

West Germanic OV and VO

The status of exceptions

Published by

LOT
Janskerkhof 13
3512 BL Utrecht
the Netherlands

phone: +31 30 253 6006
fax: +31 30 253 6406
e-mail: lot@let.uu.nl
<http://www.lotschool.nl/>

Cover illustration by Matthew Knieling
<http://www.inanimateshorts.com>

ISBN 978-90-78328-79-7
NUR 616

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Academisch proefschrift

West Germanic OV and VO

The status of exceptions

ter verkrijging van de graad van doctor
aan de Univeriteit van Amsterdam
op gezag van de Rector Magnificus
prof. dr. D. C. van den Boom
ten overstaan van een door het college voor promoties ingestelde
comissie, in het openbaar te verdedigen in de Agnietenkapel
op vrijdag 20 februari 2009, te 14:00 uur

door

Robert A. Cloutier

geboren te Suwon, Zuid-Korea

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Faculteit der Geesteswetenschappen

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Acknowledgements

I want to thank both of my supervisors, Olga Fischer and Fred Weerman, for proposing this project and for believing in me. It has been a very interesting four and a half years of meetings and discussion. I found their comments, suggestions, questions, insights, and knowledge very helpful not only in my project but also in my development as a researcher. Their very different perspectives on and approaches to research helped to broaden my own and also helped my project to maintain some sort of balance (and thereby sanity). I would also like to thank the members of my dissertation reading committee, Hans Bennis, Kees Hengeveld, Jack Hoeksema, Ans van Kemenade, Bettelou Los, and Hedde Ze"ylstra, for taking the time to read my dissertation.

Special thanks go out to my office mates, Marian Erkelens and Irene Jacobi—sharing an office with you two has been a very enlightening and *gezellig* experience. I am very grateful for the support we provided for one another, both academically and silly-ly. It was always nice to have someone to chat with while enjoying a hot beverage. I also would like to thank the rest of the Dutch Linguistics group for the shared discussions at lunch—this was not only interesting to participate in but was extremely beneficial in developing my Dutch and learning the ins and outs of Dutch society, culture, and language.

The academically stimulating and socially just-plain-fun meetings of Diachronic Dialogue helped me to consider various aspects of historical linguistics and allowed me to meet a group of promising young scholars who were not only interested in digging through old texts for bits of useful date but also just fun to hang out with at conferences. Hopefully we will be able to form our asocial Dutch-speaking group at conferences in the future!

There are a few people who made my stay in Amsterdam particularly valuable. I greatly value their friendships and am really grateful that they are a part of my life. Hugo, you were always ready to go out and have fun—I really appreciate your spirit of discovery and was always happy to be invited along on your various quests. I could always count on you to be there when I needed you. Karina, my fellow Amerasian, I enjoyed hanging out with someone who actually understood America and what being American is about. My German buddies, Diana, Maren, Rachel, and Roland, thanks for taking me under your wing and introducing me to whole new world of moving and partying. Makis, I enjoyed going out to movies and having loooong discussions about God-only-remembers what. Having someone to force me to look at myself in a very critical way, though often difficult, was good for the overall development of myself.

Acknowledgements

And finally, I would especially like to thank my partner, Ashley, for putting up with the distance for so long and for supporting me throughout all my many ups and downs. You do not realize how much you mean to me. I only hope that I can be as supportive and strong for you when you need me to be.

1. Introduction

There is fairly general agreement within the literature that the oldest stages of West Germanic can best be characterized as so-called OV languages; see for instance Gardner (1971), Stockwell (1977), Van Kemenade (1987), Pintzuk (1999), Fischer *et al.* (2000), Kroch & Taylor (2000), Bech (2001), and Trips (2002) among others for Old English and Bossuyt (1978), Van den Berg (1980), De Meersman (1980), Weerman (1989), De Schutter (1988), Burridge (1993), and Blom (2002) among others for Middle Dutch.¹ In spite of this assumed OV-base order, quite a number of investigators, including many of those mentioned above, have noted that the OV order shows a considerable amount of ‘leakages’ or VO-like orders even in the oldest stages of the West Germanic languages (see, for instance, Weerman (1987) and Neeleman & Weerman (1999) in addition to the references mentioned above). So next to clear OV orders as in the Old English example in (1, taken from Van Kemenade (1987)), there are also VO-like orders as in (2, also taken from Van Kemenade (1987)).²

- (1) a. *þæt ic þas boc of Ledenum gereorde to Engliscre spræce*
that I those books from Latin language to English tongue
awende
translate
‘that I translate those books from Latin into English’
- (2) a. *þæt hit sie feaxede steorra*
that it may-be long-haired star
‘that it may be a long-haired star’

Any element can appear before or after the verb with the exception of a few elements such as pronouns that usually appear before the verb. Various motivations have been given for the extraposition: heaviness, newness, number of elements in the clause, etc. However, there are a number of counterexamples to these motivations. Example (1) above, for instance, which has three constituents, *þas boc* ‘those books’, *of Ledenum gereorde* ‘from the Latin language’, and *to Engliscre spræce* ‘into the English language’, between the subject and the verb

¹Some linguists argue, basing themselves on Kayne (1994), that all OV-languages must ultimately be derived from a universal VO word order; see for instance Biberauer & Roberts (2005) for Old English and Zwart (1997) for Modern Dutch.

²Refer to subsection 1.4.2 for an explanation of the conventions adopted in this study to distinguish the elements in examples.

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in a subordinate clause, suggests that the number of elements in a clause might not have a strong influence on the position of the elements while example (2), which has a lexically “light” element (comprising only two words) to the right of the verb, demonstrates that the (lexical) heaviness of an element need not influence its position.

Modern Dutch, which is also generally characterized as an OV language, also shows ‘leakages’ though the nature of these extraposition phenomena appears to be quite different from what we find in the earlier stages of West Germanic. VO orders are only possible if the object is clearly emphatic or contrastive, for instance, when the object forms part of a list, as in (3).

- (3) Ik *overweeg* je *te geven* een pen, een potlood, een schrift en
I consider you to give a pen a pencil a notebook and
een gum
an eraser
'I am considering giving you a pen, a pencil, a notebook and an eraser'

Even though there is agreement about the occurrence of these leakages in the oldest periods, this is hardly true as far as the analysis of these leakages is concerned. A number of approaches to the problem, which do not necessarily exclude one another, have been proposed.

The aim of this study is to evaluate various analyses of VO phenomena in OV languages that are also able to throw light on the diachronic developments in each language. Note that the developments in the two languages are quite different: while both Dutch and English begin with flexible, underlyingly OV word orders and develop to have quite rigid syntax, Dutch becomes a strict OV language whereas English becomes a strict VO language. In Dutch, the word order patterns get reduced over time but the underlying structure of the language remains the same. This situation contrasts with the shift in the underlying structure that we find in English. Comparing the two languages will bring light on the reasons why the two languages develop so differently.

In section 1.1, I briefly describe the different proposals describing (older) West Germanic syntax. This is followed by the research questions of this study in section 1.2. I describe the three constructions investigated in this study in section 1.3, and the methodology of this study, including the selection of texts and the criteria for choosing clauses, is treated in section 1.4. The chapter concludes with section 1.5, which presents the organization of this book.

1.1. Approaches

In the following section, I briefly describe the three basic approaches to older West Germanic word order by summarizing a representative analysis per approach. The three approaches are the construction-specific approach, represented

by Van Kemenade's (1987) analysis of Old English, the construction-related approach, represented by the Flexible Syntax approach of Neeleman & Weerman (1999), and the competing-grammars approach, represented by Pintzuk's (1999) analysis of Old English. Both the construction-specific and construction-related approaches contrast with the competing-grammars approach by assuming only one underlying order. The difference between the first two is the mechanism(s) they do or do not have to account for deviant orders. In the construction-specific approach, constituents can only appear in a non-underlying position when various factors, such as heaviness, newness, or discourse, play a role. This predicts that each construction will develop at a different rate because the factors influencing its word order patterns will depend on the specific characteristics of that construction. In contrast, in the construction-related approach, the appearance of a constituent in a non-underlying position is not *restricted* by such factors, which is not to say that these factors do not increase the incidence of non-underlying orders, since the extraposition of a constituent is related to other properties of the language; in the case of Flexible Syntax, this property is morphological case. This approach, then, predicts that different constructions will evolve at a similar rate over time. The last approach, competing grammars, assumes two underlying grammars, OV and VO in the case of Old English, that compete with one another until one eventually becomes more common and the other is eventually lost. Of the three accounts, the first two, namely construction-specific and construction-related, have been proposed for the earlier stages of West Germanic while the last, competing grammars, has only been defended for Old English. I treat each of the accounts in the following subsections and end with a summary of the strengths and weaknesses of these accounts.³

1.1.1. Construction-specific

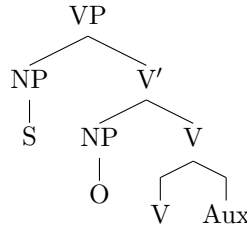
This is the traditional analysis of word order in the earlier stages of the West Germanic languages and has been supported by, for instance, Van Kemenade (1987) for Old English and Van den Berg (1980), Burridge (1993), Blom (2002) for Middle Dutch. The basic underlying word order of West Germanic in accounts using this approach is assumed to be S-O-V-Aux. A simplified syntactic tree of this underlying clausal structure looks something like the tree given in (4) below. Leakage phenomena are thus seen as a movement from a base-generated position to the left of the verb and adjunction to the right of the verb, as shown

³Note that while the approaches discussed in this study assume an underlying OV word order for early West Germanic syntax, there are also analyses based on Kayne (1994) that assume underlying VO order. The three approaches discussed in this study can in principle be applied to these types of analyses as well. I stick to OV approaches in order to streamline the discussion and because these seem to be more generally accepted in the literature.

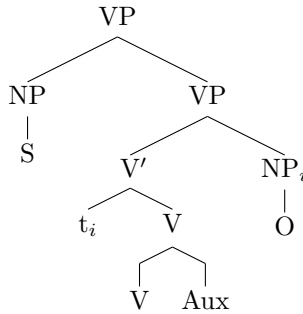
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in (5) below.

(4)



(5)



In much of the previous literature from this perspective, various motivations for this movement have been proposed, two of which will be discussed in more detail in the following subsections, namely heaviness and newness.

Koster (1973, 1975, 1999, 2001) proposes a rule called ‘PP over V’ to describe leakages in Modern Dutch, whether in main or subordinate clauses. NPs very rarely leak in Modern Dutch while PPs leak quite regularly whereas in Middle Dutch and Old English, NPs leak quite regularly. Based on data gathered from the early Old English poem *Beowulf*, Pintzuk & Kroch (1989) suggest that the leakage of PPs, which they term “extraposition,” and the leakage of NPs, which they term “heavy NP-shift,” are indeed different processes. If this analysis could be combined with Koster’s analysis, then Middle and Modern Dutch would differ in that Modern Dutch loses “heavy NP-shift” while keeping “extraposition”. This, however, is also problematic because Modern Dutch does still have a heavy NP-shift rule albeit much more restricted than what we see in Middle Dutch. Perhaps the biggest disadvantage of Koster’s analysis, however, is that the PP-over-V rule lacks any sort of motivation: it just says *that* PPs leak but does not give any indication for *why* they do. Because this analysis does not have any sort of motivation for leakages, it also does not explain why some types of PPs are much more likely to leak than other types and why some cannot leak at all, for example, PPs of direction. Some scholars, who will be discussed below, have attempted to motivate this rightward movement by relating it to various factors—two of these factors, heaviness and newness, will be discussed below. Since the construction-specific approach does not limit

or motivate leakages, with the exception of the ‘PP over V’ rule proposed by Koster, it can accommodate the leakage of the various elements quite easily.

From a diachronic perspective, this analysis is also problematic because it is too rigid. It assumes that a language is either OV or VO; there is nothing in between. As is well known, there was a shift from OV to VO in the history of English (or, one could say that word order in English has gradually become stricter over time). According to this rightward movement analysis, however, this change must be drastic as there is no possible in-between stage: English was an OV language at one point in time and a VO language the next. But many studies show that it is not so cut-and-dry: for instance, Moerenhout & Van der Wurff (2005) showed that negative and quantified objects productively occur to the left of the verb until 1550, long after the “switch” to VO. Moreover, we find a syntactic shift in the history of Dutch. Even though Dutch has remained an OV language over time, Modern Dutch syntax has lost a lot of the possibilities that were once available in older stages of the language; changes in the frequency of leaked PPs suggest that the change is more complex than having merely lost the ability to leak NPs.

This construction-specific approach is the most widely discussed and has perhaps the widest support in the literature among the three under investigation. How accurate, however, is this approach? I investigate this approach by focusing this study on three specific constructions over time. If this approach is correct, we expect to see differences in how these constructions develop over time.

Heaviness

Heaviness has been invoked by a number of people to explain leakages in both Dutch and English, among them Pintzuk & Kroch (1989), Burridge (1993) and Blom (2002). The claim is that an element leaks because it is too “heavy” to be contained in the sentence brace as seen in the following Modern Dutch example.

- (6) In Parijs *is* op 49-jarige leeftijd *overleden* de Belgische chansonnier
 In Paris is on 49-year age passed-away the Belgian singer
Jacques Brel.
 Jacques Brel
 “The Belgian singer Jacques Brel passed away in Paris at the age of 49”
 (Haeseryn *et al.* 1997)

The fact that subordinate clauses almost always leak is generally taken to be support for this observation.

Heaviness, however, has always been and continues to be a rather elusive concept: it is always possible to say that one constituent is ‘heavier’ than another, but it is often difficult to determine whether a particular constituent is itself heavy. The lack of a satisfactory definition is one of the problems with heaviness as an explanation: how heavy must an element be in order for this

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rule to apply? Moreover, should heaviness be determined by phonetic, lexical, functional or structural considerations?⁴ Or a combination of these? (6) above is both phonetically heavy (it has nine syllables) and lexically heavy (it contains five words). It could also be construed as structurally heavy in that the leaked constituent is composed of two noun phrases in apposition. Is it the combination of all these that contributes to its leakage? It is difficult to gauge as it seems to be heavy in all possible ways. The following example from Old English where the leaked element is a pronoun, however, is in no way phonetically, lexically, or structurally heavy.

- (7) *Hwi noldest ðu hyt secgan me*
why not-wanted you it say me
'Why did you not want to say it to me?' (Koopman 1990: 170)

It may have contrastive focus, which would make it functionally heavy, but more of the context is needed to determine this. Another example, this time taken from Middle Dutch, shows how complicated defining a heavy NP can be:

- (8) *daerin ghesoden sal siin serapinum*
wherein boiled shall be serapinum
'...in which serapinum shall be boiled' (Burridge 1993: 101)

This example is neither structurally nor lexically complex as it is composed of only a bare noun phrase. Is it phonetically heavy? At four syllables, it is indeed heavier than many other bare nouns. But does this make it heavy enough to cause it to leak?

Burridge (1993) observes that there is a tendency that the more words a sentential constituent contains, the more likely it is to leak. This does not necessarily suggest anything about the structure of the element; it can be a noun phrase modified by a number of adjective phrases or a noun phrase modified by a relative clause. This tendency would seem to support a lexically based definition of heaviness. Blom's (2002) finding that Middle Dutch objects modified by a relative clause always leak, however, seems to point toward a more structure-based definition of heaviness. However, the fact that virtually all instances of NPs modified by a relative clause were found outside of the sentence brace in Blom's data suggests that it might be due to another factor—perhaps it is not the “heaviness” of the NP but the presence of a subordinate clause, which generally appears after the verb anyway, that motivates the movement.

Another issue that needs to be worked out, as already mentioned, with regard to heaviness is the fact that longer constituents have a tendency to split, with part of the constituent staying before the verb and the other part coming after; (9) demonstrates this in Modern Dutch.

⁴The ‘functional’ consideration I am talking about is newness/focus and will be discussed further below. I am mentioning it here because one could say that the addition of focus to a constituent increases its heaviness, or in this case importance, in a clause.

- (9) *dat je geen bewijs hebt van zijn schuld*
 that you no proof have of his guilt
 ‘that you have no proof of his guilt’

A phonetically, lexically, and structurally heavy element *geen bewijs van zijn schuld* ‘no proof of his guilt’ is split. How should such examples be analyzed? Is it the heaviness of the entire constituent that causes part of it to leak or is it due to separate factors? If other factors are involved, what might they be?

Heaviness as a factor is also weakened by the fact that constituents that would be considered heavy on a phonetic, lexical and structural level do not always leak as the following Old English example shows:

- (10) *ealles swiþost mid þæm þæt manige þara selestena cynges þena*
 of-all most with that that many of-the best king’s thanes
þe þær on londe wæron forþferdon on þæm þrim gearum
 that there in land were died in those three years
 ‘Most of all by the fact that many of the king’s best thanes who were in
 the land died in those three years.’ (Stockwell 1977: 307)

In this example, an already fairly long noun phrase *manige þara selestena cynges þena* is modified by a relative clause *þe þær on londe wæron*. Despite the length of this complex constituent, it is still to the left of the verb. Either heaviness does not play a role in leakage, or it can be overridden by another as yet undetermined factor.

When we look at heaviness as a factor in light of previous research, we see that certain elements, namely PPs and subordinate clauses, are consistently “heavy” on more than one level. These are also the constituents that leak most often. A minimal PP or subordinate clause has at least two syllables, is almost always composed of at least two lexical items, and is structurally complex. In contrast, bare AdvPs, AdjPs, and NPs need only be a single, one-syllable lexical item without much structural complexity. Of course, one can continually add to these phrases to make ever larger elements, but my point is that when only their essential parts are considered, i.e., the bare bones of each, PPs and subordinate clauses still show greater phonetic, lexical, and structural complexity than the other types. The difficulties, however, of defining heaviness as discussed above greatly undermine its use as a factor for leakage.

As has already been mentioned, heaviness has been proposed as a reason for the extraposition of elements by a number of scholars. However, defining heaviness has always been rather vague, and there are also numerous counterexamples that seem to bring into question the influence of heaviness on word order patterns. I will examine heaviness in greater depth and try to define it more precisely if it does indeed play a role in determining the position of sentential constituents.

Newness

A number of scholars, among them De Schutter (1988), Burridge (1993) and Blom (2002), have proposed that the leakage of constituents is related to their status as either focused or new information. Reasons for this proposal include the postposing of the objects of naming verbs such as *heten* ‘to call’ and *noemen* ‘to name’ in Middle Dutch (Burridge 1993; Blom 2002), the postposing of the objects of genre-specific formulae in Middle Dutch official and religious texts (Blom 2002), and the length of leaked constituents, which being new information require a more detailed description and hence more modifiers (Burridge 1993).

Besides investigating the relationship between leakage and clause length, De Schutter (1988) examines the pragmatic factors related to leaked elements in Middle Dutch. He proposes that leaked constituents have stronger focus, stating, “A general principle of the linearization in sentences is namely that the left-right ordering is worked from the known or integrated (topical) to the new, salient (and thus focal)” (394, my translation). His preliminary expectation is that indefinite nouns, which generally refer to something new in the discourse, are more likely to be found outside of the sentence brace (hence focused) than definite nouns, which generally concern items already mentioned elsewhere in the discourse. His data, however, show otherwise—around 62.4% of the indefinite nouns and around half of the definite nouns are found in the sentence brace. He modifies this initial prediction by claiming that indefinite nouns, by their very nature, are focused; therefore, their occurrence inside or outside of the sentence brace is inconsequential, allowing him to concentrate on definite NPs. Further examination of leaked and non-leaked definite nouns shows, according to De Schutter, that “extraposition of definite constituents is directly tied to greater prominence, and almost always with strong focality. Placement in front is the rule when the constituent names an entity that has a solid anchoring in the cotext or context” (397-398, my translation). This may be what his data show, but his analysis is unattractive because it disregards indefinite nouns. Though it is true that indefiniteness generally introduces something new into the discourse, simply stating that whether an indefinite noun leaks or not does not matter is not a satisfying conclusion.

Burridge (1993) examines exbraciated constituents with respect to pragmatic considerations, namely new versus old information. Constituents that leak, according to Burridge, are likely to be “unknown information, that which cannot be understood from the context and which is not shared by the speaker and the hearer” (107). This links, to some extent, to De Schutter’s proposal. Burridge also relates this to constituent length, mentioned in the previous section. She claims that new information and longer constituents go hand in hand: if you are introducing a new item into the discourse, you want to make it as clear and specific as possible so you are more likely to add more modifiers to describe it.

In addition to heavy NP shift, Blom (2002) also finds evidence that focus

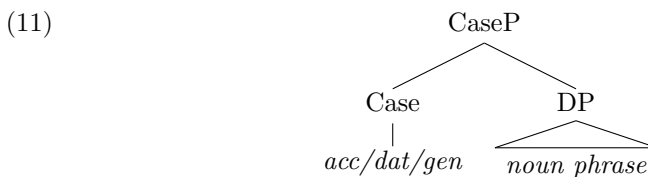
triggers leakage of direct objects in Middle Dutch. The direct objects of naming verbs (*heten* and *noemen*) and of genre-specific formulae in official and religious texts regularly appear postverbally. In these instances, one can imagine that whatever is being talked about would receive more attention than other items.

Van Kemenade & Los (2006a) show for Old English that discourse factors influence the position of sentential elements with respect to the discourse particles *þa* and *þonne*, both of which mean ‘then’. New information has a tendency to occur to the right of these particles while the position to the left is reserved for given information. Whether this distinction holds for the same positions with respect to the verb has not yet been adequately investigated.

To summarize, newness, defined in various ways, has been proposed as another motivation for the extraposition of sentential elements. None of these, however, seems able to capture the observed extraposition phenomena. I focus on one particular definition of newness, namely indefiniteness, and see to what extent this plays a role in determining the position of elements.

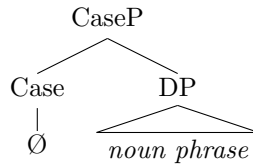
1.1.2. Construction-related

In an attempt to formulate a theory that can account for word order variation both diachronically and cross-linguistically, the Flexible Syntax approach of Neeleman & Weerman (1999) relates the various word order phenomena in a number of languages, among them Middle and Modern Dutch and Old and Modern English, to the presence or absence of morphological case. Like the construction-specific analysis discussed above, Flexible Syntax assumes that Old English, Middle Dutch, and Modern Dutch are underlying OV and that Modern English is VO. The differences between the word order patterns in Middle Dutch and Modern Dutch as well as Old and Modern English are attributed to the loss of morphological case. In this system, all DPs have a CaseP shell,⁵ as shown in (11) and (12). Both Old English and Middle Dutch have a rich system of nominal inflection that manifests itself not only on articles and adjectives modifying nouns but also on the nouns themselves. Modern English and Modern Dutch, on the other hand, have virtually lost all case marking with the exception of personal pronouns. The result is that the head of CaseP is filled in Old English and Middle Dutch, as shown in (11), while it remains empty in Modern English and Modern Dutch, as shown in (12):



⁵Nominative nouns are an exception and will be discussed later.

(12)



The appearance of a Middle Dutch or Old English element in a non-underlying position can be attributed to its morphological case—because of this, the frequency of extraposition among different constructions should be similar, all things being equal. This model, however, does not negate the possibility that other factors, such as heaviness and newness discussed above, can play a role in extraposition; the interplay of these factors would potentially increase the occurrence of non-underlying orders.

Morphological case (or the lack thereof) interacts with the Empty Category Principle (ECP) to account for word order restrictions in Modern Dutch and Modern English that are not present in Old English and Middle Dutch. The definition of the ECP as given in Neeleman & Weerman (1999: 59) is, “A non-pronominal empty category must be properly head-governed.” What this means for Old English and Middle Dutch, both of which have quite robust case systems, is that the appropriate case would have filled the head of CaseP. DPs are then properly governed and do not need to rely on the verb to avoid violating the ECP, allowing them the freedom to appear on either side of the verb. In Modern English and Modern Dutch, however, the CaseP is empty, resulting in a greater potential for improperly governed DPs; the DPs are thus restricted to certain positions in order to be properly head-governed.

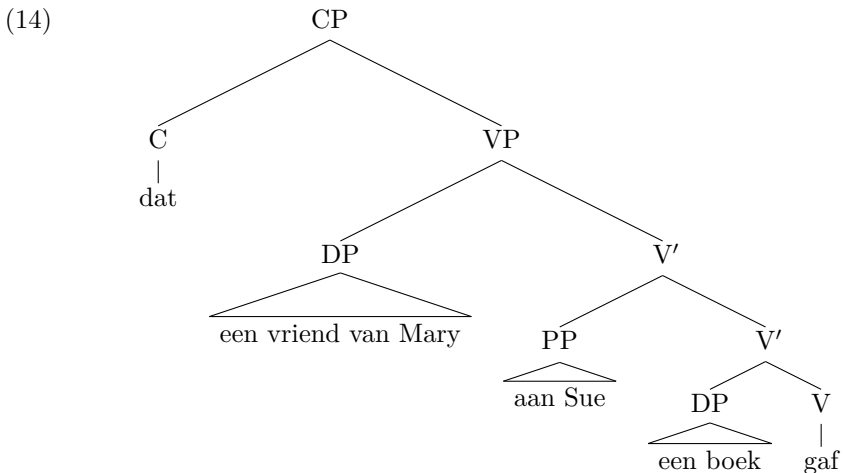
This naturally brings up the question of how DPs in Modern English and Modern Dutch *are* properly governed so that there is no violation of the ECP. For this, two related parameters are important: the direction of this government (to the right for VO languages and to the left for OV languages) and the domain of head government. In Modern English, which has become underlying VO unlike its earlier stages, the direction of government is to the right, and it has a limited government domain that requires that two elements be contained in the same phonological phrase, represented by the symbol ϕ . To determine the boundary of a phonological phrase, the following mapping principle applies: close ϕ when encountering $]_{XP}$. This essentially means that an object, for instance, needs to appear adjacent to a verb. In Modern Dutch, which has remained underlying OV like earlier West Germanic, the direction of government is to the left, and it has a larger domain of head government (m-command, i.e., the maximal projection, XP, dominating the verb must also dominate the object).

