* (1882: I: 285)

(2006 2008). It is a directional phrase containing postpositional *op* ('onto') in a *historische roman* ('historical novel') published in 1898: *Mooi Annie of de schipbreukeling* by Joan Frederik van Oordt. See below.

- (25) ...en ging toen **den** **weg** **op**...<sup>16</sup>  
 and go.SG.PST then DET.ACC road ALL  
 (Fig) Gr Srel+Sreg  
 and went then the road onto  
 '...and then went onto the road...'

In each of the following decades, from 1901 to 1950, a number of postpositional phrases expressing directional spatial relations were attested. Some examples stemming from these decades are presented below.

- (26) dan stuurde ik hem **de** **straat** **op**<sup>17</sup>  
 then send.SG.PST 1SG 3SG.M.ACC DET street ALL  
 Fig Gr Srel+Sreg  
 then sent I him the street onto  
 'then I sent him onto the street'

- (27) De duiven vlogen ... **de** **fijne** **morgenvelden** **in**<sup>18</sup>  
 DET doves fly.PL.PST DET nice morning-fields ALL  
 Fig Gr Srel+Sreg  
 the doves flied the nice morning fields into  
 'The doves flied into the nice morning fields'

- (28) Eerst ging men ... **den** **weg** **zeewaarts** **op**<sup>19</sup>  
 firstly go.SG.PST people DET.ACC road towards-see ALL  
 Fig Gr Srel+Sreg  
 firstly went people the road towards-see onto  
 'Firstly, people went onto the road towards the see'

- (29) We lipen ... **de** **vuile** **trap** **op**<sup>20</sup>  
 1PL walk.PL.PST DET dirty stair ALL  
 Fig Gr Srel+Sreg

<sup>16</sup> Joan Frederik van Oordt, *Mooi Annie of de schipbreukeling* (1898: Hoofstuk2: 20)

<sup>17</sup> Chr. van Abkoude, *Pietje Bell, of de lotgevallen van een ondeugenden jongen* (1914: Hoofdstuk 1: 4)

<sup>18</sup> Felix Timmermans, *Pallieter* (1916: 8)

<sup>19</sup> Joh. H. Been, *Paddeltje, de scheepsjongen van Michiel de Ruijter* (1908: XXII: 358)

<sup>20</sup> N.E. Fonteyne, *Kinderjaren* (1939: Hoofdstuk 4: 56)

we walked the dirty stair onto  
 ‘We walked...onto the dirty stair’

The following figure shows the plain results of the present corpus research and illustrates the development of Dutch postpositions. The numbers on the vertical axis represent the token frequency of postpositional *in* (‘into’) and *op* (‘onto’).<sup>21</sup>

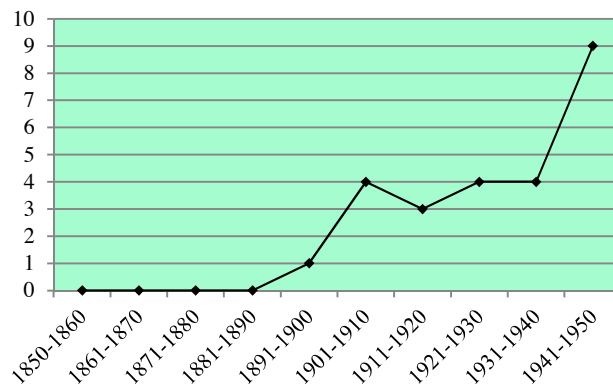


Figure I: The development of Dutch postpositions

These results confirm Cloutier’s observed time of emergence of Dutch postpositions, i.e. around the end of the 19<sup>th</sup> century. As mentioned in section 1, the emergence of postpositions indicates a word order change in Dutch directional phrases. Therefore, the findings of the current corpus study also lead to the conclusion that there is a change in word order within Dutch directional phrases. This is presented in the table below.

<sup>21</sup> Here I opt for an absolute representation because a relative measure would result in very small percentage (all below five percent), which would not be very informative to the reader.

	<u>Middle Dutch</u>	<u>Modern Dutch</u>
Possible word order(s) in Dutch directional phrases	Fig Srel+Sreg <sup>22</sup> Gr-Srel <sup>23</sup> 13 <sup>th</sup> -16 <sup>th</sup> century	Fig Srel+Sreg Gr 17 <sup>th</sup> century-now Fig Gr Srel+Sreg late 19 <sup>th</sup> century-now

Table I: The change of word order in Dutch spatial expressions

In Middle Dutch, Srel+Sreg could only be realized before Gr, whereas in Modern Dutch, Srel+Sreg can appear both before and after Gr. Besides the existing word order, which is “Fig Srel+Sreg Gr”, directional phrases in Modern Dutch also allow an innovative word order arising at the end of the 19<sup>th</sup> century, i.e., “Fig Gr Srel+Sreg”. The observation that Modern Dutch allows two different word orders when expressing directional spatial relations can be considered evidence for a transitional status of the development of directional phrases in Dutch.

### 3 Some previous approaches

Given the corpus results presented in Section 2, it is clear that the word order in Dutch directional phrases changed at the end of the 19<sup>th</sup> century. In order to investigate the *trigger* for this change, which is a syntax-internal innovation, three previous approaches to Dutch postpositions are discussed in this section. They are the semantic approach (Cloutier 2006, Beliën 2008), the particle approach (Beliën 2008) and the syntactic approach (Helmantel 2002). They are introduced and evaluated in 3.1 to 3.3, respectively.

#### 3.1 The semantic approach

According to the semantic approach (Cloutier 2006, Beliën 2008), the emergence of Dutch postpositions is related to semantic disambiguation. Here it concerns spatial phrases headed by prepositions in Modern Dutch, which are ambiguous between a locative and a directional interpretation. See (30) below for an example.

<sup>22</sup> Recall that this study assumes that both Srel and Sreg in Dutch are phonologically realized by a single adposition. I use the notation “Srel+Sreg” in Table I to represent the adpositions in Dutch directional phrases. Note that this notion differs from that of “Srel Sreg”, which suggests that both Srel and Sreg are realized separately, and indicates their linear order within a directional spatial expression.

<sup>23</sup> In Middle Dutch, DP’s representing Gr are always marked with either dative or accusative cases. This contribution of case marking to directional spatial phrases in Middle Dutch can be illustrated as “Gr-Srel”.