A quick comparison of ϕ -formation in English and Dutch shows why two definitions of head government are needed. (13a) is a slightly modified version of the example given in Neeleman & Weerman (1999: 25) and (13b) is the Dutch

translation:

- (13) a. [that [[a friend [of Mary's]] [gave [a book] [to Sue]]]]
 {that a friend of Mary's} {gave a book} {to Sue}
- b. [dat [[een vriend [van Mary]] [[aan Sue] [een boek] gaf]]]
 {dat een vriend van Mary} {aan Sue} {een boek} {gaf}

The mapping principle for ϕ -formation results in three phonological phrases in the English sentence (13a) and four in the Dutch translation of the same sentence (13b). In the English example, the verb and its direct object are contained within the same phonological phrase, and as a result the direct object receives proper government. A disadvantage of this type of government is that no constituent can appear between the verb and its object because it would break up the ϕ . In the Dutch example, the direct object and the verb are not in the same ϕ since the direct object has its own maximal projection and the ϕ boundary closes between it and the verb. With the prosodic definition of head government, an object could never be properly governed in an OV language. For this reason, “if an OV language is to have any objects, it must resort to a dispreferred alternative strategy” so as not to violate the ECP (Neeleman & Weerman 1999: 26), namely by requiring a larger domain of government. The following tree diagram illustrates the m-command relationship between the verb and its direct object:



The maximal projection dominating the verb *gaf*, VP, also dominates the direct object *een boek*, fulfilling the requirement for an m-command relationship. As can be seen, the indirect object *aan Sue* is also in an m-command relation with the verb. From this analysis, one would expect that a difference between English and Dutch would be that the direct and indirect object are able to switch places in Modern Dutch and not in English, which seems to be the case.

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- (15) a. that a friend gave a book to Sue.
b. ?that a friend gave to Sue a book.
- (16) a. dat een vriend aan Sue een boek gaf.
b. dat een vriend een boek aan Sue gaf.

Though this way of head government is considered a “dispreferred” strategy by Neeleman & Weerman, it has the advantage that objects can occur in more positions since the domain of government is larger.

In this model, the syntactic change in both languages comes down to the loss of case and the resulting choice between two options. Both Old English and Middle Dutch had much freer word order because of their robust system of morphology. Various sentential constituents could appear on either side of the verb because a filled CaseP would properly govern the constituent. Over time, the inflections phonologically weaken, resulting in less and less information being present in CaseP. As this happens, the word order becomes more and more rigid. At a certain point, morphology is totally lost, and each language has to resort to other means to avoid violation of the ECP: English opted for VO ϕ -government and Dutch for OV m-command. The factors influencing this choice must be further investigated in future research.

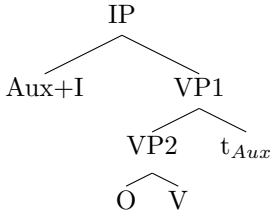
This analysis can, for the most part, account for the leakage of the various parts of speech. Most noun and prepositional phrases are not problematic as they are governed by case, either through morphology in Old English and Middle Dutch nouns or through prepositions. Potentially problematic for this approach, however, are cases of leaked nominative noun phrases as well as leaked adjective and adverb phrases found in both Old English and Middle Dutch. As this proposal does not recognize nominative as a case, a nominative noun phrase is not properly governed and thus should not be able to appear outside of the sentence brace. We do, nevertheless, see cases of leaked nominative noun phrases in Middle Dutch and Old English albeit at very low frequencies. The analysis may be able to account for this fact when we consider that these are almost invariably instances of passive sentences.

As already mentioned above, this approach differs from the construction-specific approach in that extraposition is not necessarily motivated by construction-specific factors. Moreover, this particular approach is attractive because it formalizes the oft-observed correlation between word order patterns and morphological case. If this approach is correct, then we expect that there will not be major differences among the three different constructions under investigation, which will be presented and discussed in subsection 1.3 below, because of the presence of a rich morphological system in Middle Dutch and Old English. As these systems break down, we should see a decline in word order variations.

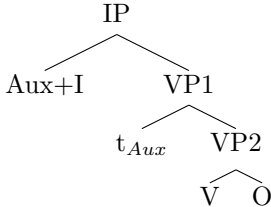
1.1.3. Competing Grammars

Pintzuk (1999) is the representative example of the competing-grammars analysis. She argues that this is the best way to account for the various word order patterns of Old English and also to account for the shift from OV to VO in English. She bases this on, among other evidence, the position of prosodically light elements such as pronominal objects and particles, which do not move from their base-generated position according to her. Because of their stationary position, they can be used as a gauge to determine the underlying position of the verb. Her proposal is that Old English had both head-final and head-initial IPs and VPs, meaning that there are two pairs of grammars competing with one another: the headedness of the IP (nonfinite verb with respect to the finite verb) and the headedness of the VP (object with respect to the verb). The interaction of these results in four possible underlying structures, as illustrated in the tree diagrams below.⁶

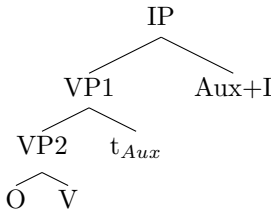
- (17) head-initial IP, head-final VP1 and VP2, deriving Aux O V



- (18) head-initial IP, head-initial VP1 and VP2, deriving Aux V O



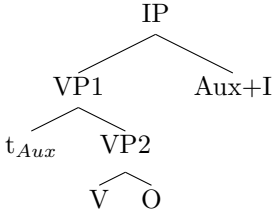
- (19) head-final IP, head-final VP1 and VP2, deriving O V Aux



⁶As Old English has robust verbal inflection, Pintzuk assumes that the finite verb always raises to I. These trees show this movement.

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(20) head-final IP, head-initial VP1 and VP2, deriving *V O Aux



In this model, some of the instances of VO order are the result of an underlying head-initial VP syntax, so the “leakages” examined in this study are mostly base-generated to the right of the verb and do not move to that position according to competing grammars. Extraposition is still used, however, to explain elements to the right of the main verb where there are two heavy elements (full NPs, PPs, etc.) to the left of the main verb.

It is important to note that in formulating this theory, Pintzuk is keeping in mind later changes in English syntax. With this model, one of the grammars, the head-initial one, eventually dominates and takes over the entire system. The domination of this particular grammar is generally attributed to contact with other languages, of which English has had many. The various word order possibilities are even found in the West-Saxon dialects of Old English, the dialects with the least amount of contact with the Vikings though perhaps one of the areas with a lot of contact with the indigenous Celtic peoples. Did the head-initial IP and VP grammars initially develop within English or as a result of contact with another group of people such as the British Celts? Or is it just a continuation of proto-Germanic syntax? All of the older Germanic languages have much more syntactic flexibility than their modern-day counterparts, so it seems that one syntactic analysis should be able to account for all older Germanic syntax as well as for the developments in the various daughter languages.

Is there a limit to the potential number of grammars available to speakers of a language? It does not seem that a limit on the number of grammars can be set with this approach without being stipulative; this strongly brings into question its usefulness.

One of the advantages of this analysis, its ability to account quite easily for most of the word order phenomena in Old English, also turns out to be one of its disadvantages—it overgenerates. The structure given in (20) is not considered grammatical by Pintzuk though her model generates it. Of course, if one allows variation in the headedness of both the IP and the VP in addition to extraposition, V-to-I movement, and verb second, all of which are optional movements, there are not many word orders that you *cannot* account for.

Unlike the other analyses, the competing-grammars approach has only been proposed for Old English. Middle Dutch data collected by De Meersman (1980) and De Schutter (1988) among others show that prosodically light elements

very rarely if ever appear after the verb, suggesting that Middle Dutch does not have competing grammars. By comparing Old English to Middle Dutch, we can evaluate the validity and usefulness of competing-grammars. We would expect that a language with competing grammars, where one grammar is VO and the other OV with argument extraposition, has a higher frequency of VO orders than a language that is only underlying OV with argument extraposition. If the frequency of VO orders is not significantly different in the two languages that are compared, assuming two underlying grammars would not be necessary or useful to be able to capture the word order facts.

1.1.4. Conclusion

As discussed in the previous subsections, there are three main approaches to describing older West Germanic syntax: the construction-specific approach in which a rigid underlying OV word order is matched with extraposition due to various factors, the construction-related approach where a flexible underlying OV word order allows properly case-marked constituents (either through visible case marking or through a preposition) to appear on either side of the verb, and the competing-grammars approach where there are two underlying positions for objects and two for the finite verb.

Many studies on the earliest stages of (West) Germanic syntax are conducted on only one language. In order to gain a more complete understanding of the oldest stages of Germanic syntax as well as its evolution over time in the daughter languages, we should compare as many of the related languages together as we have data for. Comparisons to other Germanic languages have been made in some studies though often on the basis of research conducted by other scholars. This is potentially problematic because of differences in methods of data collection.

Some of the issues of the previous approaches are methodological. A number of the diachronic studies, particularly for Dutch, are not longitudinal; they include data from a few texts in an early stage of a language and then compare these to the modern standard language. Conclusions on syntactic change drawn using this method must be made with caution as data from the period in which the change actually occurs is lacking. The problem with this approach is further compounded by the fact that the modern standard languages are sometimes based on a variety of a language for which we have no or very limited data. The comparison then is, for example, of Middle Dutch from Flanders and Modern Standard Dutch based on the Holland dialect. Longitudinal data on the development of syntax in a particular dialect of a language would offer a more complete picture of the change.

1.2. Research Questions

Each of the analyses described in section 1.1 account well for parts of the data, but they each have their own problem areas. How can we decide which best describes the situation we see in the early West Germanic languages and can account for the changes over time? These questions require five considerations in order to be adequately answered, each addressed in the following paragraphs.

First, at least two West Germanic languages should be compared with one another, particularly two that develop differently over time. This allows for evaluation of the competing grammars approach and will help to give a clearer picture of the state of early West Germanic syntax. To address this issue, I investigate the shifting word order patterns in Dutch and English. These two languages are good starting points because despite the fact that both lose their case system, they develop in quite different directions: from the early West Germanic flexible word order system, Dutch becomes a rigid OV language whereas English develops into a rigid VO language.

Second, a longitudinal diachronic study is essential to gain a better understanding of the shifts over time. This study takes this into account by starting from the earliest texts in each language and covering at least the six centuries that follow; in both languages, the shifts under investigation occur well within this time frame. From these data, we can address the following questions: what do the shifts in Dutch and English look like, and what do they say about the different analyses?

The third point, which is related to the second, is about dialects. In this study, I limit the texts to one dialect area per language as best I can. In some cases, I had to augment the selection with texts from a neighboring dialect area, which will be discussed in subsection 1.4.1, but I try to minimize this as much as possible. In this way, I can be sure that the differences over time are not due to dialect variation but to changes within the system of one dialect.

Fourth, three specific constructions are investigated. This allows us to distinguish the construction-specific approach from the construction-related approach: in the former case, we expect the three constructions to have different developments since factors influencing the position of the arguments will differ among the three constructions while in the latter case, they should have similar evolutions over time. With respect to the three constructions, I chose to start from the Dutch facts in this study in order to approach the evolution of English syntax in a novel way; a number of studies have already investigated various aspects of English historical syntax, and by approaching it from a Dutch perspective, greater understanding of English syntax may be gained. The choice of the three constructions was made because each of these three constructions has been noted as having an exceptional status in either Modern Dutch or Middle Dutch: prepositional phrases of direction (hereafter *directional phrases*) have the same word order restrictions in Modern Dutch as objects

and not as prepositional phrases as one would expect, and objects modified by relative clauses (hereafter *relative objects*) and objects of naming verbs (hereafter *naming objects*) occur with a noticeably higher frequency of VO orders than other types of objects in Middle Dutch. Moreover, relative objects are perhaps the best element to investigate heaviness as a factor because they are considered heavy by almost all definitions of heaviness, and naming objects are helpful for investigating newness as a potential factor because naming verbs generally introduce a new element into the discourse. Each of these constructions will be described in section 1.3 and in even greater detail in the relevant chapters. By focusing on these three constructions, we will also be able to evaluate some of the theories on word order change: if the shift in these three constructions can be shown to be due to the same set of factors, then this would prove problematic for the construction-specific analysis of older Germanic syntax while offering support of the construction-related approaches.

Fifth, per construction, I investigate the effect of two factors on extraposition: heaviness and newness. This will allow us to see the extent to which these specific factors influence word order. If they are influential, this would support the restricted extraposition approaches. Investigating these factors may also reveal differences between Dutch and English that might hint at why they develop differently.

1.3. Scope of the Study

As previously discussed, three different constructions that have been shown to be exceptional in the history of Dutch have been chosen for analysis: directional phrases, relative objects, and naming objects. Directional phrases are used as a gauge of the “normal” development of arguments. Both relative objects and naming objects on the other hand are, according to the literature on Middle Dutch, special cases; they are characterized by an unusually high frequency of VO orders in Middle Dutch when compared to other types of arguments. In the following sections, I will briefly describe each type of argument and the motivation for its inclusion in this study. A more in-depth discussion of each including relevant literature will be reserved for the chapter on that particular construction.

1.3.1. Directional Phrases

Directional phrases are prepositional phrases that express direction. In Modern Dutch, directional phrases tend to pattern with objects, unlike other types of prepositional phrases. This is demonstrated by the sentences in (21). Notice that both an extraposed direct object, as in (21a), and an extraposed directional phrase, as in (21b), are ungrammatical while an extraposed locational

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prepositional phrase, as in (21c) is grammatical.

- (21) a. ...*dat* ik een boek koop
...*dat* ik *koop een boek*
'...that I buy a book'
- b. ...*dat* ik in de sloot *spring*
...*dat* ik *spring in de sloot*
'...that I jump into the ditch (from a location outside of the ditch)'
- c. ...*dat* ik in de sloot *spring*
...*dat* ik *spring in de sloot*
'...that I jump in the ditch (up and down)'

Despite this restriction in Modern Dutch, both directional phrases and other types of arguments appear on either side of the verb in the Middle Dutch period. For this reason, directional phrases will be used as the gauge by which the other two arguments under investigation will be measured. I assume that the patterns emerging from directional phrases will be representative of the development of “regular” arguments in the history of Dutch and English.

Another reason for employing directional phrases as the control group instead of ordinary objects is practicality: directional phrases can be collected lexically on the basis of the preposition. This is particularly helpful in the Dutch texts as they are not parsed. In this study, I will limit myself to directional phrases headed by the preposition *in* and other semantically related prepositions. This is partly a means to restrict the amount of data collected, but it also serves a practical function: of the prepositions used to mark direction, *in* is the one with the fewest spelling variants.

1.3.2. Relative Objects

Relative object refers to any object noun phrase modified by a relative clause, where *object* is understood to refer to any argument noun phrase that is neither a subject nor the complement of a preposition, thereby including predicate nominals as well as direct and indirect objects. Burridge (1993), Blom (2002), and Ribbert (2005) have mentioned that relative objects in Middle Dutch occur with an unusually high frequency in VO orders when compared to other objects; they state that when an object is modified by a relative clause, it always occurs after the verb. In this case, relative objects are useful in investigating the development of word order patterns because they are considered heavy by almost any definition of weight: they are always structurally heavy, and this usually, though not necessarily, results in their being phonologically and lexically heavy.

One of the motivations for analyzing these arguments is that the factor ‘heaviness’ is then more or less controlled for. As discussed in subsection 1.1.1

and in the paragraph above, relative objects are more readily considered heavy than most other constituents, regardless of the method used to determine heaviness. Assuming that heavy constituents appear outside of the sentence brace, the expectation then is that the majority of these clauses will occur outside of the brace, with or without their NP. It will be especially interesting to analyze instances where this is not the case more closely since a competing factor, whatever it might be, has outweighed heaviness.

A complicating factor of relative clauses is that they modify noun phrases. Though the relative clause and the noun phrase together form an even larger noun phrase, the relative clause often appears to act independently. Because of the close bond between relative clauses and their heads, however, various factors of the head noun phrases will be taken into consideration: number of words as well as location within the clause and in relation to the relative clause.

1.3.3. Naming Objects

Naming object refer to the object of verbs of naming, such as ‘to name’ or Dutch *heten* ‘to be named’. In these constructions, the actual name being given is considered the naming object. Burridge (1993), among a number of other researchers of Middle Dutch, has noted that *naming objects* occur almost categorically outside of the sentence brace. These scholars suggest that this phenomenon is related to pragmatics and information structure: naming objects often introduce new information into the discourse, i.e., the name of a participant. We know that these same naming verbs no longer allow their objects to extrapose in Modern Dutch, as can be seen in (22b) and (22c). The only grammatical option is for the object to occur within the sentence brace, as in (22d).⁷

- (22) a. **een lant** *dat gheheiten es* **blomevenne**
 a land that called is Blomevenne
 ‘a land that is called Blomevenne’ (13C, Alkemade 1293 Nov 25)
- b. ***een land** *dat genoemd wordt* **Blomevenne**
- c. ***een land** *dat wordt genoemd* **Blomevenne**
- d. **een land** *dat* **Blomevenne** *genoemd wordt*

By conducting a diachronic study of naming objects, I will be able to get a better idea of how the various factors determining word order—namely syntax,

⁷In examples with naming objects, I modify the representation of the relevant elements discussed in subsection 1.4.2. I use the following conventions: the namer, i.e., the agent of the naming event, is underlined; the namee, i.e., the recipient of the naming event, is in bold; the name, i.e., the object of the naming event, is underlined and in bold; and the verbs and complementizers are italicized. Note that the *name* is not necessarily a proper name but can also be represented by an ordinary noun, as will become clear in some of the examples below. The term *naming object* refers to the name.

heaviness, and newness—interact throughout the history of Dutch. Naming objects lend themselves quite well to a detailed study of newness as a potential factor in word order patterns. If we assume, as suggested in the literature, that newness is the main factor in the extraposition of naming objects, then we should see that the majority of postverbal naming objects are instances of new information and that at some point, its influence over the position of naming objects decreases and eventually disappears.

1.4. Methodology

1.4.1. Description of Corpora

This is a corpus-based study. Data were gathered from texts throughout the history of both Dutch and English. In this section, I discuss the selection criteria for the texts used in this study. These criteria address the source-of-data problems of other studies, namely longitudinal diachrony, dialect, and genre. The comparative nature, a strength of this study, is demonstrated by the fact that texts from the history of English as well as Dutch will be used.

One of the issues in previous studies is the fact that many diachronic studies, particularly on Dutch, rely on only two synchronic stages of the language, i.e., an earlier period is compared to the modern standard language. Conclusions on syntactic change over time are drawn by comparing these two periods. This method is problematic for two reasons. First, such studies generally ignore the period in which the shift actually occurs. Data from these transition periods are important for a complete understanding of the factors involved in the change as well as of the progression of the change over time. Second, and perhaps more important, the data used to represent the older stages generally come from dialects that are not the basis of the modern standard languages, the variety against which the older data are often compared. Dialects in even the modern languages sometimes differ syntactically from the standard language, for instance, West Flemish varieties of Modern Dutch have verb-projection raising like in Middle Dutch, but this is no longer possible in the modern standard language. This means that anyone comparing, for instance, data from Flemish Middle Dutch texts to the modern standard language, which is primarily based on the more northerly Holland Dutch dialect, should draw conclusions cautiously. In this study, I remedy this by including texts from only one dialect area in each language.

Only prose texts were included in the corpora. Though poetry makes use of a lot of the same syntactic devices normally allowed in prose, there is also a tendency to make creative use of these devices in order to meet the requirements of meter or rhyme. This results in different word order distributions than we would otherwise find or expect in the spoken language. Van den Berg (1991)

discusses, moreover, certain syntactic constructions that are only found in Middle Dutch poetry and not in contemporaneous prose texts. Admittedly, he argues that such constructions are actually instantiations of syntactic rules found in prose texts, but the fact that they are only found in poetry texts demonstrates how the inclusion of such texts can negatively effect the word order distributions, an important part of this study.

Translations of texts were not included in this study because of the potential influence the original language may have had on the word order patterns of the Dutch or English text. Taylor (2006), for instance, found that Old English translations of Latin texts had higher frequencies of head-initial prepositional phrases with pronominal complements than non-translated Old English texts.

This study attempts to remedy the above-mentioned issues by only including non-translated prose texts from six centuries of Dutch and English. For each language, the texts included in the corpora come from the same dialect area (a notable exception is the first period of Middle English, which will be discussed below). These criteria for the inclusion of texts address the issues mentioned above but have a problem of their own; by limiting texts in this way, different genres had to be included in order to have enough data per century. Studies such as Blom (2002) have shown that different prose genres have different word order frequencies.

Dutch

The Dutch texts are taken from three sources: the *CD-rom Middelnederlands* (Van Oostrom 1998), the *Digitale Bibliotheek voor de Nederlandse Letteren* (www.dbnl.nl), and a corpus of Middle Dutch charters from the 14th century described in Van Reenen & Mulder (1993). The first two are not parsed while the last one has limited lexical and morphological coding.

Texts from six centuries were included, from the end of the 13th to the 18th century. In the interest of simplicity, the different centuries are abbreviated with the appropriate number followed by a capital ‘C’, for instance, *the 13th century* becomes ‘13C’; these abbreviations are used in the text as well as in all tables and figures. Note that Middle Dutch is usually dated between 1150 and 1550, and Modern Dutch begins thereafter.

As the issue of dialect is a potential problem for diachronic studies, only texts from North and South Holland were included in the corpus. This dialect was chosen as it is the basis of the modern standard language. This means, however, that there are fewer texts to choose from during the Middle Dutch period since the southern part of the Dutch-speaking area was more prosperous at that time.

In the corpora from which the texts of this study were collected, there was not one genre that occurred in all centuries in the history of Holland Dutch (nor for any dialect for that matter). While the texts in this study are restricted to non-translated prose, there is quite a variety of genres among them: official charters,

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religious texts, letters, journals, nonfiction, etc. More specific bibliographic information about each text, including the century in which it is contained, its genre, and its abbreviation, is given in Appendix A.

English

The English texts are taken from two related corpora: Taylor *et al.*'s (2003) *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE) and second edition of the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2). Both of these are syntactically parsed corpora, as their titles suggest.

To address the issue of diachrony, I will analyze texts from the mid-10th to the 15th centuries. I refer to the different periods of English using the dating system of the Helsinki Corpus. In this system, each period of English (Old, Middle, and Early Modern) is divided into four subperiods, each subperiod spanning roughly 100 years. In this study, the subperiods included are OE2 (850-950), OE3 (950-1050), OE4 (1050-1150), ME1 (1150-1250), ME3 (1350-1420), and ME4 (1420-1500). Note that ME2 is missing; this is due to a general dearth of texts in this period and in particular to a lack of texts in the dialects considered in this study.

As most of the Old English data come from the West Saxon dialect, spoken in the southwest of England, I will focus as best I can on this dialect area. A problem with this dialect arises, however, in the Middle English period, when there are very few texts from this area and none available from ME1. To remedy this, I will follow Kroch & Taylor (2000) in considering Middle English texts from the West Midlands dialect area as well, but only in ME1.

As mentioned above for Dutch, the criteria used to select texts in this study resulted in a corpus composed of different prose genres. The genres include homilies, laws, religious texts, chronicles, and medical texts, among others. More specific bibliographic information about each text, including its genre, is given in Appendix B.

1.4.2. Collection and Organization

In this section, I will discuss the criteria employed in collecting relevant data for this study.

Word Order

The 'sentence brace' is the primary criterion used to collect appropriate data for this study. 'Sentence brace' refers to the boundaries of a clause in Germanic languages, and only clauses in which the sentence brace is visible are included. The boundaries of the sentence brace depend on the type of clause. In main clauses, as demonstrated by the examples in (23), the left boundary of the

clause is a finite verb, given in italics. The right boundary of the clause, also italicized, can be marked by a second verb (either an infinitive (23a) or a past participle (23b)), a verbal particle (23c), or zero-marking (23d).

- (23) a. Jan *wil een boek kopen.*
 Jan wants a book to-buy
 ‘Jan wants to buy a book’
- b. Jan *heeft een boek gekocht.*
 Jan has a book bought
 ‘Jan has bought a book’
- c. Jan *las een boek uit.*
 Jan read a book out
 ‘Jan finished reading a book’
- d. Jan *leest een boek o.*
 Jan reads a book
 ‘Jan is reading a book’

In all of these examples, the direct object *een boek* ‘a book’ is contained within the sentence brace. For this study, clauses of the type given in 23a and 23b are included.

The boundaries of the sentence brace in subordinate clauses differs from that of main clauses, as demonstrated by the following subordinate-clause versions of the sentences above.

- (24) a. (Ik denk) *dat Jan een boek wil kopen.*
 I think that Jan a book wants to-buy
 ‘(I think) that Jan wants to buy a book’
- b. (Ik denk) *dat Jan een boek heeft gekocht.*
 I think that Jan a book has bought
 ‘(I think) that Jan bought a book’
- c. (Ik denk) *dat Jan een boek uitlas.*
 I think that Jan a book out-read
 ‘(I think) that Jan finished reading a book’
- d. (Ik denk) *dat Jan een boek leest.*
 I think that Jan a book reads
 ‘(I think) that Jan is reading a book’

Note that the left boundary is a subordinating conjunction, *dat* ‘that’ in these examples, while the right boundary is the verbal cluster.

Given these differences, all subordinate clauses will be considered, but because of the potential effects of verb-second in main clauses, main clauses will only be included if they have a nonfinite main verb. The boundaries of the clauses, i.e., the sentence brace, are given in italics and the relevant constituents are

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underlined in the examples throughout the text. The terms ‘leakage’ and ‘extraposition’ and all of their derivatives are used interchangeably throughout this text to refer to the location of a sentential element outside of the sentence brace. By using these terms, I do not necessarily mean to imply a movement from an initial position inside the sentence brace to a position outside. I am merely using these terms to describe the position of a given element.

Indirect objects introduced by a preposition are not included in the study because the addition of the preposition gives the whole phrase more flexibility with respect to its clausal position as can be seen by comparing the Modern Dutch examples in (25) with those in (26).

- (25) a. Jan *heeft* het meisje (dat hij leuk vond) het boek *gegeven*.
Jan has the girl that he cool found the book given
‘Jan gave the girl (who he liked) the book.’
b. *Jan *heeft* het boek het meisje (dat hij leuk vond) *gegeven*.
c. *Jan *heeft* het boek *gegeven* het meisje (dat hij leuk vond).
- (26) a. Jan *heeft* aan het meisje (dat hij leuk vond) het boek *gegeven*.
b. Jan *heeft* het boek aan het meisje (dat hij leuk vond) *gegeven*.
c. Jan *heeft* het boek *gegeven* aan het meisje (dat hij leuk vond).

Whereas the indirect object in (25) can only appear before the direct object, the one in (26) can appear before or after the direct object (26a and 26b respectively) or after the past participle (26c).