- (30)    dat    ik    **in de keuken** loop  
          COMP 1SG ALL DET kitchen walk.1SG.PRS    Directional reading  
          that I    into the kitchen walk  
          ‘that I walk into the kitchen’  
          COMP 1SG ESS DET kitchen walk.1SG.PRS    Locative reading  
          that I    in the kitchen walk  
          ‘that I walk inside the kitchen’

As can be seen from this example, without any contextual information, sentences such as (30) are always ambiguous between a locative reading, i.e., ‘inside the kitchen’, and a directional reading, i.e., ‘into the kitchen’. On the contrary, spatial expressions headed by postpositions can only be interpreted as having a directional reading. This is shown in the following example.

- (31)    dat    ik    **de keuken in** loop  
          COMP 1SG DET kitchen ALL walk.1SG.PRS    Directional reading  
          that I    the kitchen into walk  
          ‘that I walk into the kitchen’  
          COMP 1SG DET kitchen ESS walk.1SG.PRS    \*Locative reading  
          that I    the kitchen in walk  
          \*‘that I walk inside the kitchen’

Following this line of reasoning, the *trigger* for the emergence of Dutch postpositions is to disambiguate the semantic interpretation of spatial expressions headed by prepositions. This appears plausible, since spatial expressions headed by postpositions are only allowed to have a directional reading (see (31)).

A major challenge to this analysis is however that it cannot account for the exact emergence time of postpositions in the history of Dutch. To put it differently, the semantic approach cannot explain why spatial expressions headed by postpositions did not arise until the end of the 19<sup>th</sup> century. If the semantic ambiguity were the *trigger* for the emergence of spatial expressions headed by postpositions, nothing would prevent such a change from arising earlier.

One possible explanation in this respect is the existence of an overt case system in Middle Dutch. A locational phrase was always assigned the dative case and a directional one always the accusative case (Van Gestel et al. 1992, Cloutier 2006 2008). Therefore, the case assigned may have provided the possibility to determine whether spatial expressions in Middle Dutch had a locative or a directional interpretation. Nonetheless, this was not the case.

The case system of both definite articles and strong and weak nouns in Middle Dutch is presented in the following tables.<sup>24</sup> Since only the paradigms of DAT and ACC are of crucial importance to the disambiguation of the semantic component of prepositional phrases in Middle Dutch, NOM and GEN are excluded from these tables.

	Masculine			
	Strong Nouns		Weak Nouns	
	SG	PL	SG	PL
DAT	die-n/den gast-e	die-n/den gaste-n	die-n/den mensch-e-Ø	die-n/den mensch-en-Ø
ACC	die-n/den gast-Ø	die-Ø gaste	die-n/den mensch-e-Ø	die-Ø menschen- Ø

Table II: Case system of Middle Dutch articles and masculine nouns (DAT and ACC only)

	Feminine			
	Strong Nouns		Weak Nouns	
	SG	PL	SG	PL
DAT	die-r/der daet- Ø/dad-e	die-n/den dade-n	die-r/der siele- (n)	die-n/den sielen- Ø
ACC	die-Ø daet-Ø	die-Ø dade- Ø	die-Ø siele-Ø	die-Ø sielen-Ø

Table III: Case system of Middle Dutch articles and feminine nouns (DAT and ACC only)

	Neuter			
	Strong Nouns		Weak Nouns	
	SG	PL	SG	PL
DAT	die-n/den hof-e	die-n/den hove-n	die-n/den herte-Ø	die-n/den herten-Ø
ACC	dat hof-Ø	die-Ø hove- Ø	dat herte-Ø	die-Ø herten-Ø

Table IV: Case system of Middle Dutch articles and neuter nouns (DAT and ACC only)

On the basis of the paradigms of DAT and ACC of both definite articles and strong and weak nouns in Middle Dutch presented above, it can be seen that the dative and

<sup>24</sup> All tables are adapted from Mooijaart & Van der Wal (2008).

the accusative case of singular masculine DP's containing weak nouns always had identical phonological forms. Due to the n-deletion rule (Van Gestel et al. 1992, Van der Sijs 2006),<sup>25</sup> all plural DPs, being either strong or weak, in spite of their gender, were mostly difficult to distinguish from each other. In the remaining situations, the dative and the accusative case were audibly distinguishable, either by the inflection of the noun (singular masculine DP's containing strong nouns), by the phonological form of the article (singular feminine and neuter DP's containing weak nouns), or by the inflectional endings of both the article and the noun (singular masculine and feminine DP's containing strong nouns). Thus, despite the overt inflection for case, spatial expressions headed by prepositions were still ambiguous between locative and directional interpretation most of the time. This explains why in Middle Dutch, spatial expressions headed by prepositions were also sensitive to contextual information, similar to their counterparts in Modern Dutch.

Moreover, according to the corpus results presented in Section 2, Dutch postpositions arose at the end of the 19<sup>th</sup> century, which is approximately 400 years later than the disappearance of the overt case system in Middle Dutch in the 16<sup>th</sup> century. Therefore, a second problem for the semantic approach is to explain why spatial expressions headed by postpositions did not arise earlier, i.e., right after the disappearance of the case system.

### 3.2 *The particle approach*

The second approach discussed here is the particle approach (Beliën 2008). The semantic difference between adpositional phrases headed by prepositions and those by postpositions forms the starting point of this approach. Prepositional phrases are interpreted as having a locative reading (see (32a) and (33a)), whereas postpositional phrases always express directional spatial relations (see (32b) and (33b)).

(32a) ...dat Jan **op** **de** **weg** fiets. Locative reading  
 COMP John ESS DET road cycle.SG.PRS  
 that John on the road cycles  
 '... that John cycles on the road.'

(32b) ...dat het meisje **de** **weg op** fiets. Directional reading  
 COMP DET.NEU girl DET road ALL cycle.SG.PRS  
 that the girl the road onto cycles  
 '... that the girl cycles onto the road.'

---

<sup>25</sup> The n-deletion rule is a morpho-phonological constraint, under which the *n* at the end of a word following an unstressed vowel is deleted.



- (33a) ...dat de poes **in de kamer** rende. Locative reading  
 COMP DET cat ESS DET room run.SG.PST  
 that the cat inside the room ran  
 ‘... that the cat ran inside the room.’
- (33b) ...dat de poes **de kamer in** rende. Directional reading  
 COMP DET cat DET room ALL run.SG.PST  
 that the cat the room into ran  
 ‘... that the cat ran into the room.’

As can be seen from the examples above, both a-sentences have exactly the same lexical elements as their b-counterparts, i.e., the same content words and the same function words with exactly the same inflection. However, they differ from each other in their semantic interpretations, namely that both a-sentences are interpreted as having a locative reading and both b-sentences express directional spatial relations.

According to Beliën (2008), this difference cannot be accounted for by the semantic difference of each lexical word, but rather by the means in which every lexical word is combined with another. In other words, the semantic difference between both a- and b-sentences above should be considered a consequence of a structural difference between the adpositional phrases presented above. The adpositional phrases in (32a) and (33a) are termed as Preposition Constructions (hereafter PrsCs), whereas those in (32b) and (33b) are termed as Particle Constructions (hereafter ParCs). Three semantic parallels are attested between PreCs and ParCs (Beliën 2008), which are summarized below.

- (34) Semantic parallel I:  
*The particle in a ParC expresses the result of an event, just as a resultative particle of a common separable prefix verb in Dutch;*

Semantic parallel II:  
*The DP in a ParC is (either partially or as a whole) traversed, just as the direct object of motion verbs in other languages;*

Semantic parallel III:  
*The semantic difference between ParCs and PreCs is similar to that between other constructions with direct objects and those with prepositions;*

On the basis of these three semantic parallels, Beliën (2008) concludes that Dutch postpositions (for instance, *op* ('onto') and *in* ('into') in (32) and (33), respectively) actually belong to a certain category of particle, and they form, together with the verb (such as *fietsen* ('ride a bicycle') and *rennen* ('run') in (32) and (33), respectively), a separable prefix verb in Dutch (that is *opfietsen* and *inrennen* in (32) and (33), respectively). Note that the category of ParCs in Beliën (2008) refers not only to postpositional directional phrases, but also to all separable prefix verbs in Dutch. According to the author, Dutch separable prefix verbs require a special kind of direct object, i.e., the DP in the ParCs in her particle approach (e.g. *de weg* ('the road') and *de kamer* ('the room') in (32) and (33), respectively).

In sum, the particle approach (Beliën 2008) analyses Dutch postpositions as a separable prefix part of Dutch separable prefix verbs and relates the semantic difference between Dutch prepositional phrases and Dutch postpositional phrases to their structural difference. This directly explains why prepositional and postpositional phrases in Modern Dutch differ from each other in their semantic interpretation, even though both contain exactly the same lexical items that are always phonologically identical. Nevertheless, this approach is inadequate because of the following problems.

First of all, the direct-object-status of the DP in ParCs is questionable. As is well-known, direct objects of true separable prefix verbs in Dutch may survive in a passive context (see (35)), just as the direct objects of canonical transitive verbs do. However, it appears that DPs, termed as direct objects in ParCs, do not (Helmantel 2002) (see (35')).

- |        |   |         |
|--------|---|---------|
| (35a)  | ... dat mijn vader <i>het bier</i> op drinkt.<br>'... that my father drinks up the beer.'                     | Active  |
| (35b)  | ... dat <i>het bier</i> opgedronken wordt door mijn vader.<br>'... that the beer is drunk (up) by my father.' | Passive |
| (35'a) | ... dat het meisje <i>de weg</i> op fietst.<br>'... that the girl cycles onto the road.'                      | Active  |

- (35'b) \*... dat *de weg* opgefietst wordt door het meisje<sup>26</sup>                      Passive  
 '??'

As can be seen from the examples above, DP *de weg* ('the road') in the ParC *de weg op* ('onto the road') in (35') cannot survive in a passive context. Hence, the argument that DPs in ParCs represent a special category of direct objects is problematic.

A second challenge for the particle approach is that the semantics of the so-called particle in ParCs differs from both that of a resultative complement in general and that of a resultative particle of a separable prefix verb in Dutch. This is illustrated in the following examples. In (36), a generic resultative complement *kapot* ('broken') is given. Example (37) contains the resultative particle *weg* ('away') of Dutch separable prefix verb *weggooien* ('throw away'). In (38), a ParC containing a particle *op* ('onto') is presented, which expresses the directional spatial relation.

- (36a) ... dat ik de vaas *kapot* schop.    Event  
 '... that I kick the vase broken.'
- (36b) ... dat de vaas *kapot* is.    Result  
 '... that the vase is broken.'
- (37a) ... dat ik alle appels *weg*gooi.    Event  
 '... that I throw away all the apples.'
- (37b) ... dat alle appels *weg* zijn.    Result  
 '... that all the apples are away.'
- (38a) ... dat het meisje de weg *op* fietst.                                      Event  
 '... that the girl cycled onto the road.'

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<sup>26</sup> One of the reviewers wondered if sentences similar to (35'b) are truly ungrammatical, since s/he points out that examples like *De vrachtwagenchauffeur verklaarde dat hij de weg opgereden was omdat hij dacht dat de naderende auto's nog ver genoeg weg waren* ('The truck driver declared that he pulled onto the road because he figured the approaching cars were still far enough away') can easily be found on the internet. It is possible that comparable examples are frequently used among Dutch native speakers. However, the example given here significantly differs from (35'b), both syntactically and semantically. From a syntactic perspective, *was* in (35'b) is part of Dutch passive constructions, whereas *was* in the example is simply required by Dutch past perfect tense. This means that (35'b) and the example at hand are completely different syntactic constructions. Semantically, the example at hand is not intended to be passive at all, whereas (35'b) is presented with an intended passive meaning, which is unavailable. Based on these two arguments, I claim that (35'b) is indeed an ungrammatical passive sentence.