Heaviness

Heaviness can be defined in a number of ways, and in this study, I focus on two of these: lexical and structural. In order to get an impression of the lexical heaviness of various constructions per century, I count and compare the distribution of word lengths per position. This gives an impression of the number of words allowed on either side of the verb per period. I counted items between spaces as separate words even if they are written together in the modern standard language, for example, Middle English *hym self* ‘himself’ counts as two words, and I counted identifiable words written together as separate words, for example, Dutch *vander* ‘from-the’ counts as two separate words. I also included prepositions and relativizers in the word count.

Structural heaviness is defined by the internal structure of the relevant elements, and each instance was determined to be either simplex or complex. I distinguished simplex and complex phrases based on two separate definitions, which I call *strong* and *weak* respectively, in order to be able to define the constraints of structural heaviness as accurately as possible. In the strong definition of structural heaviness, I only count elements modified by relative clauses (example 27a) and conjoined elements (examples 27b–27d) as structurally

heavy elements, i.e., complex elements. Note that conjoined elements are not limited to elements combined with conjunctions, as demonstrated by (27c).

- (27) a. ond hys lychama *wæs alæded* of Indeum on þa ceastre
 and his body was led from India into the castle
þe ys nemned Edyssa
 which is named Edyssa
 ‘And his body was led from India into the castle named Edyssa’
 (OE4, mart2)
- b. Ich habbe iblend men & ibroken ham þe schuldren. & te
 I have blinded men and broken them the shoulders and the
 schonken. i fur *iwarpen* ham & i water
 legs into fire thrown them and into water
 ‘I have blinded men and broken their shoulders and their legs and
 thrown them into fire and into water’ (ME1, julia)
- c. Ende als si alle dinghen hadden vuldaen na die wet ons
 and when they all things had completed after the law our
 Heren, *siin* si weder *ghekeert* in Galylee in hare porte
 Lord are they again returned into Galilee into her gate
te Nazareth
 at Nazareth
 ‘And when they had completed all things according to the law of
 our Lord, they returned again into Galilee, into its gate at Nazareth’
 (14C, a’damlect)
- d. dese vorghenoemd[e] commendeur ende broedere die
 these above-mentioned commander and brethren who
 ghevallen *moghen* ende *in comen* in zuethollant.
 fall may and in come into South-Holland
northollant. [k]innemarlant. vrieslant. ende in zelant
 North-Holland Kennemerland Frisia and into Zeeland
 ‘...this above-mentioned commander and his entourage ... who may
 fall and enter into South Holland, North Holland, Kennemerland,
 Frisia, and into Zeeland’ (13C, hgk 1290 may 22)

These elements are included under the strong definition of structurally heavy elements because relative clauses and conjoined elements appear to ‘detach’ quite freely from their head. This is an indication that they themselves have an inherent heaviness that contributes to the entire element.

In the weak definition, I include elements that are modified by genitive noun phrases (example 28a) and/or prepositional phrases (example 28b) in the count of complex elements.

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- (28) a. want hi hier *neder is ghecomen* uut den scoet sijn Vaders
because he here down is come out the lap his father's
inden lichaem Marien om di
into-the body Mary's about you
'...because he has come down here out of the lap of his father into
the body of Mary for you' (15C, pseudo)
- b. ende ic *sal u leden int lant van Israel*
and I shall you lead into-the land of Israel
'and I shall lead you into the land of Israel' (14C, a'damlect)

These are not included in the strong definition because they rarely, if ever, separate from their head. The investigation of the influence of structural heaviness on word order involves two parts: one, a qualitative examination and comparison of the heaviness on either side of the verb and two, a statistical comparison of the heaviness per position in each period. The former gives a general impression of any potential heaviness restrictions or influences in any given period while the latter either confirms the generalizations or brings them into question.

The influence of (structural) heaviness can be conceptualized in two ways. In the first, which I will call *preverbal restriction*, there may be a restriction on the heaviness allowed in a particular position, for instance, a restriction on conjoined directional phrases or ones modified by relative clauses occurring to the left of the verb. This would perhaps be related to the desire of subjects to occur as near as possible to the verb, with which it must agree, or for general processing restrictions. In the second, which I will call *postverbal constraint*, a structurally complex directional phrase may be "forced" into a position to the right of the verb because of its complexity. These two are related, but note that they are not necessarily mutually inclusive: complex elements sometimes split with the head or the first conjunct occurring to the left of the verb while the modifying relative clause or the conjoined phrase occurs to the right as seen in (27b) above, repeated here as (29).

- (29) Ich habbe iblend men & ibroken ham þe schuldren. & te
I have blinded men and broken them the shoulders and the
schonken. i fur *iwarpen* ham & i water
legs into fire thrown them and into water
'I have blinded men and broken their shoulders and their legs and thrown
them into fire and into water' (ME1, julia)

The complex directional phrase *i fur & i water* 'into fire and into water' is split here, with the first conjunct appearing in preverbal and the second in postverbal position. In itself, the first conjunct is simplex and as such seems to satisfy the preverbal restriction, but the (complex) phrase as a whole does not satisfy the postverbal constraint as only part of it appears postverbally.

How can these two different constraints be differentiated and statistically tested? Since the difference boils down to the status of split complex directional phrases, I count the data in two ways. Remember that examples are coded for two items: their position (OV or VO) and their complexity (simplex or complex). When investigating the preverbal restriction, clauses like the one in (29) above, for example, are counted as OV because the head of the phrase or the first conjunct is to the left of the verb and *simplex* because the part of the phrase that occurs to the left of the verb is simplex. When investigating the postverbal constraint, however, this same clause is still OV because of the location of the head or the first conjunct, but it is counted as *complex* since the entire complex phrase is taken into account. If either of these constraints is an important factor, then we expect to see significant differences between the distribution of simplex and complex phrases across word orders in any particular period.

Newness

The investigation of newness is examined from a quantitative and a qualitative perspective. I define newness in this study as indefiniteness since indefinite noun phrases usually introduce a new entity into the discourse and definite noun phrases tend to represent given items in the discourse. I consider the ratio of definite to indefinite elements per position per period, using the following criteria in determining the definiteness of an element. If the element contains a definite article, a demonstrative, a possessive pronoun, a noun in the genitive case modifying the head noun phrase, or a name, I count it as definite. I also consider instances of the word ‘heaven’ and ‘hell’ as definite noun phrases even if they are not preceded by articles or demonstratives because they are always treated as names in my examples. If an element contains an indefinite article or no determiner element, I count it as indefinite.

The qualitative evaluation involves a more detailed examination and comparison of repetitions of the same element. This is helpful in determining the differences or similarities in the contexts in which the element occurs. If newness plays an important role in determining word order, then we expect that the first instance of a noun phrase or prepositional phrase will be postverbal whereas the second instance should be preverbal.

1.4.3. Analysis

In order to compare my data, I use a number of different statistical tests. Because these are used throughout this study, I will briefly describe each, mentioning what it measures, what the values mean, and any limitations the test may have. Whenever I use the term *significant* without further modification in this study, I mean ‘statistically significant’. In this study, statistical significance is taken to

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be a two-tailed p -value of 0.05 or less—note that the smaller the p -value, the more significant a difference is, i.e., the less likely it is that the difference can be attributed to chance. For more detailed information about these and other statistical tests, refer to Hatch & Farhady (1982) or any other general statistics book.

The test that I use most frequently is the Fisher-Yates test. It is similar to the better known χ^2 test but is corrected in order to be able to deal more accurately with small amounts of data. This test is used to compare frequencies among two sets of variables. In my study, this would be, for example, the variables word order (OV versus VO) and time (century or period, for instance 13C versus 14C). When data are plugged in, the result is a 2×2 square that shows the frequency of OV versus VO orders in 13C and 14C. More often than not, these frequencies will be different. The Fisher-Yates test allows one to calculate the likelihood that the differences in frequency between two variables can be attributed to chance. If the frequencies are so different from one another that they cannot be attributed to chance, then we have statistical significance. The likelihood is expressed by the p -value mentioned in the previous paragraph.

Another statistical tool I use in this study is the logistic function. Unlike the previous test, which only considers two time periods at once, the logistic function takes the data for all the periods and maps out the development over time, making an S-curve. A number of items are derived from this calculation: the rate of change, the amount of time over which the change takes place, and the midpoint of the change. The rate of change is expressed by the slope of the curve. The slope can range anywhere between 0 (a horizontal line, no change) to a value near 2 (a vertical line, an instantaneous change); a slope of 1 is the halfway point between the two. Note that whether the slope is positive or negative does not change the rate but the direction of the change. So a slope of -1 represents the same rate of change as a slope of 1, just in the opposite direction. A potential problem with this approach is that it calculates the slope based on the assumption that the change starts from a period with 0% occurrence of the construction to 100%, or vice versa. This poses a problem in the case of the shift from flexible word order patterns to more rigid ones that we find the Germanic languages because most scholars assume that the earliest stages of Germanic were not rigidly OV, thus, there was never an initial stage of 100% OV. Despite these problems, however, logistic functions are still useful by providing an indication of the rate of change over time and will therefore be cautiously used in this study.

The t -test is the final statistical test that I employ in this study. This test compares the averages of two different groups and lets us know whether the averages are significantly different from one another. It takes into consideration the number of items in each group and the standard deviation in addition to the averages. After calculating these, we get a t -value. To know whether the calculated t -value is significant or not, we look at a t -value chart. On the chart,

we find the value that corresponds to the degrees of freedom of the comparison (the total number of items being compared minus 1) and the p -value we are interested in (two-tailed 0.05 in this study). If the calculated t -value is lower than the number we find on the chart, then the difference between the two groups is not statistically significant. If it is higher, then the difference is statistically significant. This test is used for testing lexical heaviness as a factor in relative objects.

1.5. Organization of the Study

In this chapter, I have laid the foundation for the rest of this study. In Chapters 2, 3, and 4, I examine each of the constructions, namely directional phrases, relative objects, and naming objects, respectively. Each of these three chapters begins with a general introduction and more detailed discussion of each of the constructions as related to Dutch and English. This is followed by a section that recaps the research questions of this study as well as research questions that are particular to the relevant construction. Any adaptations to the methodology or other methodological considerations specific to the relevant construction are discussed in the following section before the results are presented in two data sections: one for the data from Dutch and one for the English data. This was the best way to keep the presentation clear and understandable. In these language-specific sections, I try to avoid making references to the results of the other language, rather saving a comparison of the Dutch and English situations for the final concluding section. In this way, readers who are primarily interested in either the Dutch data or the English may refer to that particular language-specific section without having to resort to the other perhaps less familiar section. These three construction-specific chapters are followed by Chapter 5 in which I compare the results of the three different constructions to one another; the format of this comparative chapter roughly follows that of the construction-specific chapters. The observations are summarized and conclusions are drawn in this final chapter.

2. Directional Phrases

In the previous chapter, I discussed the topic of this book and how it is organized as well as relevant literature on word order in the history of Dutch and English. The novel approach of this study is starting from the development of interesting constructions in the history of Dutch and comparing them to the developments in English. In this chapter, I begin the study by examining directional phrases in the history of Dutch and English; I use these to measure the “normal” development of arguments in either language over time. In section 2.1, I discuss the development of these phrases in the history of Dutch as well as potential problems with using them. Basically, Middle Dutch directional phrases, just like objects, occur on either side of the verb whereas their position is very restricted in Modern Dutch: unlike other prepositional phrases but much like objects, they cannot appear outside of the sentence brace except in very specific circumstances, which will be discussed below. I also discuss the developments in English. Note that I will use the abbreviation D to represent ‘directional phrase’ throughout this chapter when discussing word order instead of the more common O for ‘object’; however, for the purposes of this dissertation, the two are seen to be interchangeable.

I look at directional phrases instead of objects for a number of reasons. First, they are practical for corpus work because one can conduct lexical searches of corpora. Second, regular objects have already been investigated by numerous researchers, and directional phrases provide a novel approach to syntactic developments over time. Third, the relatively low frequency allows for detailed analysis of the small number of examples. Finally, any theory on syntax and on word order change should be able to account for the object-like behavior of directional phrases.

In section 2.1, I begin with a discussion of directional phrases and their characteristics. The research questions of the study are formulated in section 2.2. Section 2.3 is a brief recap of the methodology used to collect and categorize data as explained in Chapter 1. Sections 2.4 and 2.5 are investigations of the facts for Dutch and English, respectively. The data of the two languages are compared in section 2.6.

2.1. Directional Phrases

2.1.1. Dutch

As has been discussed in the literature, prepositional phrases in Modern Dutch can in general quite freely extrapose (Koster 1973, 1974, 1975, 1978, 1999, 2001; Van Riemsdijk 1974, 1978, 2002; Helmantel 2002). One exception, however, is directional phrases, which are generally restricted to a position to the left of the verb as demonstrated by the examples in (30). So strong is this restriction that a number of scholars consider such directionals to be objects, either as part of a small clause (Den Dikken 1995) or as part of a complex predicate (Neeleman & Weerman 1999). The contrast between locational and directional phrases can be observed in the examples in (30) below: when the prepositional phrase *in de sloot* ‘in(to) the ditch’ occurs before the verb as in (30a), the interpretation is ambiguous: it can either mean that Jan is jumping (up and down) in the ditch, a locational reading, or that he is jumping into the ditch from another place, a directional reading. When the prepositional phrase occurs after the verb as in (30b), the directional reading is blocked; it can only mean that Jan is jumping (up and down) in the ditch. Note that in all translations (but not in the glosses), I use the word *into* for instances of directional phrases. Unless otherwise noted, the word *in* is reserved for contexts where it has a locational reading.

- (30) a. *dat Jan in de sloot springt*
 that Jan in the ditch jumps
 ‘that Jan jumps (up and down) in the ditch’
 ‘that Jan jumps into the ditch’
- b. *dat Jan springt in de sloot*
 ‘that Jan jumps (up and down) in the ditch’
 ‘that Jan jumps into the ditch’

The exact same syntactic restriction occurs with prepositions that are purely directional with no possible locational reading, as in (31). The directional phrase *naar Amsterdam* ‘to Amsterdam’ can only appear before the verb and not after it except when there is a strong contrastive reading.

- (31) *dat Jan *(naar Amsterdam) gaat (*naar Amsterdam)*
 that Jan to Amsterdam goes to Amsterdam
 ‘that Jan goes to Amsterdam’

These examples demonstrate that directional phrases are restricted to a position to the left of the verb; however, under certain circumstances, they can extrapose, namely when the verb of motion occurs with a particle such as *terug* ‘back’ in (32).

- (32) *dat ik het schaap terug leidde de wei in*
 that I the sheep back led the pasture in
 ‘that I led the sheep back into the pasture’ (taken from De Schepper & Lestrade 2008)

The phrase *de wei in* ‘into the pasture’ in this example can be seen as an appositive to the particle *terug*, i.e., it elaborates on the precise direction of the action of leading and is not essential in the clause. The fact that the clause remains grammatical even after removing the adpositional phrase seems to support this.

Another characteristic of a number of directional adpositions is that they can occur after the relevant noun phrase. According to Helmantel (2002:33), twelve of the fifteen Modern Dutch directional adpositions can occur after a noun phrase: *af* ‘off’, *binnen* ‘inside’, *door* ‘through’, *in* ‘in’, *langs* ‘along’, *om* ‘around’, *onder* ‘under’, *op* ‘on’, *over* ‘across’, *rond* ‘round’, *uit* ‘out’, and *voorbij* ‘past’.¹ As is the case with the preposition *in* in example (30) above, these twelve adpositions can also occur before noun phrases (with the exception of *af*, whose prepositional use is restricted to trade language and fixed expressions, cf. Helmantel 2002, 34). The distribution of the preposed versus postposed adpositions is such that when they occur after noun phrases, they always have a directional reading, as demonstrated in (33a). Because the postpositions always denote direction, they cannot occur to the right of the verb as seen in (33b).

- (33) a. *dat Jan de sloot in springt*
 ‘that Jan is jumping (up and down) in the ditch’
 ‘that Jan is jumping into the ditch’
 b. **dat Jan springt de sloot in*
 ‘that Jan is jumping into the ditch’

When they occur before noun phrases and in conjunction with verbs of motion, their meaning becomes ambiguous as in (30a) above where the clause can be interpreted with a locational or directional reading. Helmantel (2002:15) divides these twelve directional adpositions further into two groups: narrow locative adpositions and extended locative adpositions.² The former group is composed of *binnen*, *in*, and *op*; these designate a location to which the subject moves. The latter group contains the remaining adpositions and designates a location along which the subject moves. This distinction is important as it has some effects on the syntax of these structures, for instance restrictions on the auxiliary

¹The three directional adpositions that cannot occur after the noun phrase by themselves are *naar* ‘to’, *tot* ‘until’, and *van* ‘from’. Some of these can co-occur with the postpositional variants of other adpositions though maintaining a prenominal position, however, or can occur after a noun phrase in conjunction with another adposition. An example is *naar ... toe* ‘to’, where *toe* is a variant of *tot*.

²The three inherently directional adpositions that always occur before the noun phrase *naar*, *tot*, and *van* are grouped together into a separate category: point locative adpositions.

2. Directional Phrases

allowed with the verb. Beliën (2006) argues that *uit* should be included in the group of narrow locative adpositions, where its “irregularities” are for the most part characteristics of this group, instead of being classified as an irregular extended locative adposition as Helmantel (2006) does. I adopt this analysis, though it does not have an effect on this stage of the study.

The characteristics of Modern Dutch directional phrases can thus be briefly summarized as being restricted to a position to the left of the verb unless occurring with verbal particles and having the possibility that the adposition occurs after the noun phrase.

When we compare this to the situation in Middle Dutch, we immediately notice that the two stages differ on both of these points. In Middle Dutch, the position of directional phrases within a clause is flexible; they appear on either side of the verb whether the verb occurs with or without a particle. The directional phrase *in dit cloester* ‘into this cloister’ in (34) below, for instance, appears between the finite verb *moet* ‘must’ and the main verb *gaen* ‘to go’, the order we still find in Modern Dutch. Example (35), in contrast, exemplifies an instance of a directional phrase outside the sentence brace without a verbal particle: the directional phrase *in een huus* ‘into a house’ appears to the right of both the finite verb *was* ‘was’ and the nonfinite verb *ghegaen* ‘gone’.

- (34) ick *moet* hier in dit cloester *gaen*
I must here in this cloister go
‘I must go here into this cloister’ (16C, exempel)

- (35) *als* hi *was* *ghegaen* in een huus
as he was gone in a house
‘as he had gone into a house’ (14C, a’damlect)

In addition to the absence of a syntactic restriction, Middle Dutch directional adpositions also differ from those of Modern Dutch in that they never appear after the noun phrase (Hogenhout-Mulder 1983:74). Rather, the distinction between locational and directional readings of some of these adpositions was made by different case marking on the noun phrase: if a locational reading was intended, the dative case was used whereas the accusative case was used to mark a directional reading. This, however, was not entirely reliable, especially at the end of the Middle Dutch period, as there was syncretism between various cases as the result of the loss of final consonants in the articles, the most distinctive part of the case marking.

Given the unique characteristics of Modern Dutch directional phrases, namely their syntactic restriction, especially when compared to other prepositional phrases, and the ability of the adposition to appear before or after the noun phrase, two competing theories have emerged to explain these phenomena, particularly the version of directional phrases with the postnominal adposition. In one theory, postnominal directional adpositions are analyzed as just that,

adpositions, meaning that the noun phrase and the adposition together form a unit (Helmantel 2002, and the references discussed there; Beliën 2006). The second approach, in contrast, analyzes the directional postpositions as verbal particles, meaning the “adposition” forms a unit with the verb, i.e., a complex predicate, and, as a result, the noun phrase is analyzed as the direct object of this phrasal verb (Neeleman 1994; Neeleman & Weerman 1999; Blom 2005). Each of these theories has its proponents, and each has its strong and weak points. No matter how one analyzes the Modern Dutch system, however, it is quite clear that it greatly differs from the situation in Middle Dutch and that some sort of reanalysis has taken place. The status and position of the adposition is not relevant for this study as the postpositional variants do not occur in the data set and do not seem to occur until much later in the history of Dutch (as late as 19C according to Cloutier 2006) anyway. The most relevant difference for this study is the syntactic restriction that develops, and it is this change that parallels the development of objects in the history of Dutch.

2.1.2. English

Modern English directional phrases are syntactically restricted to the right of the verb as shown in (36).

(36) John (*to London) *is* (*to London) *going* *(to London).

There are no postposed directional adpositions, though ambiguous adpositions can be combined with *to* to make the directional reading clear as in (37a).

(37) a. I *am walking* into the store.
 b. I *am walking* in the store.

This, however, is not always obligatory; example (37b), for instance, can have either a locational reading, i.e., I am in the store and walking around, or a directional reading, i.e., I am outside of the store and am about to enter it. Example (37a), however, can only have a directional reading.

In Old English, the situation is different. The position of directional phrases is more flexible: they can occur on either side of the verb as seen in the examples in (38). Depending on the preposition, the distinction between directional and locational readings is usually marked by case. Though there were no examples of postposed adpositions in my data, adpositions can occur on either side of the noun phrase with postpositions usually occurring with simple adverbs of place, with indeclinable interrogatives and relatives, and with single personal pronouns (Lundsær-Nielson 1993:39-44).

(38) a. *gif* he bið untyneð & *recoð* his neahgebures ceap in
 if it is unfenced and (he) brings his neighbor's cattle in
on his agen geat
 into his own gate

2. Directional Phrases

- ‘if it is unfenced and he brings his neighbor’s cattle into his own gate’ (OE2, lawine)
- b. se soðfæsta witega, *þe* on Abrahames wununge *wæs* gefyrn
the righteous prophet who into Abraham’s dwelling was once
gebroht
brought
‘the righteous prophet, who was once brought into Abraham’s dwelling’ (OE3, aelhom)
- c. *Gif* ceorl ceap *forstild* & *bired* into his ærne
if peasant cattle steals and carries into his dwelling
‘If a peasant steals and carries cattle into his dwelling’ (OE2, lawine)

The placement of the adposition with respect to the complement, then, is the result of the nature of the complement rather than a distinction between locational and directional interpretations. There are also instances of prepositions co-occurring with the preposition *to* for a directional reading as in (38c) above.

Between Old English and Modern English, there is a change in the positions allowed for directional phrases: Old English allows them to occur on either side of the verb while they are restricted to a position after the verb in Modern English. The position of the adposition itself within its phrase is also more flexible in Old English, being able to occur to the left or right of its complement; in Modern English, directional adpositions always occur to the left of their complements. Both Old and Modern English allow the combination of a potentially ambiguous directional adposition with the adposition *to* to disambiguate the locational and directional readings. The addition of *-to* blocks a locational reading, but in no stage of the language is it obligatory.

2.1.3. Summary

We see that there are some similarities in the evolution of directional phrases in Dutch and English but also some notable differences. There is a clear change in the position allowed. In the older stages of both languages, directional phrases occur on either side of the verb, and over time, the directional phrases become restricted to one side of the verb: to the left in Dutch and to the right in English.

Both languages have a means to disambiguate locational and directional readings of adpositions, though the means used and when the use arises differ. In the earliest stages of Dutch and English, case marking on the noun was used. In later stages of Dutch, postposed adpositions carried out this function, marking directional readings. In English, there is the possibility of combining potentially ambiguous adpositions with *to* in order to clearly mark directional readings though this possibility existed in Old English, a point of contrast with Dutch. This may suggest that the locational reading is more basic, in

some sense, since the directional reading is the one that involves some sort of modification.

Finally, the position of adpositions also differs: in Middle Dutch, directional adpositions only occurred to the left of verb while they can appear on either side in Modern Dutch. In Old English, adpositions in general (including directional) could occur to the right or left of its complement, but the choice was usually a matter of the nature of the complement and not a means to distinguish locational and directional readings as in Modern Dutch. In Modern English, directional adpositions only occur before their complements.

We now have a general idea about the status of directional phrases in the different stages of Dutch and English. In this study, I do not consider the position of the adposition within the adpositional phrase. The reason for this is because I did not find any instances of directional phrases with postposed adpositions in this study. Moreover, I limit myself to the adposition *in* as well as its Old English equivalent *on*, classified as one of the narrow locative adpositions by Helmantel (2002). This adposition is found throughout the history of both Dutch and English. The choice of this adposition over *op* and *uit* has to do with the number of possible spelling variants. *Binnen* was not chosen because of its much lower frequency compared to *in* and its absence in Modern English.

2.2. Research Questions

The discussion in the previous sections and chapters leads to four main questions regarding the development of the word order possibilities of directional phrases. In this chapter, we will only be considering the facts regarding directional phrases; a comparison of these with object phrases and naming objects will be discussed in Chapter 5.

A first question that arises is how the position of arguments in each language develops over time. Specifically, at what point do we see a shift to a more rigid DV order in Dutch and to a more rigid VD order in English? A frequency count of the word order patterns over time will give us a good indication of the developments in the two languages. The Fisher-Yates test is useful to determine whether there is any change in the syntactic system from one period to the next. If it demonstrates the distribution of word orders in one century differs significantly from that of a later century (or centuries), I assume that this pinpoints a significant change in the underlying syntactic system. If the distribution found in adjacent centuries does not differ significantly, I assume that the system underlying them is the same. This will also allow me to group data from different periods together if one century does not yield enough data to achieve statistically significant results. The logistic function of the data will also be calculated to provide an indication of the rate of the change, the midpoint of the change, and the amount of time the change needed to complete

itself. I can then use these data to later compare the systems in Dutch and English. As discussed in Chapter 1, I assume that Dutch has never had a period of competing grammars: Dutch remains underlying DV throughout its history though the realization of this DV grammar differs in different periods. If English does have a period of competing grammars, then we expect the distribution of word orders in this competing-grammars period to be significantly different from any period of Dutch. After all, if a DV period of Dutch can allow a high enough frequency of VD orders so that it is not significantly different from a competing-grammars period of English, it is not logical to assume an underlying difference between the two languages. I will compare the periods established for Dutch with those established for English in subsection 2.6.1 and discuss any conclusions that can be drawn.