- |       |                                    |        |
|-------|------------------------------------|--------|
| (38b) | *... dat het meisje op is.<br>‘??’ | Result |
| (38c) | *... dat de weg op is.<br>‘??’     | Result |

As can be seen above, resultative particles, i.e., *kapot* (‘broken’) and *weg* (‘away’) in (36b) and (37b) respectively, express the results of the events, which are *schoppen* (‘kick’) in (36) and *gooien* (‘throw’) in (37). However, the particle in ParC *de weg op* (‘onto the road’) in (38) does not. The result of the event *fietsen* (‘ride a bicycle’) is neither (38b) nor (38c).<sup>27</sup>

In addition, not all verbal particles of Dutch separable prefix verb express resultative meaning. For instance, *op* in *opbellen* (‘to call’) and *oproepen* (‘to evoke’, among others) lacks resultative semantics (see further Van Goethem (2006) for this observation). Since not all verbal particles exhibit resultative semantics, Semantic Parallel I in (34) becomes problematic in Beliën’s analysis.

Moreover, the particle approach cannot capture the time of emergence of Dutch postpositions, which are considered particles contributing to Dutch separable prefix verbs. To put it differently, the particle approach cannot provide an explanation for why ParCs are a late development in Modern Dutch arising at approximately the end of the 19<sup>th</sup> century but not earlier, despite the much earlier existence of separable prefix verbs already in Middle Dutch, or even earlier.<sup>28</sup>

Finally, the particle approach of Beliën (2008) is confronted with the challenge that it cannot account for the *trigger* for the emergence of the so-called particles, i.e., Dutch postpositions.

### 3.3 The syntactic approach

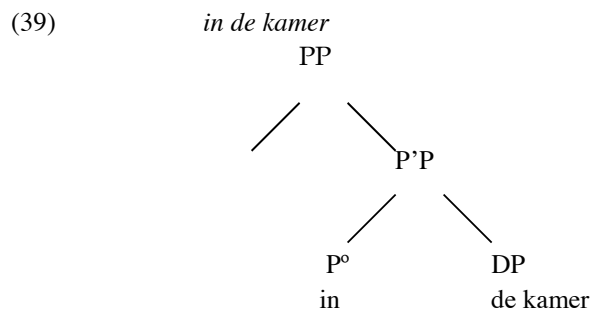
In order to account for Dutch postpositions, Helmantel (2002) proposes a syntactic approach, in which she argues that, in Dutch, prepositional and postpositional phrases have the same syntactic structure, although they differ from each other in their semantic interpretation, as already illustrated in (32) and (33) in 3.2.

<sup>27</sup> It can be suggested that particles in spatial expressions such as *de tuin uit* (‘out of the garden’) can also be categorized as adverbs, and that one argument for this adverb analysis is that they allow resultative paraphrasing, as in *De kachel is uit* (‘the stove is off’). The focus of this paper, however, lies in the use of such particles in spatial expressions. While expressing spatial relations, the resultative nature of these particles disappears. Consider for this point example (38).

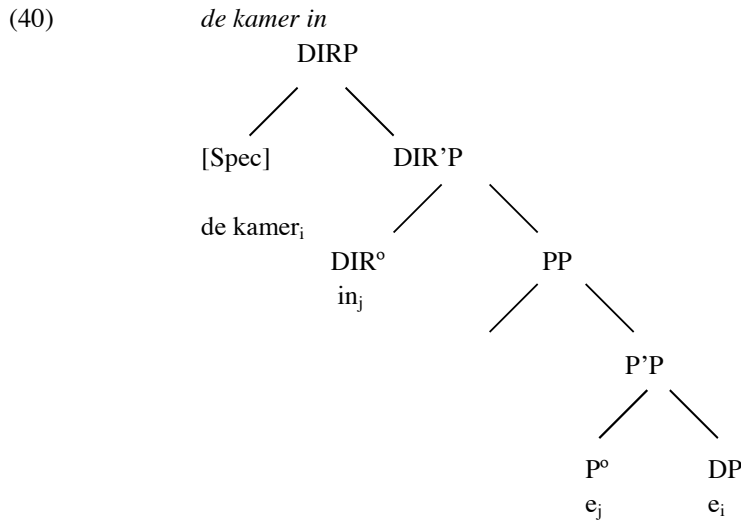
<sup>28</sup> A reviewer suggested that “the univerbation of the adposition and the verb would be an instance of grammaticalization”, if the process of grammaticalization is seen as “the gradual shift in all parts of grammar toward tighter structures, toward less freedom in the use of linguistic expressions at all levels” (Haspelmath 1998: 318). However I do not share the reviewer’s views on grammaticalisation, nor do I take the emergence of Dutch postpositions to be a case of grammaticalisation.

According to Helmantel (2002), there are two kinds of prepositional phrases (hereafter PPs), which are simplex and complex PPs. Since complex PPs are irrelevant to the research questions addressed in this paper, only simplex PPs are introduced here.

As for simplex PPs, two further subtypes are distinguished, namely simplex PPs headed by prepositions and those headed by postpositions. As mentioned above, despite the semantic differences, both of these subtypes have exactly the same underlying syntactic structure, from which the surface word order in Dutch postpositional phrases is derived (Helmantel 2002). With regard to prepositional phrases,  $P^{\circ}$  is realized by an adposition, and nothing is moved from its generating position. The entire PP is moved to the PF and acquires the surface order  $[_{pp} P DP]$ . This can be seen from the example in (39).



As already mentioned, the surface word order of simplex PPs headed by postpositions is derived from the underlying structure in (39). This process of derivation takes place via movement.  $P^{\circ}$  is realized by an adposition and then moves from its generating position to a higher head position of a functional projection DIRP, i.e.,  $DIR^{\circ}$  (Helmantel 2002). After this head-to-head movement, functional projection DIRP is activated. Consequently, this PP obtains a directional interpretation. A second movement that takes place here is that of the DP, the complement of the PP. When  $P^{\circ}$  moves to  $DIR^{\circ}$ , DP moves to SpecDIRP. Both movements are motivated by *feature checking* on the basis of the Minimalist Program (Chomsky 1995). After these movements, the whole PP is realized at PF with the surface word order  $[_{pp} DP P]$ . The syntactic structure discussed above is illustrated in (40).



According to the syntactic approach, the semantic difference between Dutch prepositional and postpositional phrases is captured by the presence of DIRP in the latter phrases. On the basis of this approach, Helmantel (2002) draws the following conclusion. Dutch postpositions are actually an instance of prepositions that are moved to a higher head position, i.e., DIR°. Following this conclusion, the generalization might be made that adpositions in Dutch prepositional phrases should always be phonologically identical to those in Dutch postpositional phrases. However, this generalization is not borne out: the postpositional variants of Dutch prepositions *met* ('with') and *tot* ('to') are *mee* ('with') and *toe* ('to'), respectively. Moreover, this approach is confronted with the following additional issues.