Second, to what extent does heaviness play a role in determining word order? This question is only relevant in the periods where there is variation between DV and VD orders. In this study, two types of heaviness are examined: lexical and structural. For lexical heaviness, I will look at the distribution of word lengths of directional phrases on either side of the verb. This will provide an overall impression of the lexical weight allowed on either side of the verb. If lexical heaviness has any influence on word order, we expect that the word lengths allowed preverbally are significantly shorter than those allowed postverbally. Structural heaviness, which focuses on the structure of the relevant constituent, is also considered. If the structural heaviness of an element affects its position in a clause, then we will be able to observe it in one of two related ways: the first is what I term the preverbal restriction where preverbal elements are not heavy, and the second is the postverbal constraint where heavy elements occur to the right of the verb. If the postverbal constraint is operative, then the preverbal restriction must also occur, but the reverse is not true. The preverbal restriction can be satisfied by splitting a structurally complex constituent so that its (simplex) head occurs to the left of the verb while its modifiers, which cause the entire constituent to be complex, occur to the right. Such an operation, then, would be triggered by the preverbal rather than by the postverbal constraint.

Third, how important is newness in determining word order? As with the previous question, this is only relevant in periods with variation between DV and VD orders; this question deals with the influence of discourse on word order. In order to determine this, I will compare the proportion of directional phrases entailing definite noun phrases to those with indefinite noun phrases per position per century because, according to Van Kemenade & Los (2006a), the position of Old English noun phrases with respect to discourse particles is sensitive to definiteness. If newness plays an important role in determining word order in any century, then we expect there to be a significantly greater percentage of directional phrases with indefinite noun phrases to the right of the verb than to the left.

Finally, can we distinguish separate cohesive synchronic syntactic systems by

considering word order, heaviness, and newness together? If so, what periods can we distinguish and what characterizes them? If there is a cohesive syntactic system, then we expect that the factors governing word order will be the same in adjacent centuries/periods, i.e., the extent to which heaviness and newness, if relevant factors, influence word order will be the same. This study will help to find out which factors are relevant in each period and the extent to which each influences word order.

In sections 2.4 and 2.5, I will present the data and results for Dutch and English, respectively. Each of these language-specific sections ends with a subsection where I address the research questions posed here per language and which includes connections between word order, heaviness, and newness. The Dutch and English sections are followed by section 2.6 where I compare and summarize the results for both languages.

2.3. Methodological Considerations

In this section, I will briefly review the way in which I collected and categorized the data and the criteria I used to include or exclude clauses. For detailed information about the texts used in this study, refer to Chapter 1.

2.3.1. Directional Adpositions

I used the program *MicroConcord* version 1.0 to find instances of adpositions meaning ‘into’ (Scott & Johns 1993). The program allows wildcards, represented by the symbol <*>, allowing one to search for words with a particular string of letters without regard for preceding, intervening, or following letters depending on where the <*> is placed with respect to the letters. For example, the search string <in*> will sort out all words in which the letter <i> precedes the letter <n> with or without letters in the positions where the <*> occurs. This search string is helpful, for instance, in picking out the Dutch words *in* and *inne* as well as instances where it is written together with a following determiner, such as *int*, *inder*, *inden*, *inde*, and *indien* or even a following word, such as *indordrecht*. Of course, the program included a number of irrelevant words (for instance, Latin borrowings beginning with *in-* as in *intelligent*), which needed to be taken out, but these were in general easy to distinguish from the adpositions. In ambiguous instances where it was not immediately clear whether the word was an instance of an adposition, a closer look at more of the context was sufficient to determine the intended word. I also included other spellings of the initial vowel, namely <jn*> and <yn*>. These spellings are found in both the Dutch and English data. Additionally, I looked for instances of the adposition <on> in English as this is the primary adposition in the earlier texts for the meaning ‘into’.

After collecting the adpositional phrases, I filtered out by hand the cases where it had a directional reading. Most of the relevant examples occurred with verbs meaning ‘to go’ and ‘to come’ so there was no doubt that the adpositional phrase was directional. For other motion verbs, I looked at the context to determine whether it was a directional phrase or a locational phrase. If I could not determine the status by the context, I did not include the example. I did not rely on case marking to judge the directionality of an adpositional phrase even though there is a tendency to use accusative case for directional readings. I chose not to do this because accusative case is not limited to directional phrases and because case marking, especially in the later stages of both languages, is not consistent. I limited myself to more literal examples where there is some physical motion from one location to another. I did not include more figurative uses, for instance, with verbs meaning ‘to translate’, even though it could be argued that there is a movement of a text from one language into another.

2.3.2. Word Order

Once the clauses containing directional phrases were collected, they had to meet a number of syntactic criteria in order to be included in the study. As discussed in Chapter 1, I did not include main or conjunct clauses that contained only a single finite verb in order to avoid the potential effects of verb second, which would have resulted in increased VD orders. Instances where the directional phrase occurred in the first position (i.e., topicalized directional phrases) were similarly excluded as such an order limits the position of the directional phrase. Clauses needed to meet two additional criteria in order to be included: the directional phrase had to contain a full noun phrase and not a pronoun, and the directional phrase had to occur in the same clause as the verb. Pronouns are known to prefer a preverbal position in Dutch and the early stages of English. If my assumption that directional phrases adhere to the same patterns as other types of arguments is correct, this means that directional phrases with pronouns also prefer preverbal positions.

As some of the examples occur in relative clauses, the directional phrase is occasionally found outside of the relevant clause, as in (39), though this order is rare.³ The first directional phrase, *in to þe gernere* ‘into the grainery’, occurs in the same clause as the main verb *don* ‘do’. The second directional phrase, *in to heuene* ‘into heaven’, however, occurs in a relative clause outside of the scope of the main verb and hence was not counted.

- (39) Ah þet we moten bon of þe corne þe me *scal don in to þe*
but that we must be of the grain which one shall do in to the

³Note that the examples are taken from the English data, but the same criteria were also used for the Dutch texts.

gernere bet is in to heuene
grainery that is in to heaven
 ‘...but that we should be like the grain that one puts into the grainery,
 that is, into heaven’ (ME1, lamb1)

One type of construction, namely a participle with a directional phrase modifying a noun phrase as in (40), met the two additional criteria but was excluded. In (40), the verb *cumenne* is a present participle modifying the noun *Crist* and functions more as an adjective than a verb in this construction. The influence of its adjectival nature on the position of the directional phrase is not clear; it is possible that such participle constructions prefer a VD order to DV even in an underlyingly DV language.

- (40) Myd þy he getacnode Crist *cumenne* in þære clænan
 with that he symbolized Christ come into of-the pure
fæmnan ynnod
virgin’s womb
 ‘With that, he symbolized Christ, come into the womb of the pure virgin’
 (OE4, mart2)

Further, these constructions are generally appositive in nature, giving additional but non-essential information about one of the elements in the matrix clause. These examples were not included in the analysis in order to avoid any potential effect they may have on the word order patterns.

In determining whether a clause is DV or VD, I looked at the position of the first directional phrase itself (if there was more than one) with respect to the verb. In a few instances, the directional phrase occurred to the left of the verb but was further modified by a relative clause or coordinated phrase to the right of the verb. As the first directional phrase still occurred preverbally, I counted these tokens as DV. These examples were quite rare, however, and should not have a major impact on the frequencies.

2.3.3. Heaviness

I examine heaviness as a factor both lexically and structurally. The reader should refer to subsection 1.4.2 of Chapter 1 for specific details. A brief summary of these criteria follows.

In order to get an impression of the lexical heaviness of directional phrases on either side of the verb per century, I count and compare the distribution of word lengths of directional phrases per position. This gives an impression of the number of words allowed on either side of the verb per period. I counted items between spaces as separate words even if they are written together in the modern standard language, for example, English *hym self* ‘himself’ counts as two words, and I counted identifiable words written together as separate words,

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for example, Dutch *vander* ‘from-the’ counted as two separate words. I also included the preposition itself in the word count.

Structural heaviness is defined by the internal structure of the directional phrases and was determined to be either simplex or complex. I distinguished simplex and complex directional phrases based on two separate definitions, which I call *strong* and *weak* respectively, in order to be better able to define the constraints of structural heaviness as accurately as possible. In the strong definition of structural heaviness, I only counted directional phrases modified by relative clauses and conjoined directional phrases as structurally heavy elements. In the weak definition, I include directional phrases that were modified by genitive noun phrases and/or prepositional phrases. The investigation of the influence of structural heaviness on word order involves two parts: one, a qualitative examination and comparison of the heaviness on either side of the verb and two, a statistical comparison of the heaviness per position in each period. The former gives a general impression of any potential heaviness restrictions or influences in any given period while the latter either confirms the hypotheses or disproves them.

2.3.4. Newness

The final factor under investigation is newness, examined from a qualitative and a quantitative perspective. The criteria for determining newness of directional phrases have been set out in subsection 1.4.2 of Chapter 1, to which the reader should refer for specific details. Here I provide a brief summary.

I understand newness as indefiniteness since indefinite noun phrases usually introduce a new entity into the discourse and definite noun phrases tend to represent items already mentioned in the discourse. For the quantitative study, I count the occurrence of directional phrases with indefinite and definite noun phrases per position per period and compare the results statistically. The qualitative evaluation, on the other hand, involves a more detailed examination and comparison of instances in which the same directional phrase appears.

2.4. Dutch

In this section, I will focus on the data from the history of Dutch. The primary concern here is the position of directional phrases and how it develops over time. I look at the distribution of the frequencies of word orders (DV and VD) over time in subsection 2.4.1 before examining the influence of heaviness (subsection 2.4.2) and newness (subsection 2.4.3) on word order possibilities. It is clear from the developments that these factors have varying and shifting degrees of influence on word order over time. I discuss the evolution of this construction in the history of Dutch in subsection 2.4.4.

2.4.1. Word Order

Figure 2.1 shows the distribution of the position of directional phrases over time, i.e., the frequency of the order VD versus DV. There is a drastic shift in

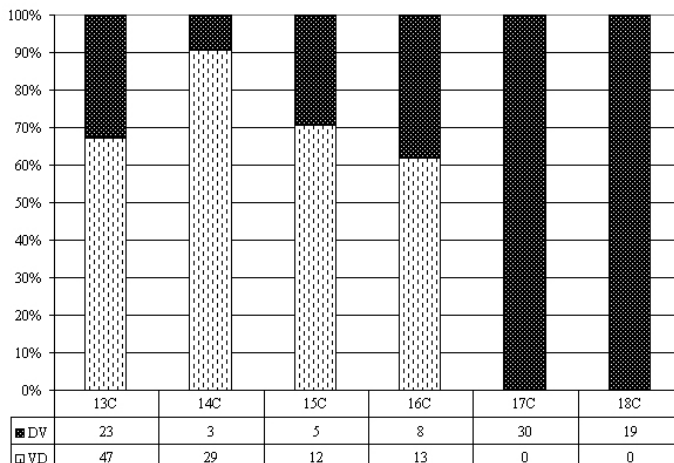


Figure 2.1.: Position of Directional Phrases in Dutch

the position of directional phrases between 16C and 17C. Whereas directional phrases actually occur more frequently to the right of the verb than to the left up until 16C, they are restricted to a clause-internal position from 17C on. What is also striking is the frequency with which the VD order occurs in this early period; despite being underlyingly DV, two-thirds or more of the examples are VD in 13C–15C. Even in 16C, more than half of the examples are VD. This shows that the frequency of VD can still be very high in a language with an underlying DV grammar.

When we compare the centuries to one another using the Fisher-Yates statistical test, we observe that 17C and 18C are not significantly different from one another but are significantly different from all of the other centuries ($p = .00002$). We also see that 14C is significantly different from both 13C ($p = .02$) and 16C ($p = .03$) but not 15C. There is no statistically significant difference between 13C, 15C, and 16C. From this, we can distinguish two periods: 13C&14C&15C&16C on the one hand and 17C&18C on the other. I include 14C in the first period because it is wholly contained within it and because it is not significantly different from 15C, one of the centuries that clearly belongs to this period. For statistical tests on the first period in the following subsections on heaviness and newness, I will look at each century individually as well as combine the data

2. Directional Phrases

for more accurate statistics. Given the oddity of 14C, I will also check to see if subtracting the data from this century has an influence on the combined total of this period.

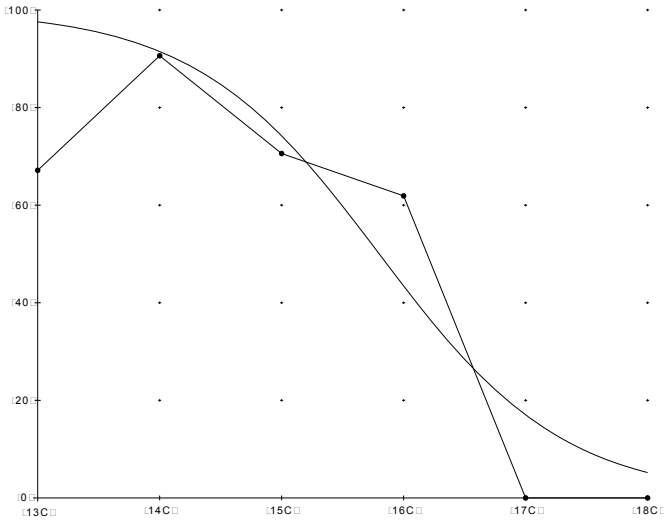


Figure 2.2.: Logistic Function of Directional Phrases in Dutch

If we calculate the logistic function of the data, we get figure 2.2. Note that the line with the dots is a representation of the actual data and the smooth S-shaped curve is the logistic function. According to these calculations, the slope of the curve (i.e., the rate of change) is -1.32 , a rather quick change; the change takes 4.5 centuries to complete, and the midpoint of the change is just before 16C. The negative slope means that the direction of change is toward the loss of a possibility, in this case the loss of VO. The range of the change suggests that the change starts mid-13C and completes itself at the very beginning of 18C.

2.4.2. Heaviness

I investigate heaviness as a potential factor in the position of directional phrases by counting and comparing their word lengths per position in each period as well as examining the structural complexity of preverbal and postverbal directional phrases in each period. On the basis of the data on word order frequencies in the previous subsection, we can distinguish two syntactic systems:

13C&14C&15C&16C where both preverbal and postverbal directional phrases occur with a higher frequency of postverbal, and 17C&18C where only preverbal directional phrases occur. Is there some sort of heaviness restriction, whether lexical or structural, on preverbal directional phrases in the earlier period, i.e., is there a preverbal restriction? Does the heaviness of directional phrases force them to occur in a postverbal position, i.e., is there a postverbal constraint? If so, how is heaviness best defined?

Table 2.1 gives the distribution of word lengths per position in Dutch; the first column is the total of all directional phrases in 13C&14C&15C&16C, and the second column excludes the data from 14C. It is evident from the table that the VD position is preferred regardless of the length of the directional phrase. A statistical analysis using the Fisher-Yates test on the various permutations of these data reveals that the preference is not significantly greater for longer directional phrases than for the shorter ones, nor is any of the distributions for the various word lengths significantly different from the overall distribution of DV and VD orders. The few examples of directional phrases composed of

phrase length (words)	including 14C		excluding 14C	
	DV	VD	DV	VD
2-3	32	69	29	47
4-5	4	19	4	16
6-7	1	4	1	3
8-9	2	6	2	4
>9	0	3	0	2
Total	39	101	36	72

Table 2.1.: Word Length of Directional Phrases per Position in Dutch

more than nine words are all VD, which is telling, but as the numbers are so small, we cannot say anything definitive about any possible correlation between lexical length and position of directional phrases. This suggests that heaviness defined lexically is not useful in predicting the position of directional phrases in any period of Dutch.

In examining the structural heaviness of directional phrases in 13C&14C&15C&16C according to the strong definition, note that of the 39 instances occurring preverbally in table 2.1, only three (about 8%) can be considered complex according to the weak definition (see table 2.3 below), and two of these are split. This means that the majority of the preverbal directional phrases, around 92%, are simplex. Two of the complex directional phrases are conjoined as in (41a), and one, given in (41b) is modified by a relative clause.

- (41) a. *Dat si eweleke... jn onser grauescap ende in al onsen lande,*
that they forever... into our county and into all our land

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tholne vri *varen sullen*

toll free sail shall

‘that they shall sail into our county and into all of our lands forever without paying a toll’ (13C, d’recht 1284 juni 7)

- b. Ende *als* hij van haere tot in ytalien *toech* daer hij
 and when he from her until into Italy brought there he
ierst romen began te stichten
 first Rome began to found

‘And when he went from her into Italy, where he first began founding Rome’ (15C, blome)

Of the 101 postverbal directional phrases, 13 instances (about 13%) can be considered complex according to the strong definition: eight are conjoined, four are modified by relative clauses, and one is both conjoined and modified by a relative clause. As with the preverbal directional phrases, the majority are simplex, around 87%. The percentage of simplex versus complex directional phrases per position does not seem to differ greatly.

Table 2.2 gives the distribution of simplex versus complex directional phrases over the orders DV and VD in the early period as established in subsection 2.4.1 based on word order patterns. In this table, complex directional phrases are understood according to the strong definition of structural complexity, i.e., as either conjoined directional phrases or directional phrases that are modified by a relative clause. Moreover, the two split directional phrases (one in 13C and one in 15C) were counted as simplex to see if the preverbal restriction is operative in this period, i.e., whether there is a restriction on the heaviness allowed to the left of the verb. The data in the first column indicate that simplex directional

	including 14C		excluding 14C	
	DV	VD	DV	VD
Simplex	38	88	35	63
Complex	1	13	1	9
Total	39	101	36	72

Table 2.2.: Position and Complexity in Directional Phrases in Dutch: Preverbal Restriction and Strong Definition

phrases are 2.3 times more likely to occur postverbally than preverbally whereas complex directional phrases are 13.0 times more likely. This is an indication that there is a stronger tendency for complex directional phrases to be postverbal than for simplex ones. The statistical test, however, does not show a significant difference in the distribution of simplex versus complex directional phrases per word order in any individual century nor in any of these distinct periods. This

may be the result of a lack of data on complex directional phrases since the tendency is quite clear. Collecting more data may help resolve this, but for now, we will say that there is no restriction on the structural heaviness of preverbal directional phrases when structural heaviness is defined according to the strong definition though there is a tendency toward a restriction.

Table 2.3 gives the same information as in table 2.2 but according to the weak definition of complexity. In addition to the elements considered complex according to the strong definition, instances of directional phrases modified by genitive noun phrases and/or prepositional phrases are also included. Again, the two split directional phrases (one in 13C and one in 15C) were counted as simplex to see if the preverbal restriction is operative. The data in the

	including 14C		excluding 14C	
	DV	VD	DV	VD
Simplex	36	73	33	51
Complex	3	28	3	21
Total	39	101	36	72

Table 2.3.: Position and Complexity in Directional Phrases in Dutch: Preverbal Restriction and Weak Definition

first column indicate that simplex directional phrases are 2.0 times more likely to occur postverbally than preverbally whereas complex directional phrases are 9.0 times more likely. This is an indication that there is a much stronger tendency for complex directional phrases to be postverbal than for simplex ones. The distribution of simplex versus complex directional phrases per word order is not significantly different in any individual century, but the difference is significant when the data are taken together: $p = .01$ in 13C&14C&15C&16C, and $p = .02$ in 13C&15C&16C. This suggests that the preverbal restriction is indeed operative when structural heaviness is defined according to the weak definition. In other words, the part of a directional phrase occurring preverbally is significantly less likely to be conjoined or modified by a relative clause, genitive noun phrase, or prepositional phrase than a directional phrase that occurs postverbally. The inclusion of 14C seems to skew the results slightly since it has only three instances of DV order, none of which is complex by either definition. Even when it is excluded, however, there is still evidence that there is a preverbal restriction on directional phrases in this period of Dutch.

We have just seen that there is a structural heaviness restriction on preverbal directional phrases when structural heaviness is considered according to its weak definition. Remember, however, that the existence of this preverbal restriction does not necessarily mean that the heaviness of a directional phrase forces it to occur to the right of the verb. In order to check this, we need to take

2. Directional Phrases

another look at the split directional phrases, which were considered simplex in the previous discussion, and see if the difference in the distributions will remain significant if we consider them complex. Table 2.4 gives the same distributions as in table 2.3, i.e., according to the weak definition of complexity; however,

	including 14C		excluding 14C	
	DV	VD	DV	VD
Simplex	34	73	31	51
Complex	5	28	5	21
Total	39	101	36	72

Table 2.4.: Position and Complexity in Directional Phrases in Dutch: Postverbal Constraint and Weak Definition

the two split directional phrases (one in 13C and one in 15C) are counted as complex to see if there is a postverbal constraint on directional phrases. The data in the first column indicate that simplex directional phrases are 2.1 times more likely to occur postverbally than preverbally whereas complex directional phrases are 5.6 times more likely. This suggests a weak tendency for complex directional phrases to be postverbal than for simplex ones. The distribution of simplex versus complex directional phrases when considering the postverbal constraint is not significantly different in any individual century nor when the data are considered together. This lets us know that while there is a restriction on the structure allowed preverbally, a complex directional phrase as a whole is not necessarily forced to a postverbal position; splitting is an important way to meet the requirements of the preverbal restriction.

2.4.3. Newness

Newness is the next factor under investigation. To determine if it is a relevant factor in determining the position of directional phrases, I will look for whether the noun in the phrase is definite or indefinite. I begin with the qualitative part of the study where I examine the position of repetitions of the same directional phrase. This is followed by the quantitative part where the distributions of definite and indefinite directional phrases per position per period are statistically analyzed.

There were not many examples of repeated directional phrases within the same text among the data, only a few examples in 13C and 16C. Moreover, the examples that there are do not indicate that newness has an influence on the word order. The 13C examples in (42), for instance, have a directional phrase containing a name, which was counted as definite, i.e., given information. In both (42a) and (42b), the directional phrase appears after the verb.

- (42) a. *do hi liep in die haghe*
 then he walked into The Hague
 ‘then he walked into The Hague’ (13C, d’recht 1284 begin mei)
- b. *doe si voeren in die haghe*
 then they went into The Hague
 ‘then they went into The Hague’ (13C, d’recht 1284 begin mei)

If newness did influence the word order, we would have expected the second occurrence to appear before the verb, contrary to what we find. This suggests that newness does not play an important role in determining the position of directional phrases.

The directional phrase in the 13C examples in (43), *in onse lant* ‘into our land’, was counted as definite because of the possessive adjective preceding the noun. Unlike the preceding clauses, these directional phrases appear in different positions; however, the order in which they appear in the different positions again goes against what one would expect if newness played a role.

- (43) a. *soe sullen die comanne bi wat weghe si in onse lant*
 so shall the merchants by what way them into our land
varen
 transport
 ‘in this way, the merchants shall transport them into our land by some way’ (13C, hgk 1300 jan 7)
- b. *dat ghoet dat si gheleit hebben in onse lant*
 the goods that they led have into our land
 ‘the goods that they led into our land’ (13C, hgk 1300 jan 7)

Example (43a) occurs first in the text, yet the directional phrase appears before the verb. In the second occurrence, (43b), the directional phrase appears after the verb, the order we expect with indefinite, or new, noun phrases, even though it clearly is the same directional phrase as in the first example, which occurs only five clauses earlier. Again, the data suggest that newness does not play a role.

In 16C, we still get no indication that newness plays a role in determining the position of directional phrases. The directional phrases in the clauses in (44) are formulated a little differently from one another, but it is clear that they refer to the same thing. (44a) was counted as definite because of the possessive pronoun *zijn*, and (44b) was counted as definite because of the definite article *de* and the noun phrase in the genitive modifying the complement.

- (44) a. *dat wy ons den Heere begeeren op te offeren in zijnen handen*
 that we us the Lord desire up to offer into his hands
 ‘that we desire to offer ourselves into his hands’ (16C, offer)

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- b. Hierom *willen* wy ons gheheelijcken *ouer gheuen* inde
herearound want we us wholly over give into-the
handen des Heeren
hands of-the Lord
'For this reason, we want to give ourselves completely into the hands
of the Lord' (16C, offer)

Both directional phrases occur to the right of the verb. This is additional evidence that newness does not play a role in Dutch directional phrases.

The above three pairs of examples indicate that newness does not play a role in determining the position of directional phrases; statistical tests also confirm this. Table 2.5 gives the distribution of definite and indefinite directional phrases per word order in 13C&14C&15C&16C as well as the combined data for 13C&15C&16C. Already before conducting the Fisher-Yates test, one can

	including 14C		excluding 14C	
	DV	VD	DV	VD
Definite	34	92	31	66
Indefinite	5	9	5	6
Total	39	101	36	72

Table 2.5.: Position and Newness in Directional Phrases in Dutch

observe in the table that there is no stronger tendency for indefinite directional phrases to occur postverbally than definite directional phrases. According to the combined data in the first column, definite directional phrases are 2.7 times more likely to occur postverbally than preverbally whereas indefinite directional phrases are 1.8 times more likely. This actually is a slight reversal of what we would have expected. The fact that there is no statistically significant difference in the distributions within any individual century nor in any of the combinations of centuries confirms our suspicions: newness, at least when defined as indefiniteness, is not an important factor in determining word order in early Dutch.

2.4.4. Discussion

I will address the research questions posed in section 2.2 above in this subsection. In response to the first set of questions regarding the distribution of the directional phrases over time, we saw in subsection 2.4.1 that there is a clear break between 16C and 17C: from 13C to 16C, there is a rather high frequency of VD orders whereas VD orders are completely absent from 17C. A statistical test confirmed the distinction between these two periods. One of

the centuries in the first period, namely 14C, behaves a bit differently from the others in the same period, however; 14C has a significantly higher frequency of VD orders than either 13C or 16C, but it is not significantly different from 15C. For this reason, I conducted the other statistical tests for this period with and without 14C to see if that had any effect. In no instance did the inclusion or exclusion of 14C result in statistical significance or insignificance. This suggests that 14C can be safely included in this period. The logistic function of these data revealed that the slope of the S-curve, which describes the rate of change, is -1.34, a rather fast change. The midpoint of this shift is just before 16C, different from what the raw data would seem to suggest.

The second set of research questions addresses the influence of heaviness, understood both lexically and structurally, on word order patterns in the centuries where both word orders still occurred. As discussed in subsection 2.4.2 above, lexical heaviness does not have an influence on the word order patterns: for all word lengths, there is a preference for VD orders, but this is just a reflection of the overall preference for VD orders in this period. In contrast, structural heaviness, when defined by the weak definition, does have an influence on word order in the form of a preverbal restriction. Under the weak definition of complexity, a directional phrase is considered complex if it is conjoined (two or more directional phrases conjoined with or without a conjunction, or two or more noun phrases conjoined under a single preposition) or modified by a relative clause, a genitive noun phrase, or a prepositional phrase. The preverbal restriction significantly reduces the ability of preverbal directional phrases to be complex; complex directional phrases either have to split with part of it occurring to the right of the verb, or the whole phrase has to occur to the right. Despite this restriction, however, complex directional phrases are not always forced to the right, showing that the postverbal constraint is not operative in early Dutch.

Newness is the third research question. There were only a few examples of repeated directional phrases. None of these repetitions seemed to indicate that newness played an important role in the word order of directional phrases. This was confirmed by a statistical test; the distribution of indefinite and definite directional phrases across the two word orders was not significantly different in any individual century nor in any division of periods. This shows that newness does not play a role in determining the position of directional phrases in the early stages of Dutch.

All of these data give evidence for two distinct periods. The first period, 13C&14C&15C&16C, has two word orders available. The position of structurally complex directional phrases, understood by the weak definition, is limited by a preverbal restriction rule: structurally complex phrases must either split or occur postverbally. As mentioned above, 14C was a bit problematic because it did not seem to behave in the same way as most of the centuries in this period. However, the fact that the inclusion or exclusion of the data from 14C did not

have much of an effect on any of the results suggests that it does belong in this initial group. We will confirm this later when we compare these periods to the periods in English. In the second period, 17C&18C, there is no word order variation: directional phrases always occur preverbally.

This research can be greatly augmented in a number of ways, many of which are just as relevant for English discussed below. One issue that is specific to Dutch, however, is the internal syntax of directional phrases. In my data, I found no examples of *in* appearing after the noun phrases. However, in contemporary Dutch, this is one of the more common ways of expressing direction. Further research should include an investigation of the rise of the postpositions we see in Modern Dutch and the potential impact this may have had on the position of directional phrases within a clause.

2.5. English

In this section, I will focus on the data from the history of English. The primary concern here is the position of directional phrases and how it evolves over time. I look at the distribution of the frequencies of word orders (DV and VD) over time in subsection 2.5.1 before examining the influence of heaviness (subsection 2.5.2) and newness (subsection 2.5.3) on word order possibilities. It is clear from the developments that these factors have varying and shifting degrees of influence on word order over time. I finally discuss the evolution of this construction in the history of English in subsection 2.5.4.

2.5.1. Word Order

Figure 2.3 shows the frequency of the position of directional phrases with respect to the verb in English over time. We can see a gradual increase in the frequency of VD order over time until it becomes the only order available in ME3; the system in ME3 and ME4 is different from the earlier periods, a rigid VD syntax being clearly what determines the position of directional phrases. In the other periods where the word order is more variable, we see two distinct periods, giving a total of three distinct periods: OE2, characterized by a low frequency (around 30%) of VD orders; OE3&ME1, characterized by a higher frequency of VD orders (above 65%) while still allowing DV orders; and ME3&ME4, characterized by rigid VD order.

When the periods are compared to one another using the Fisher-Yates statistical test, we see that ME3 and ME4, as expected, are not significantly different from one another but are significantly different from the other periods, with the exception of OE4. In addition, ME3 is not significantly different from ME1. I will group ME3 and ME4 together but separately from OE4 and ME1 because they have only VD orders. Note, however, that these four periods could be

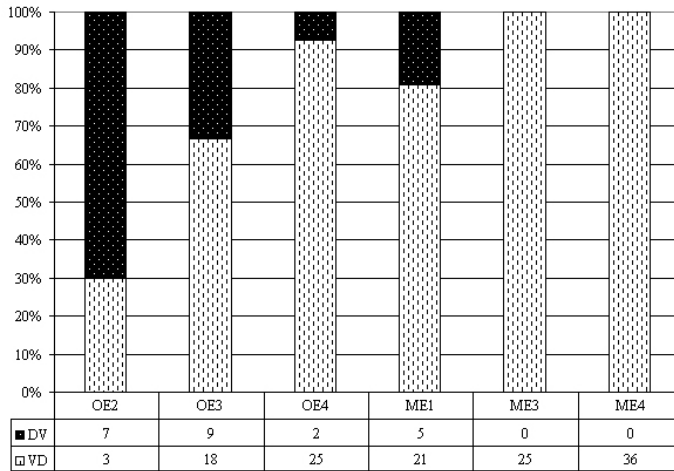


Figure 2.3.: Position of Directional Phrases in English

grouped together. I chose not to do this because the word order options in ME3&ME4 are much more limited than in OE4&ME1 and because ME1 is also not statistically different from OE3, a period which is clearly different from ME3&ME4.

For the first four periods, the picture is much more complicated. Given the very low frequency of VD orders in OE2, it is not surprising that it is significantly different from the other periods; however, it is *not* significantly different from OE3, suggesting that they might share the same underlying system. OE3, in turn, is significantly different from OE4 but not ME1 whereas OE4 and ME1 are not significantly different from one another. These statistics indicate that OE2 should be treated separately from OE4&ME1. It is not entirely clear, however, where to group OE3, and its position between the two distinct systems does not help to decide. For the presentation of data, I will group OE3 with OE2 and not OE4&ME1, but in my calculations, I will try grouping it with each to see if there is any difference. This may eventually reveal that the behavior of OE3 is more like either OE2 or OE4&ME1.

If we calculate the logistic function of the data, we get the graph shown in figure 2.4. Note that the line with the dots is a representation of the actual data and the smooth S-shaped curve is the logistic function. According to these calculations, the rate of change is 1.34; the change takes 4.5 centuries to complete, and the midpoint of the change is around 900, so about halfway through OE2. The range of the change suggests that it starts around 680 (OE1,

2. Directional Phrases

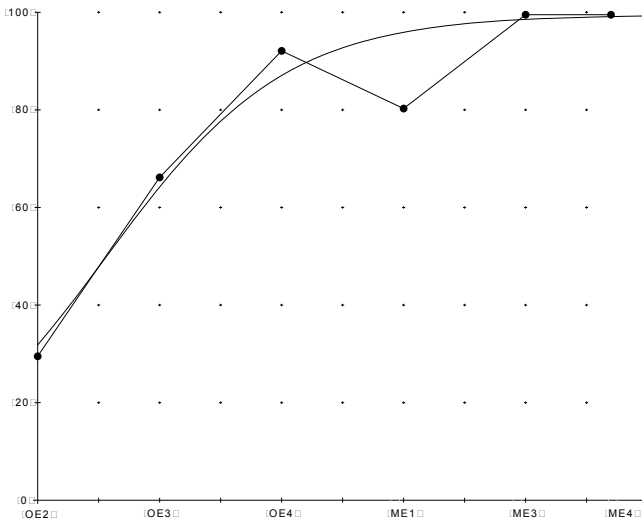


Figure 2.4.: Logistic Function of Directional Phrases in English

not one of the periods included in this study) and completes itself around 1130 (at the end of OE4).⁴

2.5.2. Heaviness

I investigate heaviness as a potential factor in the position of directional phrases by counting and comparing their word lengths per position in each period as well as examining the structural complexity of preverbal and postverbal directional phrases in each period. On the basis of the data on word order frequencies in the previous subsection, we can distinguish three syntactic systems: OE2 and OE3 where both preverbal and postverbal directional phrases occur with a lower frequency of postverbal, OE4&ME1 where both preverbal and postverbal directional phrases occur with a higher frequency of postverbal, and ME3&ME4 where only postverbal directional phrases occur. Is there some sort of heaviness restriction, whether lexical or structural, on preverbal directional phrases in any of the periods? Does the heaviness of directional phrases force them to occur in a postverbal position, i.e., is there a postverbal constraint? If so, how is heaviness best defined?

⁴Refer to section 1.4.3 in Chapter 1 for a discussion of the problems associated with the logistic function.

Table 2.6 gives the distribution of word lengths per position in English; the first column is the total of all directional phrases in OE2&OE3, and the second column is the data from OE4&ME1. I also checked each period individually as well as OE3&OE4&ME1 and the combination of just OE3 and ME1. For the most part, it seems that there is a preference for VD orders. The one exception is two-to-three-word directional phrases in OE2&OE3; in this period, the division is about 50–50. It is also interesting to note that the one instance

phrase length (words)	OE2 & OE3		OE4 & ME1	
	DV	VD	DV	VD
2–3	15	14	6	36
4–5	0	4	1	5
6–7	1	2	0	4
8–9	0	1	0	1
Total	16	21	7	46

Table 2.6.: Word Length of Directional Phrases per Position in English

of a preverbal directional phrase of six words or more occurs in OE2, the most DV of all periods. With this in mind, I compared the various permutations of the data using the Fisher-Yates test to see if there was any effect of lexical weight on the position of directional phrases. I did this by comparing two-word directional phrases to the others, two- and three-word directional phrases to the rest, etc. up to nine-word directional phrases compared to the rest. I did this comparison for each individual period as well as for the combinations OE2&OE3, OE3&OE4&ME1, and OE4&ME1. I found that the preference for the VD order is not significantly greater for longer directional phrases than for shorter ones nor is any of the distributions for the various word lengths, no matter how they are combined, significantly different from the overall distribution of DV and VD orders per period. This indicates that lexical heaviness does not play an important role in determining the position of directional phrases.

Table 2.7 gives the distribution of simplex versus complex directional phrases over the orders DV and VD in the early periods as established in subsection 2.5.1 based on word order patterns. In this table, complex directional phrases are understood according to the strong definition of structural complexity; i.e., only conjoined directional phrases or ones modified by relative clauses are considered complex. Moreover, the one split directional phrase (from ME1) was counted as simplex to see if the preverbal restriction is operative. The data in the first column indicate that simplex directional phrases are 1.3 times more likely to occur postverbally than preverbally whereas complex directional phrases are just as likely to occur on either side; these two types do not greatly differ from one another. The second column, on the other hand, shows that simplex

2. Directional Phrases

	OE2 & OE3		OE4 & ME1	
	DV	VD	DV	VD
Simplex	15	20	7	42
Complex	1	1	0	4
Total	16	21	7	46

Table 2.7.: Position and Complexity in Directional Phrases in English: Preverbal Restriction and Strong Definition

directional phrases are 6 times more likely to appear postverbally and complex 4 times more likely. The Fisher-Yates test confirms that the distribution of simplex versus complex directional phrases per word order is not significantly different in any individual period nor in any combination of the periods as established above. This shows that there is no restriction on the structural heaviness of preverbal directional phrases when structural heaviness is defined according to the strong definition. These results are probably due to the lack of complex directional phrases, so no conclusive statements can be made.

Table 2.8 gives the distribution of complexity over the two orders according to the weak definition of structural complexity. This means that in addition to the elements considered complex according to the strong definition, instances of directional phrases modified by genitive noun phrases and/or prepositional phrases are also included. Again, the one split directional phrase from ME1 is counted as simplex to see if the preverbal restriction is operative. Again, the

	OE2 & OE3		OE4 & ME1	
	DV	VD	DV	VD
Simplex	13	17	7	40
Complex	3	4	0	6
Total	16	21	7	46

Table 2.8.: Position and Complexity in Directional Phrases in English: Preverbal Restriction and Weak Definition

data show no clear tendency: in the first column, both simplex and complex directional phrases are 1.3 times more likely to appear postverbally than preverbally, and in the second column, simplex directional phrases are 5.7 times more likely to appear postverbally than preverbally compared to 6.0 times for complex directional phrases. Even with the weak definition, the Fisher-Yates test indicates that the distribution of simplex versus complex directional phrases per word order is not significantly different in any individual century nor in

any combination of periods, confirming that there is no preverbal restriction on directional phrases in any stage of English. What this also means is that there cannot be a postverbal constraint since it can only exist with the preverbal restriction. Heaviness by any definition, then, does not seem to play a role in determining the position of directional phrases in English.

2.5.3. Newness

Newness is the next factor under investigation. To determine if it is a relevant factor in determining the position of directional phrases, I will look for whether the noun in the phrase is definite or indefinite.

The following examples from OE3 have the same directional phrase, *on þisne middanearde* ‘into this world’. This phrase was counted as definite in both instances because of the demonstrative *þisne*. In both (45a) and (45b), the directional phrase appears before the verb.

- (45) a. *ðæt soðe leoht wæs þe onliht ælcne mannan þe on*
 that true light was which illuminates all man who into
þisne middanearde becymð to menn geboren
 this world comes to men born
 ‘that was the true light, which illuminates all mankind, which comes
 into this world born of men’ (OE3, aelhom)
- b. *ic gelyfe þæt þu eart Crist, Godes Sunu, þe on þysne*
 I believe that you are Christ God’s Son who into this
middanearde to mannum come
 world to man may-come
 ‘I believe that you are Christ, God’s Son, who came into this world
 as man’ (OE3, aelhom)

As both directional phrases are definite, this position is expected as they are instances of old information. This would seem to suggest that newness may play a role in word order in the first period of English. In the same text, however, there are examples that suggest otherwise. The directional phrases in (46) are more or less the same: they have the same number of words and refer to an open sea of fire. Both are definite and as such are expected to occur before the verb and not after, as they appear here.

- (46) a. *þonne se deað and seo hell wurdon asende into þam bradan*
 then the death and the hell became sent into the spacious
mere ðæs brastligendan fyres
 sea-of-the roaring fire
 ‘then death and hell were sent into the open sea of roaring fire’ (OE3,
 aelhom)

2. Directional Phrases

- b. *ælc ðæra manna wæs aworpen into ðam widgillan mere*
each of-the men was thrown into the broad sea
ðæs bradan fyres
of-the open fire
'each of the men was thrown into the broad sea of open fire' (OE3, aelhom)

It is noteworthy that the directional phrases in (46) are quite complex, each comprising the head with a genitive noun phrase modifier. This may indicate that the combination of newness and heaviness plays a role in this example despite the discussion in 2.5.2 suggesting that heaviness does not play a significant role in the history of English.

Of course, more convincing evidence that newness does not play an important role would be examples where an indefinite directional phrase occurs to the left of the verb while its definite counterpart occurs to the right, but these examples are enough to bring into question the role of newness in determining word order in the first period of English.

In the second period of English, we have a stronger indication that newness may play a role in word order. The three examples in (47) all appear in the same text. Two of these are indefinite, i.e., new information, while one is definite.

- (47) a. [þ]a *het* he hym gebyndan anne ancran on hys
then commanded he him to-tie an anchor onto his
sweoran ond hyne forsendan on sæ
neck and him send into sea
'Then he commanded him to tie an anchor around his neck and to send him into the sea' (OE4, mart2)
- b. *ond se ancra þær wæs big geseted myd þam he wæs ær*
and the anchor there was by set with that he was before
on þa sæ onsended
into the sea sent
'and the anchor with which he was previously sent into the sea was thereby set' (OE4, mart2)
- c. [ð]a *het* se casere hyne beheafðian ond *weorpan*
then commanded the emperor him to-behead and to-throw
þone lichaman ond þæt heafod on sæ
the body and the head into sea
'The emperor then commanded him to behead and to throw the body and the head into the sea' (OE4, mart2)

The two instances that are indefinite both occur after the verb while the one definite directional phrase occurs before the verb. This is the exact pattern that we expect if newness plays a role in determining word order. Admittedly, *on sæ*

can be construed as an idiomatic expression. However, the fact that it appears in the same text both with and without a definite determiner combined with the fact that it occurs in different positions indicate that newness may still play a role, even where idiomatic expressions are concerned.

The above examples give mixed results on newness and word order: it seems that newness does play a role in some of the cases but not in others. The Fisher-Yates test indicates that newness does not play a role. Table 2.9 shows the combined distribution of definite versus indefinite directional phrases per position in OE2&OE3 as well as for OE4&ME1. The data in the first column

	OE2 & OE3		OE4 & ME1	
	DV	VD	DV	VD
Definite	9	17	3	32
Indefinite	7	4	4	14

Table 2.9.: Position and Newness in Directional Phrases in English

show no clear tendency: definite directional phrases are 1.9 times more likely to occur postverbally than preverbally whereas indefinite directional phrases are only 0.6 times more likely. The second column does show a strong tendency, but one that is the opposite of what we would expect: definite directional phrases are 10.7 times more likely to occur postverbally than preverbally while indefinites are only 3.5 times more likely. Given these odds, newness is more likely to play an important role in OE4&ME1 though not in the way we would have expected. A statistical analysis, however, does not show a significant difference in the distributions within any individual period nor in any combination of the periods. This indicates that newness is not an important factor in determining the word order of directional phrases in any period of English.

2.5.4. Discussion

In this section, I will address the research questions posed in 2.2. The first set of questions concern the distribution of the directional phrases over time. We saw in subsection 2.5.1 that it is possible to distinguish three different periods: OE2, OE4&ME1, and ME3&ME4. It was not clear, however, where to place OE3: it fits between two distinct periods and was not significantly different from either, suggesting that it is some sort of transition period between the two. This allows the possibility of placing it together with either OE2 or OE4&ME1. For the presentation of data, I grouped it with OE2, but in the various statistical tests, I tried grouping it with both periods to see what effect that may have. In the end, the inclusion or exclusion of OE3 did not have an effect on the outcome of any of the statistical tests in any of the periods as all of them turned out to be

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insignificant. This, of course, makes it difficult to decide where best to place OE3. I will reserve deciding until the comparison of Dutch and English in the following section. Hopefully, comparing English to the situation in Dutch may reveal the best place for OE3. The logistic function of these data showed that the slope of the S-curve is 1.34. The midpoint of the shift is the middle of OE2, around 900.

Heaviness was the object of the second set of research questions. The potential effects of both lexical and structural heaviness were investigated by looking at the distribution of word order patterns across the various periods. Moreover, structural heaviness was defined in two ways: a strong definition whereby only two types of directional phrases were considered complex and a weak definition where two additional types of directional phrases were added to the first group. In addition, I checked for the presence of a preverbal restriction on directional phrases as well as a postverbal constraint. As discussed in subsection 2.5.2 above, heaviness, whether analyzed lexically or structurally or defined strong or weak, does not play an important role in determining the position of directional phrases in any period of English nor in any combination of periods.

The third set of research questions addressed the influence of newness on word order. Newness was defined according to definiteness: indefinite directional phrases were considered new and definite ones old. In none of the individual periods nor any combination thereof was the distribution of newness over the two word orders significantly different, suggesting that it does not play a role in determining the position of directional phrases, at least when newness is defined by definiteness.

The data above point toward three distinct periods: OE2 where DV is clearly the preferred word order; OE4&ME1 where VD is more common but DV is still available as an alternate order; and ME3&ME4 where VD is the only order. The only distinguishing characteristic of these periods is the frequency of DV versus VD orders. As mentioned above, OE3 proves problematic because it is not significantly different from either OE2 and ME1, two periods that clearly belong to different stages. Moreover, OE3 appears between these two distinct stages, and the fact that there are no further characteristics of either stage does not help in determining where best to place OE3.

This research can be greatly augmented in a number of ways, many of which are just as relevant for Dutch discussed above. One issue that is specific to English, however, is the rise of the “double” preposition *into*. The combination of *in* and *to* exists even in Old English, but the combination becomes more consistently used to denote direction in later stages of English, though it is still possible to use the bare preposition for direction. Further research should investigate the influence this double preposition may have had in the word order possibilities over time.

2.6. Comparison

Now that we have a clear understanding of the evolution of directional phrases in Dutch and English, we can more accurately compare the two and see what this reveals about the two languages themselves as well as about language change in general. I will treat the subsections in the same order as they appear in the previous two sections.

2.6.1. Word Order

The evolution of the word order patterns of directional phrases in Dutch and English have clear and opposite developments. In the early period of Dutch (13C&14C&15C&16C), both DV and VD orders are allowed with a high frequency of VD patterns. Then, there is a drastic change in 17C whereby DV orders become the only available order. The English OE2 period, contrary to the first period of Dutch, has a low frequency of VD patterns (around 30%) with a noticeable increase in VD orders in OE3 to 67%, which is comparable to the frequencies found in the initial period of Dutch. This high frequency of VD orders eventually gives way to a rigid VD order.

It is striking that the raw Dutch data show no intermediate period where both orders are possible with DV occurring more often; this is perhaps an effect of the number of texts available. What is also striking is the high frequency of VD orders in the early period of Dutch, from 62% in 16C up to 91% in 14C. If, as we assumed in Chapter 1, Dutch has no period of competing grammars, then it would seem that even an underlyingly DV language can allow a very high percentage of VD orders. How, then, do the frequencies of the early periods in Dutch compare to those of the different stages of English? If we take the total distribution of DV and VD orders in 13C, 15C, and 16C and compare it to the individual periods in English where there is variation between both orders, we notice that it is only significantly different from OE4 ($p = .008$), the variable period in English with the highest frequency of VD. This suggests that the system underlying 13C, 15C, and 16C Dutch is not significantly different from that underlying early English, with the exception of OE4. When we include 14C into the rest of the Dutch data, we see that the entire combined Dutch period is significantly different not only from OE4 ($p = .03$) but also from OE2 ($p = .02$). Here, the introduction of 14C changes the outcome of the statistical analysis—this suggests that 14C should probably be considered syntactically different from the other centuries.

In comparing the combined data of 13C, 15C, and 16C to the combined data of the periods established for English (OE2&OE3, OE3&OE4&ME1, and OE4&ME1), we notice that the Dutch data are not significantly different from the first or second period, but they are significantly different from the third ($p = .009$). If we add 14C to the Dutch data, the results stay the same: the

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Dutch data are not significantly different from the first or second period, but they remain significantly different from the third period ($p = .05$).

What these data taken together suggest is that the system underlying the early periods of Dutch and the early periods of English are not significantly different from one another. The similarities among the word order patterns of the early stages of Dutch and English and the similarity in the rate of change in both languages seem to indicate that the underlying word order for both languages are best viewed as the same. The one exception is OE4, which is significantly different from the early Dutch periods; even the inclusion of 14C, the century with the highest percentage of VD orders, does not change the statistically significant difference. It would seem that at least this period in English can be considered as having competing DV and VD grammars. If this is the case, then we would also expect ME1 to have competing grammars since it is not significantly different from OE4. However, ME1 is not significantly different from any of the combinations of the Dutch data, nor is it significantly different from either OE3 or OE4. How, then, can we explain ME1? The oddity of ME1 can probably best be accounted for by considering the nature of the texts. Remember that there were no texts written in the Southwestern dialect of Middle English in either ME1 or ME2 that were available in PPCME2. In order not to have a gap of two periods, I decided, based on Kroch & Taylor (2000) and Kroch *et al.* (2000), to use texts from the West Midlands, a dialect area to the north of the Southwestern dialects under investigation in this study. Because this area, i.e., the West Midlands, was not controlled by the Vikings, it lacks many of the innovations found in more northerly and easterly texts. The texts from this area, however, also preserve more of the West Saxon scribal tradition, which would probably make the language in the texts more conservative than the spoken language at that time. This may be part of the reason why the data from ME1 are similar to both OE3 and OE4.

2.6.2. Heaviness

Heaviness was investigated according to two definitions: lexical and structural. By counting the words in directional phrases on either side of the verb, I found that longer directional phrases do not have a significantly stronger preference for VD order than shorter directional phrases, and no word length occurs significantly more often before or after the verb than the overall average for the period. This confirms that the lexical heaviness of directional phrases does not have an influence on position in any stage of Dutch or English.

Structural heaviness was defined in two ways. In the strong definition, directional phrases were considered structurally heavy when they were conjoined with another directional phrase, when two noun phrases were conjoined under one preposition, or when the directional phrase was modified by a relative clause. These were included in the strong definition because of their ability to split

from the main directional phrase. In the weak definition, directional phrases modified by prepositional phrases or by genitive noun phrases were also counted as structurally heavy. Having two definitions of structural heaviness allows pinpointing the most accurate definition of structural heaviness. In addition to the strong and weak definitions, two potential effects of structural heaviness on word order were investigated: the preverbal restriction and the postverbal constraint. The presence of the preverbal restriction does not necessarily mean that complex directional phrases will have a higher percentage of VO orders since split directional phrases would be counted as OV even though part of them occur after the verb. The presence of the postverbal constraint, on the other hand, does mean that complex directional phrases will occur more often after the verb than before. The data in Dutch and English show differences with respect to the influence of structural heaviness on word order.

The early stage of Dutch, we find, has the preverbal restriction according to the weak definition: directional phrases (or a portion thereof) occurring preverbally are significantly more likely to be simplex than complex. This does not, however, mean that structurally complex directional phrases are significantly more likely to occur postverbally: the option of splitting is also a common way to avoid the preverbal restriction. We found that Dutch does not have a postverbal constraint, so complex directional phrases are *not* significantly more likely to occur postverbally than preverbally.

In contrast, English does not have the preverbal restriction or the postverbal constraint by any definition of structural heaviness nor is there any indication of a tendency toward any of the restrictions. This suggests that structural heaviness does not play a role in determining the word order of English directional phrases.

Dutch and English differ with respect to the influence of structural heaviness on word order as evidenced in the above discussion. Given the nature of the restriction in Dutch, however, we do not expect there to be a significant influence on the word order distributions. Even though the portion of a directional phrase occurring preverbally is not complex, it does not mean that complex directional phrases appear postverbally, as we saw in the above discussion.

2.6.3. Newness

In this study, newness is defined by indefiniteness according to Van Kemenade & Los (2006a). If newness plays an important role in word order, then we would expect indefinite directional phrases to occur after the verb significantly more often than before the verb. The qualitative analysis of the effect of newness in Dutch was not promising: the data suggested that newness does not play a role in determining word order. The statistical analysis confirmed that this was the case. The data not only show that there is no significant difference in the distribution of definite and indefinite directional phrases across word orders but also shows a very slight, albeit insignificant, tendency toward the opposite of

our expectations: the factor by which definite directional phrases were more likely to occur postverbally than preverbally (2.7) was slightly greater than that for indefinite directional phrases (1.8). Again, this difference is statistically insignificant but reinforces the idea that newness does not play a role.

In English, the qualitative analysis of the data seemed a little more promising, though not completely. In some examples, newness seemed to have an influence on the position of the directional phrase while it did not in other cases. The statistical analysis showed that newness is not an important factor in any of the periods of English or combinations thereof. As was the case in Dutch, the OE4&ME1 period indicated the opposite tendency we expected: the factor by which definite directional phrases were more likely to occur postverbally than preverbally (10.7) was greater than that for indefinite directional phrases (3.5). Again, this seems to reinforce the lack of influence newness has on word order.

This summary shows that the two languages are similar when considering the influence of newness (or lack thereof) on the position of directional phrases.