The first problem concerns the activation of functional projection DIRP. Dutch simplex PPs headed by prepositions are semantically ambiguous between locative and directional interpretations. This is already shown in (32) and (33), which are repeated below.

(41a) ...dat Jan **op** **de** **weg** fiets. Locative reading  
 COMP John ESS DET road cycle.SG.PRS  
 that John on the road cycles  
 '... that John cycles on the road.'

(41b) ...dat het meisje **de** **weg** **op** fiets. Directional reading  
 COMP DET.NEU girl DET road ALL cycle.SG.PRS  
 that the girl the road onto cycles  
 '... that the girl cycles onto the road.'

- (42a) ...dat de poes **in de kamer** rende .Locative reading  
 COMP DET cat ESS DET room run.SG.PST  
 that the cat inside the room ran  
 ‘... that the cat ran inside the room.’
- (42b) ...dat de poes **de kamer in** rende. Directional reading  
 COMP DET cat DET room ALL run.SG.PST  
 that the cat the room into ran  
 ‘... that the cat ran into the room.’

If DIRP is necessary for a directional interpretation of Dutch PPs headed by postpositions, and if DIRP is not present or activated in simplex PPs headed by prepositions (consider the corresponding syntactic structure in (39)), how does one account for the directional interpretation that Dutch simple PPs headed by prepositions may obtain when DIRP is absent, as in both b-sentences presented above? To formulate this in a different way: if the function of DIRP is to induce the directional meaning, then how do Dutch prepositional spatial expressions lacking a DIRP as given in (39), obtain a directional interpretation?

A second issue is that this approach cannot provide an explanation for the exact emergence time of simplex PPs headed by postpositions. That is why did postpositions in Dutch arise around the end of the 19<sup>th</sup> century, not earlier or later?

Finally, the syntactic approach discussed here cannot account for the *trigger* for the emergence of Dutch postpositions, which in terms of this approach is represented by the two syntactic movements introduced above, i.e., the head-to-head movement of P<sup>o</sup> to DIRP<sup>o</sup> and the DP-movement from its generating position to SpecDIRP (see (40)).

#### 4 An alternative analysis from the perspective of language typology

After discussing the three previous approaches to (the emergence of) Dutch postpositions and their challenges, I now introduce an alternative analysis from the perspective of language typology. This analysis is based on a typological research on spatial expressions in 12 languages. In this research, each language included is investigated for its basic word order in clauses and its word order in spatial expressions. The results are summarized in Table V.<sup>29,30</sup>

<sup>29</sup> The data concerning the basic word order in clauses and the word order within spatial expressions are collected from the grammar books Derbyshire (1979 1985) for Hixkarayana; Kita (2006), Hinds (1986), Susumu (1973) and Tsujimura (2007) for Japanese; Levinson (1996), Marathi (1997) and Pandharipande (1997) for Marathi; Goksel, & Kerslake (2005), Arik (2003) and Lewis (1975) for Turkish; De Rijk (2008), Hualde & Ortiz de Urbina (2003) and Saltarelli (1988) for Basque; Asher & Kumari (1997) and Prabhakara Variar (1972) for Malayalam; Fortescue, (1984) and Sadock (2003) for West Greenlandic;

<u>Language</u>	<u>Basic word order in clauses</u>	<u>Word order in spatial expressions</u>
Hixkarayana	OVS	Gr Sreg-Srel
Japanese	SOV	Gr Srel
Marathi	SOV	Gr(-Srel) (Sreg)(-Srel)
Turkish	SOV	Gr-GEN Sreg-POSS-Srel
Basque	SOV	Gr(-GEN/Srel) Sreg(-Srel)
Malayalam	SOV	Gr(-DAT) (Srel)
West Greenlandic	SOV	Gr(-ERG/Srel) (Sreg-POSS-Srel)
Finnish	SVO	Gr(-GEN/Srel) (Sreg-Srel)
Tarascan	SVO	Gr Sreg
Koromfe	SVO	Gr Sreg
Lao	SVO	Srel (Sreg) Gr
Maori	VSO	Srel Sreg Srel Gr

Table V: Results of typological research

As mentioned the terminology employed here is such that when Sreg and Srel are phonologically realized in one lexical element, such as an adposition in Dutch, the representation “Sreg+Srel” is used. When Sreg or Srel are linguistically realized as word inflections in the form of affixes, for instance in Finnish and Basque, the representation “-Sreg/Srel” is used. Finally, the representation “Sreg-Srel” implies that both Sreg and Srel are realized as separate morphological units of one single lexical element, as in Hixkarayana, Basque and Finnish. Parentheses indicate the optionality of a certain linguistic form.

As briefly introduced in Section 1, every language has its individual means of expressing spatial relations (consider again the examples (1) through (5)). This is to say that not all languages investigated in the current typological research exhibit a category of adpositions or employ adpositions in organizing space. For instance, Turkish and Finnish use a case system to realize spatial relations (see (43) and (44)), whereas in Lao, verbs are employed in spatial phrases (see (45)).

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Kracht (2002), Lestrade (2010) Sulkala & Karjalainen (1992) for Finnish; Monzón (2004), Friedrich (1969) and Suárez (1983) for Tarascan; Rennison (1997) for Koromfe; Enfield (2007) for Lao; Bauer (1993) and Foley (2000) for Maori.

<sup>30</sup> All the data presented in Table V were collected by a group of rMA students of the University of Amsterdam. They are Daniele Dalmasso for Basque; Francesca Giamboni for Japanese; Agnieszka Gimzewska for Turkish; Rosa Gusing for Hixkarayana; Marjolein Kersten for Finnish; Cornelia Lahmann for Marathi; Jing Lin for Lao; Alessandro Lopopolo for Tarascan; Marlou van Rijn for Maori; Klaas Seinhorst for Malayalam; Nienke Verhoog for Koromfe; Janneke Verschoor for West Greenlandic. For the detailed questionnaire used to collect data on each investigated language, please e-mail the author.



- (43) kilise-**nin** iç-**in-den** çık-a -ma-dı-k<sup>31</sup>  
 church-GEN.SG interior-3SG.POSS-ABL exit-ABIL-NEG-PAST-1PL  
 church interior unable to exist  
 ‘We were unable to come out of the church’
- (44) Tenniskenttä o-n koulu-**n** sisä-**lla**<sup>32</sup>  
 tennis-court be-3SG school-GEN inner-ADE  
 tennis-court is school inner  
 ‘The tennis-court is inside the school’
- (45) laaw2 **doot5** khua3 taaj3<sup>33</sup>  
 3SG.F leap bridge die  
 she leap bridge die  
 ‘She leapt from a bridge and died’

However, what is crucial here is not whether a certain language exhibits a category of adpositions or uses this category to organize space. Rather, what is crucial here is in which position within the spatial expressions Gr is phonologically realized, which is either before or after Sreg/Srel, or Sreg-Srel, or Sreg+Srel. How Srel/Sreg, Sreg-Srel and Sreg+Srel may be phonologically and morphologically realized, which is by means of adpositions or verbal inflection, etc., is a language-specific issue, and as such is irrelevant here.<sup>34</sup>

Given the data presented in Table V, a typological generalization can be made. This is that the basic word order in clauses is associated with the position where Gr is realized in spatial expressions in a language, i.e., before or after Sreg/Srel, Sreg-Srel, or Sreg+Srel. More precisely, if a language exhibits OV order in clauses, then it is likely to express Gr before Srel in its spatial phrases.

Inspired by this typological generalization, it can be hypothesized that the change of word order in Dutch directional phrases (i.e., the emergence of Dutch postpositions) should be related to the basic word order in Dutch clauses. If this hypothesis is correct, then the *trigger* for the emergence of Dutch postpositions, which resulted in a word order change in Dutch directional phrases, should be that the order “Gr Srel+Sreg” better fits the typological observation cross-linguistically:

<sup>31</sup> Taken from Kornfilt (1997: 244).

<sup>32</sup> Taken from Sulkala & Karjalainen (1992: 246).

<sup>33</sup> Taken from Enfield (2007: 410).

<sup>34</sup> It can be questioned whether it is accurate to compare languages that employ adpositions in spatial expressions with those that use other strategies, e.g., inflectional morphology that generally takes the form of suffixes. I have two suggestions in this respect. First, although some languages presented in Table V do allow word morphology, i.e., inflectional suffixes, to express spatial relations, this strategy is never obligatory. Second, what counts here is not the position of the inflection but that of the lexical element realizing Srel/Sreg, Sreg-Srel, or Srel+Sreg.

Nevertheless, before this hypothesis can be accepted, two puzzles remain to be solved.

As reported in the existing body of literature, Dutch has always been an OV language (see Cloutier 2006 2008, Koster 1975, Van Gestel et al. 1992, Van der Sijs 2006, Weerman 1987, among others). In other words, there has not been any change in the basic clausal order in the history of Dutch. Therefore, the first puzzle in this regard is why the word order in spatial expressions in Middle Dutch was “Fig Srel+Sreg Gr” instead of “(Fig) Gr Srel+Sreg”. Given the significant association between the basic word order in clauses and that within spatial expressions, it would be expected that Middle Dutch, categorized as an OV language, should exhibit the order “Gr Srel+Sreg” in her spatial expressions; “Fig Srel+Sreg Gr” is unexpected

Subsequently, the hypothesis from the perspective of language typology needs to account for the emergence time of Dutch postpositions. That is, why the innovative order of directional phrases, which better fits the typological pattern in OV languages, arose at the end of the 19<sup>th</sup> century but not earlier or later. In what follows, I focus on how the analysis from the typological perspective solves these two puzzles.

According to Neeleman & Weerman (1999), Gerritsen (1978 1980), Weerman (1987), and Van Gestel et al. (1992), Middle Dutch was a free OV language with a considerable amount of *leakages* or VO-like orders, whereas Modern Dutch should be characterized as a strict OV language with rigid OV order and few *leakages*. The development of allowed VO-like orders in the history of Dutch is illustrated in the logistic functions presented below.<sup>35</sup> The numbers on the horizontal axis indicate the century, e.g. 16C stands for the 16<sup>th</sup> century. On the vertical axis, the percentage of the surface VO order that has been attested in Cloutier’s corpus study can be read. Different lines represent different constructions investigated in Cloutier (2008). The grey line stands for the logistic function of directional phrases, the solid black line for the logistic function of relative objects, and the dotted line for the logistic function of naming objects.<sup>36</sup> In the current study,

<sup>35</sup> Adopted from Cloutier (2008: 167: Figure 5.2).

<sup>36</sup> One of the reviewers suggested that the development of surface VO orders in Dutch history would be more accurate if the data collected in Cloutier (2008) could be combined with the results in Burridge (1993). Her/his argument was that Cloutier only investigated certain types of constructions that more frequently allowed *leakages* than regular direct objects. While Burridge’s data might provide more insight in word order from the 14<sup>th</sup> through the 17<sup>th</sup> century, they do not provide frequency information on a crucial aspect for the current study, namely surface VO orders in Early Modern Dutch. Therefore, the data do not serve the purpose of this study. Burridge’s data do have added value to this study for a different reason, however, as they suggest that two Dutch dialects showed a shift in the surface word order in subordinate clauses. In both, Brabantish and Hollandish, VO orders were relatively frequent in the 14<sup>th</sup> century, occurring 14% of the time on average, but much less frequent in the 17<sup>th</sup> century, when their frequency dropped to just 3.6% on average. (see further the data presented in Burridge (1993: 46: Table 9) and Burridge (1993: 47: Table 10). Burridge interpreted this trend as an indication for “the gradual

the development of each individual construction is irrelevant, and is not discussed in further detail.