2.7. Concluding Remarks

We have seen in the previous discussion that the word order patterns of directional phrases are similar in the various stages of Dutch and English. The frequencies in the early period of Dutch do not significantly differ, for the most part, from the frequencies in OE2–ME1 in English. Only one of the periods of variable word order in English, namely OE4, significantly differs from the early period in Dutch; additionally, the combination OE4&ME1 is also significantly different from the combinations of variable periods in Dutch. This indicates that this period of English should perhaps best be analyzed as a period of competing grammars with respect to this construction.

The development that directional phrases undergo in Dutch is similar to what we expect for objects: they occur on either side of the verb in the Middle Dutch period and thereafter gradually become more and more restricted until the preverbal position is the only one possible. The position of other types of prepositional phrases, on the other hand, does not become as restricted as directional phrases, as we can see in present-day Dutch where they can occur on either side of the verb. In English, however, the picture is not as clear—directional phrases undergo a shift toward a restricted VO order like objects, but this also happens with other types of prepositional phrases.

We also saw that Dutch and English differ with respect to the influence of structural heaviness. The early period of Dutch clearly has a restriction on the complexity of directional phrases allowed before the verb, though the complexity of directional phrases does not cause them to appear after the verb more often than splitting. This tendency toward splitting of complex elements suggests there is a tendency toward OV orders already present in the earliest stages

of Dutch. English directional phrases, on the other hand, do not seem to be influenced by structural heaviness in any way. Already here, we observe some differences between Dutch and English, which may be indicative of the later opposite developments in the languages.

While there were clear differences in the role played by structural heaviness in the two languages, the influence of newness on directional phrases was the same: in neither language did newness play a significant role.

There are a number of ways in which this research could be augmented. The most obvious is by investigating the development of other directional adpositions. It would also be useful to compare the development of the directional uses of prepositions versus their locational use and to compare these multifunctional prepositions with prepositions that are only used either for location or for direction. A corollary of this is the investigation of case and its influence on the position of directional prepositional phrases. Further research should also be concerned with the patterns in the various dialects of each language as well as the interaction of the speakers of these dialects to see what influence this may have had.

3. Relative Objects

The previous chapter examined the development of the position of directional phrases in the history of Dutch and English. These phrases are taken as the control group for the development of the position of arguments over time. In this chapter, I turn to a particular type of argument, the position of which has been widely noted as exceptional in the literature on Middle Dutch. Burridge (1993), Blom (2002), and Ribbert (2005) have mentioned that objects modified by relative clauses (hereafter *relative objects*) occur with an unusually high frequency in VO orders when compared to other objects; they state that when an object is modified by a relative clause, it always occurs after the verb. In this case, relative objects are useful in investigating the development of word order patterns because they are considered heavy by almost any definition of weight: they are always structurally heavy, and this usually, though not necessarily, results in their being phonologically and lexically heavy.¹

Relative objects are the focus of this investigation for a number of reasons. First, one of the theories under investigation on the shift in English from OV to VO relies on the position of relative clauses (Ogura 2001: to be discussed more fully in section 3.1.1). In order to effectively evaluate this proposal, the position of relative objects needs to be analyzed. Second, they will be useful for studying weight as a factor in leakage. Because argument noun phrases with relative clauses must always be considered structurally heavy (though not necessarily phonetically or lexically heavy as will be demonstrated in section 3.5), instances where the entire relative object string does not extrapose can be compared to instances where it does to see if there is indeed a significant difference in the phonetic and/or lexical weight of extraposed versus non-extraposed constituents. Moreover, these examples can be further analyzed to see if newness plays a role in determining word order. Third, in the history of Dutch, we see a clear shift with respect to word order possibilities of these complex strings. In Middle Dutch, we find two main options: OVR and VOR, where ‘R’ represents the position of the relative clause. In Modern Dutch, however, the latter option, namely VOR, is no longer possible. A careful investigation of the development of this pattern can reveal the factors involved in this change. And finally, relative clauses are practical: as I am searching texts through six centuries of two different languages, in one of which no syntactically parsed corpus exists, I

¹Recall that for the purposes of this study, the term *object* refers to any argument noun phrase that is neither a subject nor the complement of a preposition, thereby including predicate nominals as well as direct and indirect objects.

3. *Relative Objects*

need something that is fairly easy to collect. As relative clauses generally begin with a relative pronoun, I can do a lexical search for the (various spellings of) the relative pronouns of Dutch through time and sort through the examples; for English, the program CorpusSearch 1.0 will be used to extract relative objects from the corpus. This greatly reduces the time required to collect relevant data.

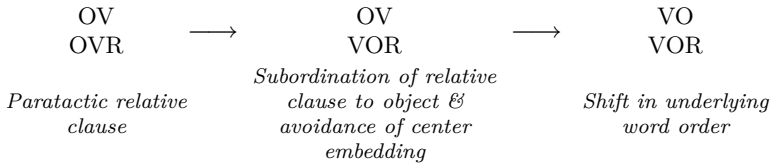
In section 3.1, I describe various aspects of relative clauses, beginning with Ogura's (2001) theory on the influence of relative objects on the shift in English syntax in subsection 3.1.1 before moving on to some of the characteristics of relative objects: the relative pronouns found in the data collected for Dutch and English in subsection 3.1.2; the word order possibilities of objects, relative clauses, and verbs within a clause as well as my assumptions about their possible positions in subsection 3.1.3. I state the research questions that result from the preceding discussion with predictions about the results based on previous analyses in section 3.2. Section 3.3 is a discussion of the procedures used to gather and group the data for each language. In sections 3.4 and 3.5, I present the data for Dutch and English, respectively, and these data are summarized and compared in section 3.6.

3.1. Relative Objects

This section begins by summarizing Ogura (2001) and the hypothesis that the change in the underlying word order of English was initiated by relative objects. This is followed by a discussion of two features of relative objects relevant to this study, namely the relative pronouns found in the examples in this study and the syntactic properties of relative objects.

3.1.1. Processing: Avoidance of Center-embedding

Ogura (2001: 234) proposes a theory on the word order change in English, relating it to "the interaction between the evolution of relative clauses and perceptual factors". A schema of Ogura's analysis is given below; note that the first row represents the underlying order at that stage, the second row the orders for relative objects, and the last row provides the reason for the word orders.



In Ogura's analysis, the underlying order of the initial stage of English is OV, and the underlying order of relative objects is OVR, an order that can only be attained by movement in most other analyses.² For Ogura, however, the order OVR in this initial period is the result of an older paratactic coordination, making the "relative clause" a semi-independent clause that gives additional information about a preceding element. Relative clauses are thus not extraposed from a position within the sentence brace to a position outside; rather, they originate outside of the sentence brace and are separate from the head noun. This suggests that, unlike in traditional analyses, relative clauses are not subordinate clauses that are dependent on objects, at least initially. In the beginning, then, relative clauses behave more like unlinked coordinated clauses that provide additional information about a given noun within the sentence brace.

In the second stage, relative clauses lose their semi-independent status and depend increasingly on the objects they modify. This dependence on the object causes adjacency of the object and the relative clause, i.e., subordination of relative clauses to objects. Since the object originates to the left of the verb and the relative clause to the right, there are two logical options if they are to appear next to one another: the relative clause can join the object to the left of the verb (embedded into the sentence brace), or the object can join the relative clause to the right (extraposition). Center-embedding, i.e., the insertion of a clause into the middle of another, is difficult to process, as demonstrated by (48) below from Ogura (2001: 234) (itself taken from (Kuno 1974)):

(48) The cheese [the rat [the cat chased] ate] was rotten.

This sentence, which is technically grammatical, is virtually impossible for even native speakers to process. According to Ogura, because of the difficulty in processing the information, speakers try to avoid center-embedded constructions, which would rule out the order ORV and prefer VOR. Over time, this word order, where the object appears to the right of the verb when modified by a relative clause, gradually spreads to objects without relative clauses, causing the eventual shift to VO.

A problem with this analysis is that while it is true that the sentence in (48) above is difficult to process, sentences with three layers of embedding are quite rare, whether it be due to the avoidance of center-embedding or to discourse

²In many analyses, noun phrases and relative clauses are considered one element, not two separate constituents as in Ogura's analysis. The underlying representation of these, however, differs per analysis. See De Vries (2003) and the references there for an overview.

3. Relative Objects

constraints. Taking one of the center-embedded clauses out as in (49) makes the entire string perfectly acceptable.

(49) The cheese [the rat ate] was rotten.

It seems unlikely, therefore, that a rare subset of an already infrequent subset of objects occurs frequently enough to initiate change in the underlying word order of a language. Nevertheless, Ogura's analysis will be evaluated on the basis of the data from Dutch and English.

3.1.2. Relative Pronouns

In Dutch, the relativizer *(het/de)welk* was chosen as the relativizer for this investigation. It declines like an adjective and agrees in number and gender with its head noun. Case can either be determined by its head noun or by the function of the *(het/de)welk* in the relative clause. It can occur by itself, with a preceding definite determiner, or with a repetition of the noun being modified (Stoett 1923, 33-34; Van den Berg 1971, 26; Van Kerckvoorde 1993, 177). None of the literature has mentioned a difference in use or in the syntax between *welk* versus *(het/de)welk* nor between either of these and *welk* + NP though a discourse or syntactic distinction among these is conceivable given that their differences in internal structure—this would perhaps be an interesting topic for future research. In addition to being a relativizer, *welk* can also function as an interrogative adjective, which is easily distinguished from its relative pronoun function.

Dutch also has a number of other relativizers, among them *die/dat*. *Die/dat* in particular is much more frequent than *(het/de)welk*. *(Het/de)welk* was chosen mainly for practical reasons. Though *die/dat* occurs much more often than *(het/de)welk* as a relativizer, it also has additional functions that are much more often employed than *(het/de)welk* ever is: *die/dat* is also used as a demonstrative/definite article, occasionally as a pronoun, and *dat* functions as a subordinating conjunction. This makes collecting *die/dat* in a large corpus impractical. Another reason for choosing *(het/de)welk* over *die/dat* is that the spelling of *welk* is easily reduced to two variants as the consonant sequences <w-l-k> and <w-l-c> do not often occur, regardless of the vowels employed. The letter combinations of *die/dat* occur quite frequently in other, non-relevant words.

I assume that the positional distribution of these two relative pronouns is more or less the same, an assumption which should be tested in future research. In the end, whether a relative clause is headed by a form of *(het/de)welk* or *die/dat* should not affect the results of this study because in either case, the object is being modified by a clause, and this clause serves to make the object structurally heavy.

For Old and Middle English, the relative clauses analyzed were those coded as such in the corpora used. The corpora do not distinguish among the various relativizers, though when collected, they are easy enough to distinguish. Most of the Old English relative clauses are marked by the relative particle *þe*. Sometimes, it occurs with a form of the demonstrative *se*. Both are optional and can be combined, giving three possible configurations:³ *þe* by itself, *þe* with demonstrative *se*, or demonstrative *se* by itself. The particle *þe* does not decline while demonstrative *se* agrees with the head noun in gender, number and sometimes case (Diamond 1970, 22-23; Davis 1980, 24; Moore *et al.* 1977, 155-156). More often, however, the case of *se* is determined by its function in the relative clause and not the case of its antecedent. In the Early Middle English data I collected, *þe* still appears as a relative marker but eventually gives way to newer markers in the later periods: *that*, *(the)which*, *whom*, and occasionally *when*, *where*, *whose* and zero-marking.

3.1.3. Syntax

The position of relative clauses must be investigated with respect to their heads, and the position of both of these constituents must be viewed with respect to the verb. The interaction between these results in five logical orders:⁴

1. ORV
2. OXRV
3. OVR
4. VOR
5. VOXR

Note that one of these, namely OXRV, does not occur in my data set at any stage of either English or Dutch; this order is even ungrammatical in Modern Dutch as can be seen in (50) below.

- (50) **dat* Jan het boek morgen **dat hij gisteren heeft gekocht**
 that Jan the book tomorrow that he yesterday has bought
wil lezen. OXRV
 wants to-read
 ‘that Jan want to read the book tomorrow that he bought yesterday.’

I further classify these five logical orders into two main types: *combined relative objects* (i.e., ORV and VOR) and *split relative objects* (i.e., OXRV, OVR and VOXR). In all stages of both English and Dutch, relative objects can occur

³It is also possible that there is no relativizer, but this is more common with subjects than with objects and does not occur in my data.

⁴Orders where a relative clause precedes an object are also logically possible but are not considered as they never occur in West Germanic

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either together or split, as demonstrated in (51) to (54) below. The (a) examples show combined relative objects, namely relative objects where the object and relative clause occur adjacent to one another, and the (b) examples split relative objects, namely instances where some additional sentential element occurs between the object and the relative clause. I label each example to demonstrate which of the five logical orders the sentence represents. The boundaries of the clause, i.e., the verbs, verbal particles and complementizers (if present), are italicized, the objects underlined and bold, and the relative clauses in bold.

(51) Modern English

- a. John *wants to read* the book **that he bought yesterday** tomorrow.
VOR
- b. John *wants to read* the book tomorrow **that he bought yesterday**.
VOXR

(52) Old English

- a. *þæt* hie *woldan* eal **þæt he wolde** VOR
that they wanted all that he wanted
'that they wanted all that he wanted' (OE2, bede)
- b. *þæt* hie eal þæt *woldon* **þæt he wolde** OVR
that they all that wanted that he wanted
'that they wanted all that which he wanted' (OE2, bede)

(53) Modern Dutch

- a. Jan *wil* het boek **dat hij gisteren heeft gekocht** morgen *lezen*.
ORV
- b. Jan *wil* het boek morgen *lezen* **dat hij gisteren heeft gekocht**.
OVR

(54) Middle Dutch

- a. *dat* de meester **die dat maecte** seer abel *moste wesen* ORV
that the master who that made very able must be
'that the master who made that must be very able' (16C, exempel)
- b. *hoe datter* een is **die dat al maecte** OVR
how that-there one is who that all made
'how there is one who made that all' (16C, exempel)
- c. *dat* si *zien* mine claerhede, **de welke du mi ghegheven**
that they see my clarity which you me given
hebs VOR
have
'that they may see my clarity, which you have given to me.' (14C, a'damlect)

Relative clauses, considered separately from their antecedent, can occur on either side of the verb in all varieties (examples 52–54) except Modern English, where they are restricted to a position to the right of the verb. Objects, either together with or separate from the modifying relative clause, can also occur on either side of the verb in Old English (examples in 52) and Middle Dutch (examples in 54) but not in Modern English and Modern Dutch, where they are restricted to a position to the right and to the left of the verb, respectively.

Regardless of the underlying word order of a given stage of English or Dutch, relative clauses have a tendency to appear to the right of the verb, i.e., outside of the sentence brace, because of their original paratactic nature, or to avoid center-embedding, or a combination of the two, or whatever other reason. Ogura’s claim, which is even stronger, is that relative clauses originate outside of the sentence brace and separate from the object, demonstrating how strong this tendency for relative clauses to occur to the right of a verb even in an OV language is. Because relative clauses prefer appearing outside of the sentence brace even in an underlying OV language, we cannot make any claims about the state of the grammar at that time. However, instances of relative clauses inside the sentence brace, few though they may be, can be taken as an indicator that the language at that stage has an underlying OV grammar since there should be no reason for relative clauses to occur inside the brace in VO languages.

Similar assumptions hold for objects but to a much weaker extent. Objects generally prefer a position inside the sentence brace in an OV language and a position to the right of the verb in a VO language. However, as was discussed in Chapter 1, the position of objects appears to be much more susceptible to movement than relative clauses under the influence of other factors, for instance discourse related or vestigial grammatical factors. As a result, we can find objects to the right of the sentence brace in an OV language and inside the “brace” in a VO language. The occurrence of these “unexpected” word orders (i.e., a VO order in an OV language or vice versa) does not necessarily mean that the language at that particular stage has an additional underlying order. In other words, the occurrence of a fairly high percentage of VO orders in an OV language at a certain point in time does not necessarily indicate that the language at that time additionally has an underlying VO grammar. Because a number of factors play a role in object-relative clause combinations, namely heaviness and discourse factors, relative objects would seem particularly susceptible to appear in a position to the right of the verb, even in an underlyingly OV language.

3.2. Research Questions

The previous discussion on the word order possibilities of objects and relative clauses and previous analyses of these phenomena brings up a number of questions. In this chapter, I will only be considering the facts regarding relative

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objects; a comparison of these with directional phrases and naming objects will be discussed in Chapter 5.

The first set of questions has to do with the general trends in word order frequencies over time. What is the overall pattern, at what point do we see a shift to more rigid orders, and how long does the process take? A frequency count of the word order patterns over time will give us a good indication of the developments in Dutch and English. I will also use these data to establish, based on statistical (dis)similarities, different periods in which the underlying syntactic system is the same. If the distribution of word orders in two centuries does not significantly differ from one another, then I assume that the system underlying them is the same. In this way, I will be able to distinguish the evolution of the syntactic system found in the history of Dutch and English, and the combination of the data in these periods will allow for more data, strengthening the statistical validity. I will also use a logistic function to calculate the rate of change, the midpoint of the change, and the amount of time needed for the change to complete itself.

In what positions do relative clauses appear with respect to the verb and to the head of the relative object? As discussed above, relative clauses have a preference for appearing postverbally in the history of both Dutch and English, regardless of the underlying word order. Ogura (2001) claims that this is initially the case because of its original paratactic nature and later as a means to avoid center embedding. Given this strong tendency for relative clauses to occur postverbally, I will use the occurrence of relative clauses within the sentence brace as an indicator that a given stage of Dutch or English has underlying OV grammar.

I will also use the information from the previous issue to evaluate Ogura's hypothesis by looking at the position of relative clauses with respect to the head of the relative object. Ogura's hypothesis predicts that the most common order in the initial period will be OVR and that it will shift to VOR when the relative clause becomes subordinate to the object. Her hypothesis also predicts that the orders ORV and VOXR will not occur, or at least very rarely. ORV is problematic because center-embedding makes it difficult to process. VOXR is problematic because the only motivation for O to occur postverbally is in order to be adjacent to R. Looking at the distribution of these orders in Dutch and English will help determine how well Ogura's hypothesis works.

In how far does heaviness play a role in the extraposition of relative objects? Since relative objects are heavy by most definitions, the methods used to test the influence of heaviness in directional phrases and naming objects have to be adapted. If lexical weight is an important factor in determining the position of relative objects, then we would expect that relative objects occurring totally inside the sentence brace, i.e., the head noun phrase along with its modifying relative clause, to be significantly less "heavy" than those that occur either wholly or partially outside the sentence brace. To see if this is the case, I will

examine the lexical heaviness of relative objects in texts where they appear preverbally. Whether this is shown to have a significant impact on word order or not, the object itself or the relative clause itself may still in some way be related to word order effects. For instance, preverbal relative objects as a whole may not be significantly shorter than their split or postverbal counterparts, but preverbal objects or relative clauses may be significantly shorter than their postverbal counterparts. Because of this, I will also examine the lexical heaviness of the object and relative clause individually in the same texts to see what influence they may have on word order.

Because relative objects are by definition structurally heavy, I have to use a different method to examine the influence of structural heaviness than the one I used for directional phrases and naming objects, where I compare the distribution of complex versus simplex phrases. For relative objects, I compare the frequencies of the relative objects in my data with the frequencies of objects in general. For Dutch, this involves comparison with the data on Holland Dutch in Burridge (1993). For English, I conducted a separate search of the relevant texts for all objects (excluding pronouns) and compared their distribution to the data collected for the relative objects. If structural heaviness does indeed play a role, we expect to see that the relative objects in my data extrapose significantly more often than in the data set that includes all objects.

Does newness influence the position of relative objects? If so, how? This is only relevant in periods with variation between OV and VO orders as with the previous question though this question deals with the influence of discourse factors on word order unlike the previous question. In order to determine this, I will compare the proportion of definite to indefinite relative objects per position per period because according to Van Kemenade & Los (2006a), the position of Old English noun phrases with respect to discourse particles is sensitive to definiteness. If newness plays an important role in determining word order in any period, then we expect there to be a significantly greater percentage of indefinite objects phrases to the right of the verb than to the left.

The position of relative objects can also be influenced by whether the information in the relative clause is new or given. As already has been discussed, however, relative clauses in the history of Dutch and English have a strong tendency to occur after the verb, regardless of the underlying order of the language. This would suggest that the status of the information in the clause as new or given is not an important factor in determining its position within a clause. However, in order to determine this, I will examine the few instances of preverbal relative clauses to see whether they have anything in common; they may be able to point to the factors that motivate them to occur inside the sentence brace.

Can we distinguish separate cohesive synchronic syntactic systems in either language based on the combination of the above factors? If so, what periods can we distinguish and what characterizes them? If there are identifiable cohesive

systems, then we expect that the factors governing word order will be the same in adjacent centuries/periods, i.e., the extent to which heaviness and newness, if relevant factors, influence word order will be the same.

In the following section, I discuss the criteria used to collect the data. Next, in sections 3.4 and 3.5, I will present the data and results for Dutch and English, respectively. At the end of each of these sections is a subsection where I address the research questions posed here per language; the discussion in this final subsection includes connections between the various preceding subsections. The Dutch and English sections are followed by section 3.6 where I compare and summarize the results for both languages.

3.3. Methodological Considerations

3.3.1. Word Order

Remember that in this chapter, the term *object* refers to any noun phrase that is neither a subject nor part of a prepositional phrase and *relative object* refers to any such object modified by a relative clause.

For the English data, I used the *CorpusSearch* 1.1 program (Randall 2003) to search for instances of relative clauses dominated by an NP that was in turn immediately dominated by IP. This, in theory, would have yielded non-subject NPs (i.e., objects) modified by relative clauses. After looking through the examples, however, I found that I still had to sift out the relevant examples—some of the clauses retrieved had an NP modified by a relative clause where this entire NP + relative clause combination was wholly contained within another NP that was the true object of the relevant verb. These and other irrelevant examples were discarded for the study. The Dutch data were a little more difficult to collect since the texts were not syntactically parsed. Using the *MicroConcord* program (Scott & Johns 1993), I conducted a lexical search for the various spellings of the relative pronoun (*het/de)welc* and again sifted through the hits for relevant examples.

Once the examples were collected, they had to meet a number of syntactic criteria in order to be included in the study. For the reasons mentioned in Chapter 1, I did not include main or conjunct clauses that contained only a single finite verb in order to avoid the potential effects of verb second, which would have resulted in increased VO orders. Moreover, instances where the relative object or any part thereof occurred in the first position (i.e., topicalized) were also excluded as the number of possible positions it can occupy in that case is greatly limited.

Once the appropriate clauses were collected, I grouped them based on the position of the object and the relative clause as well as the finite verb and the nonfinite verb, if present. Within each group, the examples were further catego-

rized based on the type of clause in which they appeared: main, subordinate or conjunct.

In 13C and 14C Dutch official texts, I came across a few expressions that appeared in more than one text. Some of these repeated constructions are given in (55) and (56) below.

- (55) *Dat wi enen tvist hadden met onsen here den biscop janne van vrecht. Ende met enen edelen manne onsen here haren Florense Grave van hollant. waer bi dat wi in vanghenissen quamen, der vorghenoemder tvier heren. welke tvist bi onsen consente. ende bi onsen goeden wille. ende onser vriende. ende onser maghe neder ghelegheet es.*

‘that we had a quarrel, which has been settled with our consent and with our good will and our friend’s and our kinsmen’s, with our lord, Bishop Jan of Utrecht and with a gentleman, our lord, Lord Floris Count of Holland, whereby we came into prison of the aforementioned the four gentlemen.’ (13C, hgk 1285 oktober 27a)

- (56) *dat ic schuldich ben enen edelen man, haren wolfarde van barsele, here van zandenborgh die houder es van desen brieue. hondert. pont. enghels in hoofdekijns, welke penninghe hi voer mi met ghereden ghelde in vlaendren betaelt heeft.*

‘that I owe a noble man, Lord Wolfert van Borselen, Lord of Zandenburg, who is holder of this letter, one hundred English pounds in head money, which he paid for me with cash (ready money) in Flanders’ (13C, hgk 1298 juni 15)

In order to dispel the potential influence of these relatively frequent expressions, I did two sets of calculations: one in which I counted each expression only once per word order type, no matter how often it appeared and one where I counted each occurrence of an expression individually. For example, the expression given in (55) occurred a total of four times. These four instances only counted as one for the order OVR per century in which it occurred for the first count and counted as four for the second count. There were no significant differences in the frequencies between the first and second count, so I used the second count, where each instance was counted separately, in order to have a sufficient amount of data for analysis. The expression in (56), however, sometimes occurred with the phrase *te betalen* between the amount and the relative clause describing the amount. All instances with *te betalen* counted as one for the order OVR while all instances without it counted as one for the order VOR. In this way, the potential influence of such expressions on the data set could be reduced. No such frequent expressions were found in the data collected for English. An interesting observation is the large number of constituents intervening between the head of the relative object and the relative clause that modifies it in (55).

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This distance is perhaps facilitated by the occurrence of *welk* with a repetition of the head, which will be discussed below.

I will now briefly address the syntactic consequences of the relativizer *welk* + noun phrase, shown in (55) and (56) above. As discussed in subsection 3.1.2 above, this is one of the relativizing constructions encountered in my data. This occurs in 13C, where all of the relative objects occur with this construction, and in 14C. No one has discussed whether there are syntactic differences among the three relativizing constructions with *welk*, but this particular form does not seem to have a noticeable influence on the position of the heads of the relative objects. If *welk* + noun phrase did have an influence on the position of the heads, then we would expect that the heads would occur with an unexpectedly greater frequency on one or the other side of the verb, but this is not the case. This form of the relativizer does, perhaps, have some influence on the position of the relative clause itself; in (55), for example, a very long prepositional phrase, *met onsen here den biscop janne van vtrecht ... hollant*, and a subordinate clause, *waer bi dat wi in vanghenissen quamen*, in addition to the verb *hadden* intervene between the relative clause and its head. This makes sense as the repetition of the head would easily allow a reader/speaker to associate the relative clause with the appropriate head. The syntactic differences among the forms of *welk* should be investigated in future research.

In determining whether a clause was OV or VO, I looked at the position of the head of the relative object, i.e., the object noun phrase being modified by a relative clause, with respect to the verb. The position of the relative clause itself was not considered in this part of the study. All of the object noun phrases are modified by relative clauses in this study, so if the relative clause has an effect on the position of the head noun phrase, we should see a higher percentage of VO orders. The position of the relative clauses with respect to its head will be considered in the subsection on heaviness.