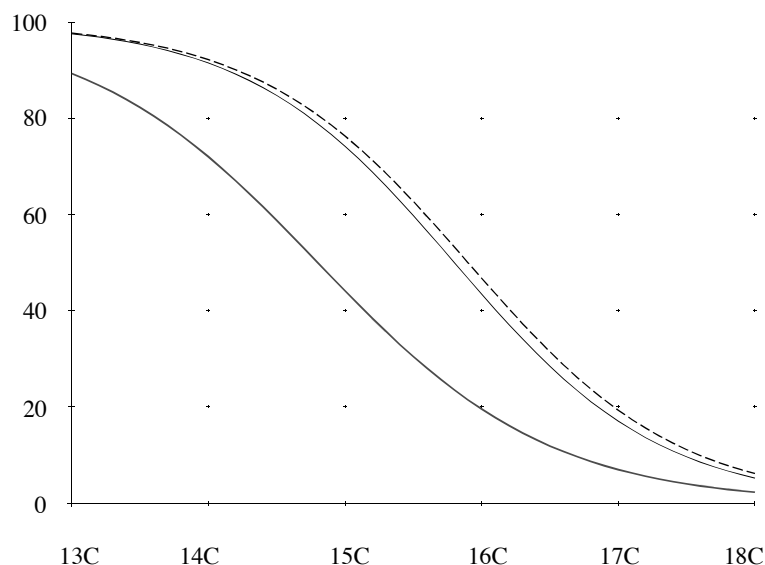


Figure II: The development of surface VO order in the history of Dutch

As can be seen from the figure above, Middle Dutch (from the 13<sup>th</sup> to the 16<sup>th</sup> century) allowed a considerable amount of surface VO orders. This implies that the degree of OV in Middle Dutch was low, and further indicates the VO character of Middle Dutch irrespective of its categorization as an OV language in the literature. Since Middle Dutch exhibited a VO character, why spatial expressions in that period allowed the order “Srel+Sreg Gr” only directly follows from the typological pattern observed in Table V.

In the 17<sup>th</sup> and the 18<sup>th</sup> century, i.e., the first two centuries of Modern Dutch, surface VO orders were still allowed, in particular, between 10% and 20%. This suggests that earlier phases of Modern Dutch still had some VO character. This may account for why the word order “Gr Srel+Sreg” in directional phrases had not yet emerged.

From the 18<sup>th</sup> century onwards, *leakages* and VO-like orders occurred at a low frequency, i.e., less than 10%. Although an occurrence of less than 10% has not been adopted in similar typological research, I assume here that the observation of VO-like word orders attested at a percentage of less than 10% might suggest that

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grammaticalization or fixing of this order as a mark of subordination” in the history of Dutch (Burridge 1993: 48).

Modern Dutch changed into a strict OV language, in which surface VO orders are seldom allowed. The change in the OV character, or to put it differently, the change in the OV degree, forms the *trigger* for the word order change in Dutch directional phrases, which is realized by the emergence of Dutch postpositions. Moreover, by observing that *leakages* and surface VO orders were not generally disallowed until the 18<sup>th</sup> century, when Dutch had become a strict OV language, we can explain why the emergence of Dutch postpositions did not arise earlier than the 18<sup>th</sup> century.

As argued in Weerman (1993), at least three generations are required before a syntactic change takes place. Therefore, given that the change in the OV degree in Modern Dutch started somewhere between the 17<sup>th</sup> and the 18<sup>th</sup> century, it becomes plausible that the word order change in Dutch directional phrases, i.e., a syntactic change within Dutch spatial expressions, arose approximately at the end of the 19<sup>th</sup> century. This implies that the puzzle regarding the non-existence of Dutch postpositions before the end of the 19<sup>th</sup> century is solved.<sup>37</sup>

On the basis of the illustration in Figure II and the discussion above, a typological overview containing different developmental phases of Dutch with respect to its basic word order in clauses and that in spatial expressions is provided. See the table below.

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<sup>37</sup> A reviewer wondered whether it also took three generations to change from an OV language with considerable amount of VO order to a rigid OV language, and what implications this might have for the alternative analysis presented here. Note that Weerman (1993) was focused on the word order change in the history of English, which concerns the resetting of a head-parameter, i.e., from OV to VO. However, in the case of Dutch word order, what is diachronically changed is not this head-parameter but the amount or the acceptability of *leakages*, which resulted in a surface VO order in Dutch. Therefore, what is important here is not whether it took three generations before Dutch became a rigid OV language, but that it took three generations before Dutch postpositional phrases arose. In other words, I argue that three generations were needed to complete a syntactic change within Dutch directional expressions. In fact, it is questionable whether the change in the OV degree in Dutch should be considered a similar syntactic change to the word order change in English.

<u>Language</u>	<u>Basic word order in clauses</u>	<u>Word order in spatial expressions</u>
Tarascan	SVO	Gr Sreg
Koromfe	SVO	Gr Sreg
Finnish	SVO	Gr(-GEN/Srel) (Sreg-Srel)
Maori	VSO	Srel Sreg Srel Gr
Lao	SVO	Srel (Sreg) Gr
Middle Dutch (1200-1500)	SOV, with considerable amount of VO-like orders	Srel+Sreg Gr
Morden Dutch (1500-1700)	SOV, with VO-like orders	Srel+Sreg Gr
Modern Dutch (1700-1890)	SOV, with few VO-like orders	Srel+Sreg Gr
Modern Dutch (1890-now)	SOV	Srel+Sreg Gr Gr Srel+Sreg
Japanese	SOV	Gr Srel
Marathi	SOV	Gr(-Srel) (Sreg)(-Srel)
Turkish	SOV	Gr-GEN Sreg-POSS-Srel
Basque	SOV	Gr(-GEN/Srel) Sreg(-Srel)
Malayalam	SOV	Gr(-DAT) (Srel)
West Greenlandic	SOV	Gr(-ERG/Srel)(Sreg-POSS-Srel)
Hixkarayana	OSV	Gr Sreg-Srel

Table VI: Typology of word order including different stages of Dutch

As can be seen, the development of the basic word order in Dutch clauses with respect to the word order in spatial expressions, and directional phrases in particular, is in line with the typological generalization in this regard. The innovative order “Gr Srel+Sreg” in Dutch directional phrases, represented by the emergence of Dutch postpositions, is predicted from the typological perspective given the change of the OV-degree in the history of Dutch, and should be considered a syntactic adaption to the typology on (directional) spatial expressions.

The typological pattern observed in the current research is not restricted to spatial directional phrases only. Typological data adapted from Dryer & Haspelmath (2011) (see Table V) show that there is a significant association between the basic word order in clauses, i.e., OV or VO, and the word order within adpositional phrases in general, regardless of their semantics and/or function ( $\alpha=.000$ ,  $< p=.05$ ).