3.3.2. Heaviness

To test heaviness as a factor in the positioning of relative objects, we will look at it from two angles: lexical and structural. Because relative objects are by most definitions, whether phonological, lexical, or structural, heavy, I employ modified versions of the methods used for directional phrases and naming objects. For lexical weight, I compare the average lengths of the relative objects in various positions with each other to see if there is a significant difference. Again, if heaviness is an important factor, we expect that relative objects in the ORV order contain significantly fewer words than the other orders (OVR, VOR and VOXR) and that objects and relative clauses occurring before the verb are significantly shorter than those occurring after the verb.

In order to examine structural heaviness as a factor, I had to bring in additional data on objects in general to compare to the data collected in this

study, which includes only relative objects. For Dutch, I compare my data with that of Burrige (1993), who also collected data from the Holland dialect of Middle Dutch, and for English, I will conduct a separate search of the corpora to get the frequencies of each order for *all* objects. If heaviness is an important factor, then we expect a higher frequency of VO orders in the data of this study than in the data where all objects were taken into account. Given that relative objects are less frequent than objects, we still expect to see a difference in frequencies even if relative objects are included in these other data. A potential problem with comparing my Middle Dutch data with that of Burrige is the fact that the genres are different: my texts come from a variety of genres whereas her texts are all medical texts.

3.3.3. Newness

The final factor under investigation is newness. As with heaviness, the methods used to investigate newness have to be modified. Because relative objects do not occur frequently and are rarely repeated within the same text, the qualitative part of the study is not feasible. I will therefore limit the investigation of newness to a quantitative study of the head of relative objects. For the quantitative study, the same criteria will be used as for directional phrases: relative objects will be considered new if the head is indefinite and old if it is definite. I consider the ratio of indefinite to definite relative objects per position per period, using the following criteria in determining the definiteness of a relative object. If the head of the relative object had a definite article, a demonstrative, a possessive pronoun, a noun in the genitive case modifying the relevant noun phrase, or a name, I counted it as definite. If the head had an indefinite article or no determiner element, I counted it as indefinite.

As already mentioned, the relative clause itself can be either restrictive or nonrestrictive and can contain either new or old information. Deciding whether a relative clause is restrictive or nonrestrictive or whether it contains new or old information is problematic because we are limited to written texts that were written in an entirely different social and cultural context. It is difficult for those of us conducting research now to establish whether the information in a relative clause was common knowledge at the time of writing. I will not try to solve this problem. However, in the context of this study, I will examine the instances of the order ORV, one of the rarest orders, to see if the relative clauses share any characteristics. If the position of the relative clause is influenced by any sort of newness factor, then we would expect that the relative clauses contained within a clause all share some property, whether it be that they are all (non)restrictive or that they all contain old or known information.

3.4. Dutch

In this section, I will focus on the data from the history of Dutch. The primary concern here is the position of relative objects and how it develops over time. I start by investigating the distribution of the word order frequencies (OV and VO) over time in subsection 3.4.1. The general trends in the position of the heads of relative objects, the logistic function of these trends, and the position of both elements of the relative objects (the head and the relative clause) are treated in this subsection. This is followed by an examination of the influence of lexical and structural heaviness in the position of relative objects in subsection 3.4.2. Lexical heaviness is examined by statistically comparing the average lengths of relative objects, their heads, and their relative clauses per position per century. Structural heaviness is investigated by comparing my data on the position of the heads of relative objects to Burridge's (1993) data on the position of *all* objects. Finally, in subsection 3.4.3, newness is investigated as a potential factor in word order. A statistical comparison of the distribution of definite and indefinite heads across word orders is conducted as well as an in-depth examination of the instances of the ORV order. I summarize the evolution of the position of relative objects in the history of Dutch in subsection 3.4.4.

3.4.1. Word Order

Figure 3.1 presents the frequencies of the different positions of the head of relative objects with respect to the verb in Dutch over time. Note that all of these have relative clauses, but the position of the relative clause is not taken into consideration in these data. This figure gives a clear picture of the development of word order in Dutch: both OV as well as VO orders are allowed to varying degrees until 18C where only OV orders appear. The majority of the tokens have VO orders in 13C and 14C while OV orders form the majority in 15C, 16C, and 17C. By statistically comparing the word order frequencies between the centuries, we can make four clear groups. 15C, 16C, and 17C do not significantly differ from one another, and so their data will be combined. 18C is not significantly different from 15C or 16C, but it is significantly different from 17C ($p = .02$). Because 18C only has OV orders, however, it will not be grouped with them. 13C is not significantly different from 15C or 17C, but it is significantly different from 16C as well as the from 15C&16C&17C. I decided not to include 13C into 15C&16C&17C because of these significant differences. 14C is significantly different from all other centuries and will also be considered separately.

The logistic function of these data is shown in figure 3.2. Note that the line with the dots is a representation of the raw data and the smooth S-shaped curve is the logistic function. According to these calculations, the slope of the curve (i.e., the rate of change) is -1.19, a relatively fast change. Note that a

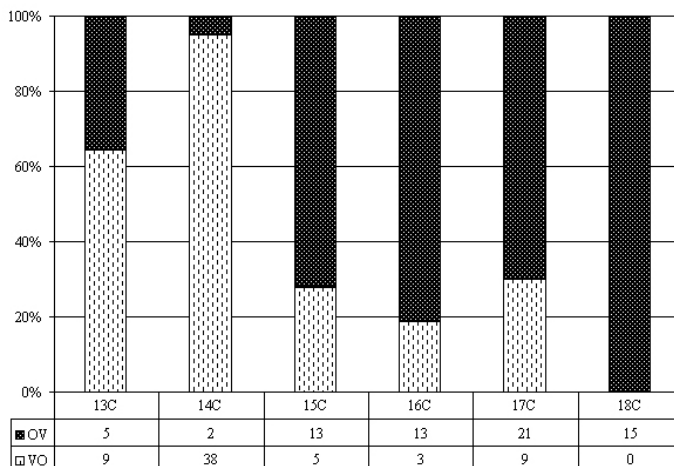


Figure 3.1.: Position of Relative Object Heads in Dutch

negative slope only indicates the direction of change, in this case a decline in VO order, i.e. a slope of 1.19 would represent the same rate of change but in the opposite direction, an increase in VO order. The loss of the extraposition of relative objects takes 5 centuries to complete itself, and the midpoint of the change is just before 15C. The range suggests that the change starts mid-12C and completes itself mid-17C. Now that we have established the patterns with respect to the position of the head, I will continue by considering the position of the relative clause in relation to the head and the verb.

Table 3.1 gives the distribution of the four word orders ORV, OVR, VOR, and VOXR over time. As discussed in subsection 3.1.3 above, the occurrence

Period	% ORV	% OVR	% VOR	% VOXR	<i>n</i>
13C	0	36	64	0	14
14C	0	5	40	55	40
15C	0	72	28	0	18
16C	0	81	13	6	16
17C	7	63	27	3	30
18C	7	93	0	0	15

Table 3.1.: Heads, Relative Clauses, and Verbs in Dutch

of relative clauses inside the sentence brace is being used as a diagnostic of

3. Relative Objects

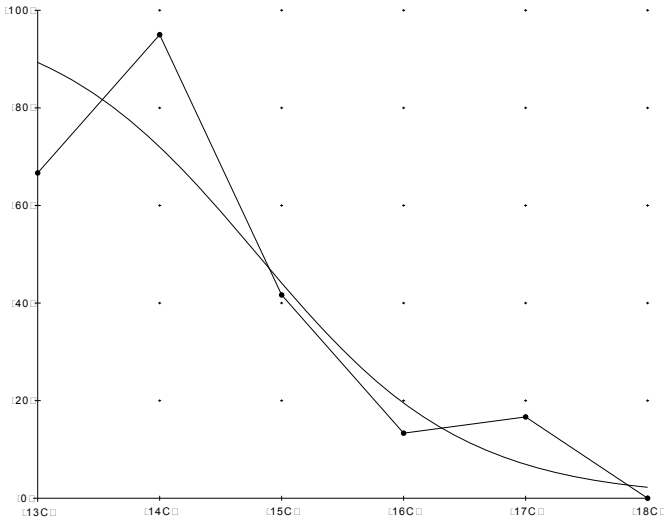


Figure 3.2.: Logistic Function of Relative Object Heads in Dutch

underlying OV grammar in this study. When we look at the position of relative clauses with respect to verbs in this table, we see, as expected, that the overwhelming majority of relative clauses in all periods occur to the right of the sentence brace, i.e., extraposed. The two later periods, 17C and 18C, have instances of relative clauses to the left of the verb as seen in the column labeled ORV. Taken together with the fact that these are also periods where OV orders form the majority confirms that they have an underlying OV grammar.

In Ogura's theory, the position of the relative clause with respect to the object plays a crucial role: the more often relative clauses in a given period occur adjacent to the objects they are modifying, the more subordinate they are to their objects. When we consider the data in table 3.1, we notice that the development in Dutch does not quite follow the pattern predicted by Ogura's hypothesis. In 13C, we already see evidence of the subordination of the relative clause to the object because of the high frequency of VOR orders. Dutch is still underlying OV, but the subordination results in combined relative objects, and the avoidance of center-embedding prevents them from occurring inside the sentence brace. This seems to support Ogura's theory. In 14C, however, even though there is an overall higher percentage of VO orders, the order VOXR is more frequent than VOR. The high frequency of this order is problematic for Ogura's hypothesis if it assumes that subordination of relative clauses to

objects results in the adjacency of object and relative clause. In Ogura's theory, a relative clause is generated outside of the sentence brace while the object is generated inside. If the head of a relative object is moved to a position outside of the sentence brace, it is in order to be adjacent to the relative clause that is subordinate to it. This is clearly not the case in VOXR orders.

Starting in 15C, we also see a steady increase in the order OVR. This is likewise unexpected in Ogura's theory. We already saw from the word order frequencies in 13C that relative clauses appear to be subordinate to objects. It seems that in spite of this subordination, relative objects prefer to split. One might explain this departure by saying that relative clauses become more independent over time in Dutch. However, there is no evidence of this, at least in the syntax. The syntax within relative clauses themselves over time shows a shift from high frequencies of VO orders (which could be an indication of their original paratactic, hence more independent, structure) to a strict OV order, which has become an indicator of subordination in Dutch. Ogura's theory is not able to deal with these data adequately. Further research into the development of Dutch subordinate clauses needs to be conducted to verify this.

These data also pose another potential problem for Ogura's theory, namely the occurrence of ORV orders, albeit at low frequencies. The low frequencies probably indicate that these constructions are difficult to process, but their occurrence shows that it is not totally impossible.

3.4.2. Heaviness

In the previous subsection, we observed the general trends in word order over time in Dutch. Now, I investigate lexical and structural heaviness as potential factors in determining the position of the relative objects. For the investigation of lexical heaviness, I compare the average length of relative objects as well as their component parts, namely the heads and relative clauses, per position per century. Three different comparisons were made: the average length of relative objects in the different word orders, the average length of heads before and after the verb, and the average length of relative clauses before and after the verb. For structural heaviness, I compare my data on the position of the heads of relative objects with the data from Burridge (1993), which include the position of *all* objects in Dutch from 14C to 17C.

Lexical Heaviness

Table 3.2 summarizes the data on the average length of relative objects in the various word order possibilities. Note that in the table *N* stands for 'number' (the number of items per word order), \bar{x} for 'average', and *SD* for 'standard deviation'. The data in the table do not show much variation in the average lengths of relative objects per word order per century, for the most part. The

3. Relative Objects

	ORV			OVR			VOR			VOXR		
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>
13C	0			5	23.0	3.7	9	23.0	10.1	0		
14C	0			2	26.5	12.0	16	22.7	11.1	22	25.1	10.4
15C	0			13	15.6	11.0	5	12.8	4.4	0		
16C	0			13	9.1	3.3	2	11.0	1.4	1	12.0	
17C	2	13.0	5.7	19	15.2	5.7	8	23.4	18.2	1	19.0	
18C	1	9.0		14	12.7	5.1	0			0		

Table 3.2.: Average Number of Words in Relative Objects per Word Order in Dutch

one exception is 17C. The average lengths in the ORV and OVR positions, 13.0 and 15.2, respectively, seem to be much smaller than the average lengths for VOXR and especially for VOR. If any of these centuries shows a significant difference in average length, we would expect to see it in 17C at the least.

The averages per word order were compared to one another per century using an unmatched *t*-test.⁵ For instance, looking at 17C, the average length of the relative object in the word order ORV (13.0 with a standard deviation of 5.7) was compared to that found for the word orders OVR and VOR.⁶ Afterwards, the data for the order OVR was compared to that of VOR. This means that a total of three comparisons were made for this century (the maximum number of comparisons): ORV versus OVR, ORV versus VOR, and OVR versus VOR. This was done for all centuries. Remember, if weight is an important factor in extraposition, then we expect that relative objects in the ORV order will be significantly shorter than that found in any other order. What we find, however, is that the lengths of the relative objects in the various orders is not significantly different from any of the other orders, suggesting that lexical heaviness does not play a role in determining the position of relative objects.

In table 3.3, we see a comparison of the average length of the heads of the relative objects before and after the verb. Note that *t* stands for ‘*t*-value’ (the result of the *t*-test), *sig* for ‘significance’ (the *p*-value, i.e., the level of significance), and *ns* for ‘not significant’. Again, the data for the most part do not show great variation in their average lengths within a century. The exceptions here, the centuries where we are most likely to see a significant difference, are 13C and 15C: in both of these centuries, the average length of postverbal heads is at least double the average for preverbal heads. The results from the *t*-test, however, show that the average lengths are not significantly

⁵Refer to subsection 1.4.3 in Chapter 1 for more information about this statistical test.

⁶Because the *t*-test is a comparison of *averages*, it cannot be conducted if there is only one item in a list.

	OV			VO			<i>t</i>	<i>p</i> -value
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>		
13C	5	3.2	2.7	9	8.3	5.6	0.04	> .05
14C	2	6.5	0.7	38	6.3	4.8	0.87	> .05
15C	13	2.2	0.8	5	4.4	3.7	0.26	> .05
16C	13	2.2	0.7	3	3.0	1.0	0.06	> .05
17C	21	3.1	1.8	9	4.0	2.3	0.29	> .05

Table 3.3.: Average Number of Words in Relative Object Heads per Word Order in Dutch

different in any century.

When we look at the average lengths of relative clauses in the two positions given in table 3.4, we notice that there is not a lot of variation in the data between the average lengths. The biggest difference in average lengths is in

	RV			VR			<i>t</i>	<i>p</i> -value
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>		
17C	2	9.5	3.5	28	14.4	10.2	0.24	> .05
18C	1	7.0		14	9.5	3.4		

Table 3.4.: Average Number of Words in a Relative Clause per Word Order in Dutch

17C, but the difference does not seem great enough to suspect significance. The *t*-test confirms these observations; the length in the two positions is not significantly different.

Structural Heaviness

We have seen that lexical heaviness does not have an influence on the position of relative objects. In order to test whether structural heaviness plays a role, I compare the distribution of the relative objects in my data, which are always structurally heavy, with those from Burridge (1993), who collected data on the position of all objects in medical texts written from 14C to 17C in Holland, shown in table 3.5.⁷ She examined the extraposition of direct and indirect objects as well as nominal and adjectival complements, similar to the criteria I used in collecting my data. It is clear that her data include relative objects as well as objects not modified by relative clauses so if there is a heaviness effect,

⁷She also looks at the Brabant dialect of Dutch, but those data will be ignored for this study.

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we would still expect to see a lower percentage of VO orders in her data than in mine. As was done in this study, Burridge counts instances of OVR as OV since the head of the relative object is to the left of the verb.

In order to facilitate comparison between the two sets of data, I recalculated Burridge's data, which is divided into 50-year increments, by century. Table 3.5 shows the distribution of OV and VO in both my data and those found in Burridge. Looking at the raw data, we can observe some tendencies. In 14C,

	Relative Objects		All Objects		<i>p</i> -value
	My data		Burridge (1993)		
	OV	VO	OV	VO	
14C	2	38	576	163	.00002
15C & 16C & 17C	48	18	932	246	> .05
15C	13	5	201	124	> .05
16C	13	3	326	67	> .05
17C	22	10	405	55	.01

Table 3.5.: Extraposition in Dutch

relative objects have a clear preference for VO orders (38 out of 40 or 98%) whereas OV orders are clearly preferred for objects in general (576 out of 739 or 78%). In the following centuries (and in 15C&16C&17C), relative objects and all object types both show a preference for OV orders. The frequency with which each type of object occurs on either side of the verb is also similar: for instance, in 15C&16C&17C, 73% of the relative objects and 79% of all objects occur preverbally. In 17C, however, the difference in frequency is greater than for the other periods: 69% of the relative objects occur preverbally as opposed to 88% for all objects. From these observations, we would expect for the distribution of OV and VO in relative objects versus all objects in Burridge's data to be significantly different in 14C and 17C but not in the other centuries. These observations are confirmed by the Fisher-Yates test. What is interesting to note is that while the difference in distributions in 14C and 17C are both significantly different, this significance actually describes different situations. In 14C, not only are relative objects significantly more likely to occur postverbally than preverbally, but all objects are significantly more likely to occur preverbally than postverbally, i.e., each type of object has its own preferred position. In contrast, both types of object prefer a preverbal position in 17C; however, objects in general have a significantly stronger preference for this position than relative objects. These differences are reflected in the level of significance (*p*-value) of each century—the lower the *p*-value, the more significant the difference is.

3.4.3. Newness

Newness is the next factor under investigation. Because there were no repetitions of the same relative object in the same text, the position of the relative objects with respect to newness will not be examined qualitatively. What follows is the quantitative study, wherein the distribution of definite and indefinite relative objects per position is compared per period, followed by an in-depth analysis of the three instance of ORV order. Remember that definiteness is taken as a representation of newness because indefinite noun phrases generally introduce a new entity into the discourse while definite noun phrases tend to be given entities that have already been mentioned.

Table 3.6 presents the distribution of definite and indefinite relative objects per position in the different periods. To determine whether a relative object was definite or indefinite (or OV or VO, for that matter), I only looked at the head of the relative object and its position, not at the information or position of the relative clause. What is striking is the lack of preverbal

	13C		14C		15C & 16C & 17C	
	OV	VO	OV	VO	OV	VO
Definite	0	5	0	12	24	14
Indefinite	5	4	2	26	24	4

Table 3.6.: Position and Newness in Relative Object Heads in Dutch

definite heads in 13C and 14C. This means that 100% of the definite heads occur to the right of the verb. In 13C, this differs from indefinite heads, which only occur to the right of the verb 44% of the time. This goes against our initial expectation that new elements have a greater tendency to appear after the verb than before, but it does still suggest that newness is a motivation for extraposition, at least with respect to relative objects. Perhaps it is the interaction of definiteness and the relative clause that plays a role, but it seems, based on these data, that if “newness” is to be further pursued as an important factor in extraposition, it will perhaps be more useful to define it in other terms such as focus, where noun phrases modified by demonstratives are perhaps more common. 14C contrasts with 13C, however, in that the frequency of indefinite heads to the right of the verb (93%) is similar to that for definite ones (100%), suggesting that newness does not play an important role in relative objects. In 15C&16C&17C, we also see a noticeable difference in the frequency of the order for definite (63% OV) versus indefinite heads (86% OV), though this difference is not as big as in 13C. Given these observations, we would expect that the distributions are significantly different from one another in 13C and possibly in 15C&16C&17C but not in 14C. In both 15C and 17C individually,

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there are similar distributions as in the combined data: definites occur 57% and 55% before the verb, respectively, while indefinites occur at 82% and 91%, respectively. In 16C, there is not much difference between the two types of head: definites are 82% preverbal while indefinites are 80%. The Fisher-Yates test, however, indicates that the distributions in none of the periods is significantly different. This discrepancy may be caused by the low number of examples in each period. Because the tendency in 13C, 15C, 17C, and 15C&16C&17C is quite clear, more data would probably allow this to be confirmed statistically. It is interesting to note, however, that the role that newness seems to play with respect to relative objects in Dutch is the opposite of our expectations; rather than indefinite heads appearing more often to the right of the verb than definite heads, we find that definite heads have a stronger preference for the postverbal position than indefinite heads.

The previous data suggest that newness may play an important role in determining the position of the head of relative objects in 13C and the combined period though the statistics did not confirm this. Newness does not seem to play a role in 14C but not in the same way as in the other centuries; both indefinite and definite relative objects occur with a very high frequency to the right of the verb. Now I will take a look at the three instances of ORV order seen in table 3.2, given in (57), to see if this rare word order is in some way motivated by newness.

- (57) a. *Daeromme* ick oock Cyriacum mijnen broeder ende
 For that reason I also Cyriacus my brother and
mede-dienaer, **den welken uwer Godvruchticheyts lange**
 fellow-servant the which your devotion's long
beraedtslagingen tot de selve Ordre hebben ghebaert,
 deliberations to the same order have caused
 tot de regeringhe van het Pastoors of Harderschap seer
 to the rule of the priests or shepherdship very
bequaem houde
 able hold
 'For that reason, I also considered Cyriacus, my brother and fellow
 servant, who the long deliberations of your devotion bore into the
 same order, very able for the rule of priests or shepherdship' (17C,
 heeren)
- b. *die* het Lot, 't **welk in de schoot gheworpen wordt**,
 which the lot the which in the lap thrown becomes
sijn uytkomst *geeft* door *sijn* bijzondere voorsienigheyt
 its result gives through his special providence
 '...who gives the lot, which is thrown into the lap, its result through
 his special providence' (17C, vb)

- c. *om dat* hij het geld, **het welk** hij met zijne
 because he the money the which he with his
bekwaamheden won, naar zijn geneigdheid *verteerde*
 ability won to his inclination spent
 ‘...because he spent the money, which he earned with his ability, to
 his own liking’ (18C, tooneel)

There are a few features that these three examples share, despite being from different genres and centuries, that may point toward newness factors in determining their position. First, the head of each relative object is definite. This is not totally unexpected as definite nouns are generally instances of given information. Second, all of these examples have a relativizer of the form determiner + *welk*. Although no one has mentioned a difference between the use of the different *welk* relativizers, the fact that this form is the only one found within the sentence brace may suggest that there are indeed some differences, which need to be further investigated. Third, all of these relative clauses seem to be nonrestrictive, giving additional but nonessential information about the head.

Another feature of these relative clauses is that they seem to be used in order to more strongly emphasize some aspect of the head. For instance, (57b) is in a sentence, repeated in (58), which is the continuation of a discussion on using God’s name in vain.

- (58) Tot het misbryk van Godts Naem moet ghebraght worden het misbryk van het Lot, wanneer men daer mede speeldt, in de plaets van Godts Naem eerbiedigh aen te roepen, *die het Lot*, **’t welk in de schoot gheworpen wordt**, sijn uytkomst *geeft* door sijn bijzondere voorsienigheydt.
 ‘The abuse of the lot (fate) must also be considered an abuse of God’s name, when one plays with it instead of reverently calling on God’s name, who gives the lot (fate), which is thrown into the lap, its result with his special providence’ (17C, vb)

In this case, the word *lot* ‘lot’ is used, which not only refers to gambling but can also mean ‘fate, destiny’. Our lot, or fate, is something over which we have no control; it is just “thrown into our laps”, as the example states. In this sentence, however, our lack of control over the lot is contrasted with God’s providence—he is the one who decides the lot. So, this example clearly shows an opposition, and the position of the entire relative object within the sentence brace may be in order to strengthen the contrast of the two sides.

This emphasizing function also seems evident in (57c), the entire sentence in which it appears repeated below in (59).

- (59) zoude men te Londen, te Parijs, of in eenige plaats van Europa, eenen Tooneelspeeler, dien men zegt te beminnen, en niet te kunnen derven, *om*

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dat hij het geld, het welk hij met zijne bekwaamheden won, naar zijn geneigdheid verteerde, wel zulk eene laage mishandeling aandoen?
'Would one in London, in Paris, or in any other place in Europe, give an actor, who one says he loves and cannot be without, such abuse because he spent the money, which he won with his own ability, to his own liking?' (18C, tooneel)

The relative object is contained within a subordinate clause headed by *om dat* 'because'. It is clear in the text that the relative clause is nonrestrictive because there is no other money with which this money is being contrasted. It seems that the writer is emphasizing the fact that the money is what the actor earned *himself*; as a result, he should be able to do with it whatever he pleases.

Of course, these observations should be taken with a grain of salt given the fact that there are so few examples. It is possible, for instance, that the fact that these relative clauses begin with *hetwelk* and occur preverbally may just be features of formal written language. However, all the characteristics taken together are consistent enough to warrant further investigation.

3.4.4. Discussion

I will address the research questions posed in section 3.2 above in this subsection with respect to the Dutch data. The first set of questions are about the word order patterns over time. In subsection 3.4.1, we saw that the main break seems to occur between 14C and 15C. 13C and 14C both have a majority of VO orders while the centuries after 14C have a majority of OV orders. With statistics, we were able to establish four periods: 13C, 14C, 15C&16C&17C, and 18C. The logistic function let us know that the shift was relatively fast with a slope of -1.19 and that it took 5 centuries to complete with its midpoint just before 15C. There were only two centuries in which the order ORV occurred: 17C and 18C. This order combined with the word order distribution is being used as a diagnostic for underlying OV order, which must be present in these two centuries.

The distribution of the word orders was used to evaluate Ogura's (2001) proposal. As was mentioned at the end of subsection 3.4.1, the data from Dutch pose a number of problems for the hypothesis. The presence of VOXR orders is not predicted by Ogura's hypothesis, let alone the high percentage found in 14C. It is actually quite a big problem since the motivation for the head of a relative object to occur to the right of the verb is precisely to be adjacent to its relative clause. In this order, however, something intervenes between the two, a violation of Ogura's account.

Another problem that the Dutch data pose to Ogura's theory is the fact that the OVR order becomes more frequent after relative clauses have become subordinate to their heads. That relative clauses are subordinate to their head

can be seen in the frequency of VOR orders in 13C and 14C as well as the ORV orders of 17C and 18C. It is also very clear from the syntax of relative clauses, which clearly shows subordinate–clause, i.e., OV, syntax.

The second set of questions addresses heaviness, whether defined lexically or structurally, as a factor in the word order of relative objects. Lexical heaviness was shown not to be an important factor in determining the position of relative objects: the average length of preverbal relative objects is not significantly different from the average length of split, postverbal, or postverbal split relative objects. Nor is the average length of the heads of relative objects or their relative clauses significantly different in any position.