	Postpositions	Prepositions
OV order	472	14
VO order	42	456

Table VII: association between the OV/VO feature and the position of adpositions

Given this pattern, Dutch adpositions can be expected to be undergoing a change resulting in a more frequent realization to the right of their complements. This requires further investigation.

## 5 Conclusion

In this paper, I investigated both the development of and the motivation for the innovative word order within Dutch directional phrases, i.e., “Fig Gr Srel+Sreg”. I started with a brief introduction to the expressions of directional spatial relations in Middle and Modern Dutch in Section 1, after which the two research questions were presented. These concern the emergence time of and the *trigger* for the change of word order in directional phrases, respectively.

In order to investigate when exactly Dutch postpositions arose, a corpus study was carried out, in which Dutch adpositions *in* (‘in(to)’) and *op* (‘on(to)’) were included. Corpus results were presented in Section 2, indicating the word order change within Dutch directional phrases. These show that, besides the existing order “Fig Srel+Sreg Gr”, an innovative order “Fig Gr Srel+Sreg” arose approximately at the end of the 19<sup>th</sup> century.

As for the *trigger* for this syntactic development in spatial expressions in Modern Dutch, three previous approaches were introduced and discussed in Section 3. They are the semantic approach (Cloutier 2006, Beliën 2008), the particle approach (Beliën 2008) and the syntactic approach (Helmantel 2002). However, as discussed in this section they are all confronted with several challenges, none of these is accepted here.

In Section 4, I presented an alternative motivation of the word order change in Dutch directional phrases on the basis of typological data collected from 12 languages. In particular, OV languages more often realize Srel(/Sreg) after Gr, which indicates an association between basic word order and the word order within spatial expressions. According to this alternative analysis, the change in OV degree in the development of Dutch was considered crucial to the emergence of the new word order “Fig Gr Srel+Sreg” in Dutch directional spatial expressions. Moreover, the current analysis also provides a plausible explanation for the emergence time of

the innovative word order in Dutch directional phrases, namely that Modern Dutch became a very strict OV language in the 18<sup>th</sup> century.

Yet, the typological analysis proposed here cannot account for the semantic component of the emergence of Dutch postpositions. Further research in this respect could be of great interest.

Further research may also focus on an investigation of other aspects of spatial expressions in Modern Dutch. For instance, why is it that not every preposition in Modern Dutch has a postposed counterpart, such as *naar* ('to'), *van* ('from')? And why do not all postpositions in Modern Dutch allow a preposed counterpart, such as *toe* ('to') or *vandaan* ('from')?

Another interesting topic for further investigation is the development of directional phrases in English and German, two other West Germanic languages. Since German is a West Germanic language that has always been categorized as an OV language, it would be fruitful to make a comparison of the findings of the current paper concerning directional phrases in Dutch and the situation in German. Because the basic word order in English changed from OV to VO in approximately 1100 (Weerman 1993), it would also be valuable to take a closer look at the development of directional adpositional phrases in the history of English.

Finally, the investigation of postpositional phrases containing R-words *daar/er* in Middle Dutch would contribute to a more complete understanding of Dutch postpositions as well.

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## **A1 Abbreviations**

ABL	ablative
ABIL	ability
ACC	accusative
ADE	adessive
ALL	allative
AUX	auxiliary
COMP	complementizer
DAT	dative
DEM	demonstrative
DET	determiner
DP	determiner phrases
ESS	essive
F	feminine
Fig	Figure
GEN	genitive
Gr	Ground
INE	inessive
INF	infinitive
M	masculine
NEG	negation
NOM	nominative
PAST	past tense
PER	perfective
PL	plural
POSS	possessive
PRS	present tense
SG	singular
Sreg	Spatial Region
Srel	Spatial Relation

**A2 Included *proza* ('prose') in the corpus study**

1850-1860

J.C. Kindermann, 1853, *De val van het laatste bolwerk der protestanten: La Rochelle in 1627*, pp. 1-21

Ed. Gerdes, 1858, *In de duinen*, pp. 28-57

1860-1870

P.J. Andriessen, 1862, *De schildknaap van Gijsbrecht van Aemstel*, pp. 86-102

J.S.G. Gramberg, 1868, *Madjapahit: historisch-romantisch tafereel uit de geschiedenis van Java*, pp. 94-134

1870-1880

A.L.G. Bosboom-Toussaint, 1876, *Laura's Keuze*, pp. 295-303

M. Emants, 1879, *Een drietal novellen*, pp. 1-40

1880-1890

V. Loveling, 1882, *Polydoor en Theodoor en andere novellen en schetsen*, pp. 282-290

A.S.C. Wallis, 1883, *Vorstengunst*, pp. 218-240

J. de Liefde, 1889, *Miloczia van Praag, of De Bohemers in London*, pp. 3-12

1890-1900

C.J. Kieviet, 1892, *Fulco de minstreel*, pp. 82-102

J. F. van Oordt, 1898, *Mooi Annie of de schipbreukelinge*, pp. 14-22

M. Emants, 1899, *Vijftig*, pp. 1-17

1900-1910

E. Molt, 1901, *Alewijn, de lijfeigene*, pp. 104-129

F. van Eeden, 1906, *De kleine Johannes. Deel 3*, pp. 220-238

J. H. Been, 1908, *Paddeltje, de scheepsjongen van Mischiel de Ruijter*, pp. 354-368

1910-1920

F. Timmermans, 1916, *Pallieter*, pp. 1-5

L. Couperus, 1917, *De komedianten*, pp. 106-124

F. T. van Boelaere, 1917, *Petrusken's einde*, pp. 7-21

1920-1930

S. Streuvels, 1926, *'Het leven en dood in den ast'*, pp. 142-155

Jac. van Looy, 1923, *Jaap*, pp. 1-10

J.P. Valkema Blouw, 1925, *Op zoek naar de schatten van Biddoux*, pp. 165-172

1930-1940

F. de Backer, 1934, *Longinus*, pp. 16-51

N. E. Fonteyne, 1939, *Kinderjaren*, pp. 53-56

1940-1950

A. Vermeylen, 1943, *Twee vrienden*, pp. 179-190

S. Vestdijk, 1947, *De vuuraanbidders*, pp. 41-45

C. Debrot, 1948 *Bewolkt bestaan*, pp. 17-24

A. Berkhof, 1949, *Veel geluk, professor!*, pp. 5-20