When the effect of structural heaviness was examined, there were mixed results. My data were compared to those of Burrige (1993), who also examined the position of verbal complements in the history of Dutch. The raw data for 14C are quite different: the heads of relative objects have a preference for a postverbal whereas other types of objects have a preference for a preverbal position. This observation is confirmed by statistics, which indicate that the distribution of these two types of objects is significantly different from one another. For 15C&16C&17C, however, the situation is not as clear. The raw data show that in the combined period as well as in each individual century, both types of object have an equal preference for a preverbal position. Again, statistics confirm this observation in all instances except for 17C, where there is a significant difference in the distribution of word order for relative objects versus other objects. Even though both types have a preference for a preverbal position, other types of objects are significantly even more likely to occur preverbally than the heads of relative objects. In this way, the situation for 17C seems to be different from the one in 14C, despite the fact that structural heaviness plays a role in word order patterns in both. Given this difference, it is not surprising that structural heaviness does not play a continuous role in the history of Dutch. It is strange, however, that there is such a difference between 17C on the one hand and 15C and 16C on the other. This may suggest that 17C should actually not be grouped with them.

Newness was the topic of the third set of questions. This was a little more difficult to investigate qualitatively because of the lack of repetition of the same relative object in the same text. However, the quantitative study was complemented with a qualitative investigation of the few instances of ORV order. First, when looking at the raw data for the quantitative part of the study, what is striking is the fact that there are no instances of definite relative objects in the OV position in 13C and 14C. These data show a clear tendency for definite relative objects to occur postverbally. Indefinite relative objects, however, have no strong preference for OV or VO in 13C while they do have an unexpected preference for VO in 14C. From these observations, we would expect that newness would play a role in 13C but not in 14C, though the role played by newness in 13C is the opposite of what we would have expected because

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all definite heads occur *after* the verb and not before. The statistics indicate that newness is not an important factor in either century. However, given the strength of the tendency in 13C, the addition of more data would probably give statistical significance. Recall, however, that the data from 13C suggest that newness should be defined in other terms to be useful, perhaps in terms of focus as suggested by the qualitative analysis. For 15C&16C&17C, we would also expect to see an effect of newness on word order: indefinite relative objects are far more likely to occur preverbally than definite relative objects according to the raw data. While the statistics do not confirm this, though, more data would probably show that it is significant.

The detailed examination of the three instances of ORV order (from 17C and 18C) revealed a number of interesting similarities among the examples that indicate that newness may play a role in determining the position of relative objects. All three examples shared the following four characteristics: the head of the relative object was definite, the relativizer was ‘determiner + *welk*’, the relative clause seemed to be nonrestrictive, and the relative clause seemed to be added for emphasis. Some of these characteristics are surprising while others match expectations. Particularly surprising is the observation that the relative clauses all seem to be nonrestrictive. One would expect relative clauses contained within the sentence brace to be restrictive because restrictive relative clauses are essential to the discourse and to identifying the head of the relative object and would thus be expected to have a stronger connection to the head than nonrestrictive relative clauses. Because the preverbal position is so uncommon for relative clauses, it is not surprising that they seem to be strongly emphasizing a particular aspect of their head. The placing of the constituent in an atypical position makes it more expressive and therefore would cause readers/speakers to pay more attention to it; this would be one way to mark a particular element in a sentence with focus.

Table 3.7 summarizes the characteristics of relative objects in Dutch per century. The results of the combined period are not reflected in this table; rather, the characteristics are based on the data of just that century. In the case of <VO (majority VO) and ORV, ‘+’ means the presence and ‘-’ the absence of that feature. For the other characteristics, ‘+’ means that statistics confirm

	13C	14C	15C	16C	17C	18C
<VO	+	+	-	-	-	-
ORV	-	-	-	-	+	+
Lexical	-	-	-	-	(+)	(+)
Structural	n/a	+ ₁	-	-	+ ₂	n/a
Newness	(+)	-	(+)	-	(+)	n/a

Table 3.7.: Summary of Relative Objects in Dutch

that the given feature is significant, ‘(+)’ means that the given feature is not statistically significant but that the data suggest that there is a strong tendency that would probably be confirmed with more data, and ‘-’ means that the feature is neither statistically significant nor is there any indication in the data that there is a tendency. Note, however, that with respect to newness, (+) indicates that there seems to be a strong tendency, but that the tendency found is the opposite of what we initially expected: definite relative objects appear postverbally more often than indefinite ones. The centuries that seem to have clusters of features in common, though no two are completely alike, are 13C and 14C, 15C and 16C, and 17C and 18C; this grouping is different from the original grouping established on the basis of only the word order distributions of relative object heads in subsection 3.4.1. Comparison with the English data should help out with some of the discrepancies. Moreover, we will be able to get a clearer picture in Chapter 5 when we compare these results with that of directional phrases and naming objects.

3.5. English

In this section, I will focus on the data from the history of English. The primary concern here is the position of relative objects and how it develops over time. I start by investigating the distribution of the word order frequencies (OV and VO) over time in subsection 3.5.1. This is followed by an examination of the influence of heaviness in the position of relative objects in subsection 3.5.2. Heaviness is considered in three different ways: the word length of preverbal relative objects is compared to split and postverbal relative objects, my data on the position of relative objects is compared to data on the position of all objects, and the position of relative clauses with respect to the verb is compared in the different periods. These three comparisons provide quantitative as well as qualitative means to evaluate the influence of heaviness on word order. I discuss the evolution of the position of relative objects in the history of English in subsection 3.5.4.

3.5.1. Word Order

Figure 3.3 shows the frequency of the position of the head of relative objects with respect to the verb in English over time. Note that the O in this figure represents only the head of the relative object and does not take the position of the relative clause into consideration in this graph. This figure gives a clear picture of the development of word order in English: both OV as well as VO orders are allowed to varying degrees until ME3 where only VO orders appear. The OE2 period is the only period where there is an equal percentage of OV orders to VO. Thereafter, the VO orders increasingly dominate until it is the

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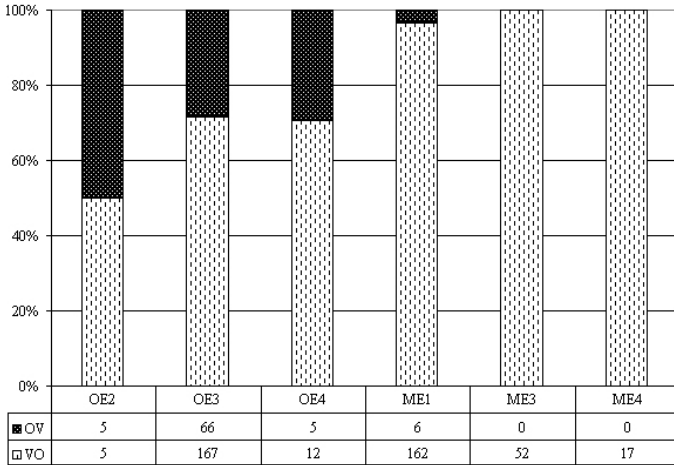


Figure 3.3.: Position of Relative Objects in English

only option. By statistically comparing the word order frequencies between the centuries, we can divide the different periods into two groups. OE2 and OE4 are not significantly different from one another and can be grouped together. OE3, however, is not significantly different from OE4, but it is significantly different from all other periods, OE2 included. I group it with OE2 and OE4 because it appears between these two periods, which are clearly not significantly different from one another, and because it is not significantly different from one of the two. ME1, ME3, and ME4 are not significantly different from one another, but they each are significantly different from the periods in the first group. Because ME3 and ME4 do not have word order variation, however, I will group them separately from ME1.

The logistic function of these data is presented in figure 3.4.⁸ Recall that the line with the dots represents the raw data and the smooth S-shaped curve is the logistic function. According to these calculations, the slope of the curve (i.e., the rate of change) is 0.68, a relatively slow change. The change takes 9.0 centuries to complete itself, and the midpoint of the change is around 900, in the middle of OE2. The range of the change suggests that the change starts in the mid-5th century and completes itself mid-14th century, just before ME3.

Table 3.8 gives the distribution of the four word orders ORV, OVR, VOR, and VOXR over time. As discussed in subsection 3.1.3 above, the occurrence

⁸Refer to subsection 1.4.3 in Chapter 1 for more information on the this test and its limitations.

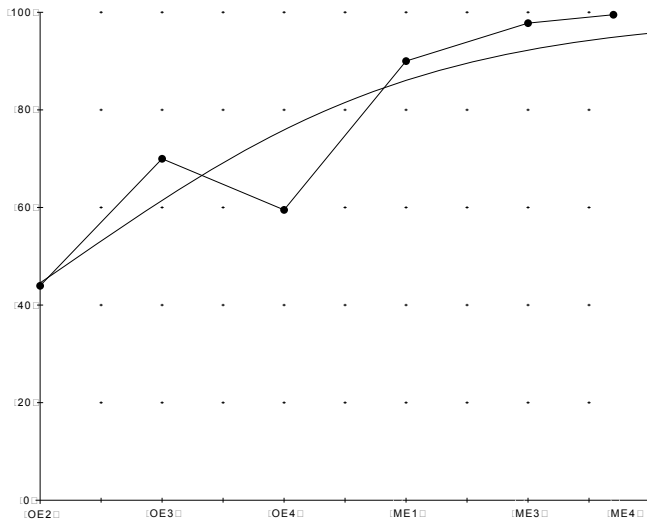


Figure 3.4.: Logistic Function of Relative Objects in English

of a relative clause inside the sentence brace is being used as a diagnostic of underlying OV grammar in this study. When we look at the position of relative clauses with respect to verbs in this table, we see, as expected, that the overwhelming majority of relative clauses occur to the right of the sentence brace, i.e., extraposed. We do find ORV orders in three periods, however: OE2, OE3, and ME1. In OE2 and OE3, we find a relatively high percentage of OV orders (in comparison to other periods), which taken together with the occurrence of ORV would seem to confirm analyzing them as having underlying OV. In ME1, however, OV orders clearly form a minority pattern, and the

Period	% ORV	% OVR	% VOR	% VOXR	<i>n</i>
OE2	20	30	50	0	10
OE3	4	24	65	7	233
OE4	0	29	65	6	17
ME1	1	3	90	6	168
ME3	0	0	98	2	52
ME4	0	0	94	6	17

Table 3.8.: Objects, Relative Clauses and Verbs in English

3. Relative Objects

one instance of a preverbal relative clause in ME1 is quite unexpected. Given the strong tendency of relative clauses to appear postverbally, the order ORV indicates that ME1 indeed has underlying OV grammar despite the overall word order patterns of this period. As will be discussed in subsection 3.5.3 below, this one example is exceptional in a number of ways, possibly indicating that this OV grammar is limited to special circumstances in much the same way as verb second in Modern English, which is retained with negative elements.

As I have already mentioned, the position of the relative clause with respect to the object plays a crucial role in Ogura's theory: the more often relative clauses in a given period occur next to the objects they are modifying, the more subordinate they are to objects. When we consider the data in table 3.8, we observe that trends seem to confirm Ogura's hypothesis. In all periods, the VOR order is the most frequent of the four word orders. This word order is the best to accommodate both subordinated relative clauses and the avoidance of center-embedding. However, split relative objects remain a sizable minority (between 30% and 35%) from OE2 to OE4. Starting from ME1, however, there is a very noticeable drop, with split relative objects forming only 9% of the total. These data more or less follow the pattern one would expect if Ogura's analysis is correct.

3.5.2. Heaviness

In the previous subsection, we observed the general trends in word order over time in English. Now, I investigate lexical and structural heaviness as potential factors in determining the position of the relative objects. For the investigation of lexical heaviness, I compare the average length of relative objects as a whole as well as their component parts, namely the heads and relative clauses, per position per century. Three different comparisons were made: the average length of relative objects in the different word orders, the average length of heads before and after the verb, and the average length of relative clauses before and after the verb. For structural heaviness, I collected data on the position of *all* nonpronominal objects in the same texts where the relative objects were collected. So as to make a clear distinction between relative objects and the other types, I subtracted the number of relative objects per position per century from the total since the relative objects would have been included in the search of all objects. In this way, we can more accurately see whether heaviness plays an important role.

Lexical Heaviness

Table 3.9 summarizes the data on the average length of relative objects in the various word order possibilities. The data in the table do not show much variation in the average lengths of relative objects per word order per period,

	ORV			OVR			VOR			VOXR		
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>
OE2	2	8.0	2.3	3	8.7	3.1	5	9.8	5.0	0		
OE3	10	7.2	2.7	56	8.8	4.5	150	9.8	7.4	17	12.4	6.1
OE4	0			5	4.6	0.6	11	12.3	7.7	1	19.0	
ME1	1	4.0		5	7.8	1.3	152	9.3	7.9	10	9.3	3.9

Table 3.9.: Average Number of Words in a Relative Object per Word Order in English

for the most part. The few exceptions are OE4 and ME1. In OE4, the average length in OVR is 4.6, which about a third of the average in VOR at 12.3 and about a quarter of the length in VOXR at 19.0. In ME1, the length in ORV at 4.0 is about half of the average for the other orders.

I compared these values with one another per period using an unmatched *t*-test.⁹ For instance, when looking at OE2, the average length of the relative object in the word order ORV (8.0 with a standard deviation of 2.3) was compared to that found for the word orders OVR, VOR, and VOXR. Afterwards, the data for the order OVR was compared to that of VOR and VOXR, and then VOR was compared to VOXR. This means that a total of six comparisons were made for this text: ORV versus OVR, ORV versus VOR, ORV versus VOXR, OVR versus VOR, OVR versus VOXR, and VOR versus VOXR. This was done for each period. Remember, if weight is an important factor in extraposition, then we expect that relative objects in the ORV order will be significantly shorter than that found in any other order. What we find is that for most of the periods, the lengths of the relative objects in the various orders is not significantly different.

In table 3.10, we see a comparison of the average length of relative object heads before and after the verb. There is not much difference between the

	OV			VO			<i>t</i>	<i>p</i> -value
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>		
OE2	5	2.2	0.5	5	3.0	2.2	0.47	> .05
OE3	66	2.2	0.8	167	2.7	1.1	0.00	> .05
OE4	5	1.4	0.6	12	2.4	0.8	0.01	> .05
ME1	6	1.8	0.8	162	2.6	1.7	0.07	> .05

Table 3.10.: Average Number of Words in Heads per Word Order in English

⁹Refer to subsection 1.4.3 in Chapter 1 for more information about this test.

3. Relative Objects

average lengths in any of the periods, so we would not expect any of these periods to be significantly different. The Fisher-Yates test confirms this observation: relative object heads to the left of the verb are not significantly shorter than those to the right.

When we look at the average length of relative clauses in the two positions given in table 3.11, we notice that there is more variation in these lengths. Though the averages in OE2 do not seem very different, the averages in OE3 and especially in ME1 seem to be more different from one another. The

	RV			VR			<i>t</i>	<i>p</i> -value
	<i>n</i>	\bar{x}	<i>SD</i>	<i>n</i>	\bar{x}	<i>SD</i>		
OE2	2	6.0	2.8	8	6.6	4.3	0.82	> .05
OE3	10	4.9	2.1	223	7.2	6.5	0.01	> .05
ME1	1	3.0		167	6.7	7.0		

Table 3.11.: Average Number of Words in a Relative Clause per Word Order in English

statistical test, however, indicates that the length of relative clauses on either side of the verb is not significantly different. Again, this may be a reflection of the lack of preverbal relative clauses rather than the actual state of affairs, especially in ME1.

Structural Heaviness

For English, I did a search of subordinate clauses in my corpus using the CorpusSearch 1.1 program for nonpronominal objects in order to compare these new data with my data on relative objects.¹⁰ In order to strengthen the contrast between the two types of objects, I subtracted the instances of relative objects from the total count of objects. These data are given in 3.12. These data seem to indicate a general tendency for relative objects to occur more often after the verb than general objects. For instance, relative objects occur to the right of the verb 69% of the time in OE2&OE3&OE4 versus 48% of the time for general objects. Distributions similar to this are found in both OE3 and OE4, where relative objects occur postverbally 70% and 71% of the time, respectively versus 50% and 48% of the time for general objects. OE2, on the other hand, has quite different distributions: relative objects occur postverbally 50% of time and general objects 24%, only half as often as relative objects. This may suggest that OE2 should be treated as a period on its own and not

¹⁰Recall from Chapter 1 that pronouns in the early stages of English are clitic in nature and almost always occur to the left of the verb. Including pronominal objects would have greatly increased the percentage of OV orders.

	Relative Objects		Objects		<i>p</i> -value
	OV	VO	OV	VO	
OE2 & OE3 & OE4	82	183	1540	1416	.00002
OE2	5	5	188	58	> .05
OE3	72	166	1280	1291	.00002
OE4	5	12	72	67	> .05
ME1	6	162	100	748	.0008

Table 3.12.: Relative Objects versus Objects in English

grouped together with OE3&OE4. In any case, since the percentages in each of these periods seem to be quite different from one another (between 20 and 25 percentage points difference), we would expect to see that the distributions are significantly different from one another. In ME1, however, the distributions do not seem to be so different: 96% of relative objects occur postverbally versus 88% of general objects, only a difference of 8 percentage points. When these distributions are statistically compared, they are shown to be significantly different in OE2&OE3&OE4 and ME1. There are, however, differences among the individual periods in OE2&OE3&OE4: the difference in distribution is only significant in OE3 and not in OE2 or OE4. Given the fact that OE3 has much more data than the other two periods, it seems that it overpowered the other two in making the combined data significantly different. Given that the distribution in OE4 is almost the same as in OE3 and OE2&OE3&OE4, however, this does not seem to be likely; rather, lack of data in OE4 and OE2 seem to be the more likely cause. This suggests a tendency for structurally heavy relative clauses to occur postverbally in OE4 that would probably be significant if there were more data. These results indicate that the interaction of factors influencing word order in OE2 is quite different from that in OE3 and OE4. Overall, though, these data show that structural heaviness plays an important role in determining word order in the early stages of English.

3.5.3. Newness

Newness is the next factor under investigation. Because there were no repetitions of the same relative object in the same text, the position of the relative objects with respect to newness will not be examined qualitatively. What follows is the quantitative study, wherein the distribution of definite and indefinite relative objects per position is compared per period, followed by an in-depth analysis of the twelve instances of ORV order.

Table 3.13 presents the distribution of definite and indefinite relative objects per position in the different periods. To determine whether a relative object

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	OE2 & OE3 & OE4		ME1	
	OV	VO	OV	VO
Definite	64	144	3	95
Indefinite	20	39	3	67

Table 3.13.: Position and Newness in Relative Object Heads in English

was definite or indefinite (or OV or VO, for that matter), I only looked at the head of the relative object and its position, not at the information or position of the relative clause. When looking at the raw data, it is clear that both definite and indefinite relative objects prefer the VO position in both OE2&OE3&OE4 and ME1. Moreover, their occurrence in the VO position is more or less the same within each period: 69% for definites versus 66% for indefinites in OE2&OE3&OE4 and 97% for definites versus 96% for indefinites in ME1. From these figures, we do not expect for the distributions to be significant in either period. In OE3 by itself, the pattern is the same as for OE2&OE3&OE4: 69% VO for definites versus 68% for indefinites. In OE2, there are not enough data (only 10 examples) to get a clear picture of the distribution; while 43% of the definites occur in VO position versus 67% of the indefinites, more data is needed to see if there are any clear tendencies. In OE4, in contrast, there is a clear pattern: 100% of the definites occur in VO position versus 58% of the indefinites. Given these numbers, we would expect for newness to play a significant role in OE4 though not in the way expected; instead of new constituents, i.e., indefinites, occurring more often in VO position than given constituents, i.e., definites, we see that there is a very strong tendency for the reverse.

When the Fisher-Yates test is used to compare the data per period, most of the observations are confirmed. Newness does not play an important role in determining the position of relative objects in OE2&OE3&OE4, OE2, OE3, or ME1. The statistics also show, however, that the distribution of the data in OE4 is not significant, against expectations. In this case, the low numbers seem to be a factor; most probably, more data would statistically confirm that newness is significant in OE4.

The previous data suggest that newness does not play an important role in determining the position of the head of relative objects. Now I will examine a few instances of ORV order, given in (60), to see if this rare word order is in some way motivated by newness. Only a selection of the ten instances from OE3 will be presented, but the discussion will be based on examination of all of the examples.

- (60) a. *ðæt ðu ðone wisdom ðe ðe God sealde ðær ðær ðu*
that you the wisdom which you God gave there there you

- hiene befæstan mæge**, georne *befæste*
 it use may eagerly may-apply
 ‘that you may apply the wisdom, which God has given you, there where you may use it’ (OE2, *prefcura*)
- b. *ðæt* we eac sumæ bec, **ða ðe niedbedearfosta sien**
 that we also some books those which most-necessary are
eallum monnum to wiotonne, *ðæt* we ða on *ðæt*
 all men to know that we them into that
geðiode wenden ðe we ealle *gecnawan mægen*
 language translate that we all know may
 ‘that we also may translate some books that are the most necessary for all men to know, that we translate them into the language in order for us to know’¹¹ (OE2, *prefcura*)
- c. [p]a het Sebastianus þone hæðenan þegn *þæt* he
 then commanded Sebastian the heathen servant that he
þa hæftlingas þe he heold on þam cwearterne *gebrohete* to
 the prisoners who he held in the prison brought to
 his spræce
 his speech
 ‘Then Sebastian commanded the heathen servant to bring the prisoners whom he held in the prison to his speech’ (OE3, *aelive*)
- d. *gif* we nu ðeowtlicera weorca. **þæt sind synna** *geswicad*
 if we now servile works that are sins yield
 ‘if we now yield to servile works that are sins’ (OE3, *cathom2*)
- e. and feawa is ðæra manna *ðe mage* ealle ða halgan bec. **ðe**
 and few is of-the men who may all the holy books which
þurh Godes muð. oððe ðurh Godes gast gedihete
 through God’s mouth or through God’s spirit composed
wæron *fulfremedlice þurhsmeagan*
 were completely investigate
 ‘and there are few men who may completely investigate all the holy books, which were composed through God’s mouth or through his spirit’ (OE2, *cathom2*)

When we take a close look at the relative objects in the preverbal position, we can make some interesting observations. First, a majority of the heads

¹¹Note that the relative object in this example appears in a clause without a verb. The clause containing the relative object seems to have been a false start and is followed by a repetition of the clause. In the repetition, the relative object is not repeated; rather, a resumptive pronoun, *ða*, is used. I included this example in the study because even though the original clause was not complete, it is clear from the beginning that if it had been completed, the relative object would have preceded the verb.

3. Relative Objects

(10 out of the 12 in OE2 and OE3) are definite. Second, a majority of the relative clauses (9 out of the 12) begin with the relativizer *þe*, though being the most common relativizer, this is not surprising. Two other relativizers are found: there are two instances of a form of the demonstrative *se* and one of *se þe*, the combination of the demonstrative and *þe*. It is more difficult to establish whether these relative clauses should be interpreted as restrictive or nonrestrictive—for most of them, either interpretation is possible and depends on what the writer thought the reader knew. Oftentimes, the information in the relative clause has not been mentioned elsewhere in the preceding discourse, but it can still be best interpreted as given information. This is exemplified by (60e), where the information in the relative clauses seems to be additional but nonessential—presumably, for a Christian, what makes books holy is that they are composed in some way by God. The fact that many of these instances share a number of features indicates that this position has certain characteristics associated with it, but more data are needed to confirm this observation.

The example from ME1 is given below in (61). This order is unexpected in this period, and investigating it reveals that it is exceptional in a number of ways.

- (61) Maked̥ twa þinges *þt þu al þt þu dest do* hit oðer for luue
Make two things that you all that you do may-do it or for love
ane of god. Oðer for oðres god
one of god or for other's good
'Make two things that you may do all that you do either for a love of
God or for the good of others.' (ME1, ancriw2)

One, the object is *al* 'all', a quantifier. Quantifiers and negative elements are known to keep an OV order longer than any other type of object in English (Moerenhout & Van der Wurff 2005). Two, the relative clause itself is quite short (in other words, it is phonologically light), comprised only of a relative pronoun (*þt* 'that'), a subject pronoun (*þu* 'you'), and a filler verb (*dest* 'do'). Finally, this relative object, short though it is and occurring right in front of the main verb *do* 'do', is resumed directly after the main verb by the pronoun *hit* 'it', thereby retaining a VO order. These observations show that the nature of this order in ME1 is different from that found in OE2 and OE3.

3.5.4. Discussion

I will now address the research questions posed in section 3.2 above with respect to the English data. The first set of questions are about the word order patterns over time. In subsection 3.5.1, we saw that the main break seems to occur between OE4 and ME1. OE2 is the only period where OV forms a sizable percentage; all other periods have either majority or exclusive VO order. With statistics, we were able to establish three periods: OE2&OE3&OE4, ME1,

and ME3&ME4. The logistic function of the data reveals that the shift was relatively slow with a slope of 0.68 and that it took 9 centuries to complete with its midpoint around 900, in the middle of OE2. There were three centuries in which the order ORV occurred: OE2, OE3, and ME1. This order combined with the word order distribution is being used as a diagnostic for underlying OV order. The combination of these two factors indicate that OE2 and OE3 have underlying OV grammar, but the word order distribution in ME1 brings into question the validity of this conclusion.

The distribution of the four possible word order patterns was used to evaluate Ogura's (2001) theory on the cause of the word order shift in English. Considering the fact that Ogura's theory is based on data from English, it is not surprising that these data corroborate with her analysis. It is still not clear, however, how a fairly rare subtype of object can influence the underlying syntax of the language.

The second set of questions addresses heaviness, defined both lexically and structurally, as a factor in the position of relative objects. Lexical heaviness was shown not to have a significant influence on the word order patterns of relative objects: the average length of preverbal relative objects is not significantly different from the average length of split, postverbal, or postverbal split relative objects. Nor is the average length of the heads of relative objects or their relative clauses significantly different in either position.

When the effects of structural heaviness was examined, there were mixed results. Both OE3 and ME1 (as well as OE2&OE3&OE4) showed statistically significant heaviness effects on the position of relative objects: in both periods, relative objects occurred significantly more often postverbally than general objects. The distribution of relative objects in OE2 and OE4, however, did not show a statistically significant difference from general objects despite the fact that the raw data indicate tendencies to the contrary. The tendency in OE2, though, is different from the others. While relative objects show a stronger preference for *postverbal* positions than general objects in the other periods (roughly 70% for relative objects versus 50% for general objects in OE3 and OE4 and 96% versus 88% in ME1), this is not the case in OE2; rather, it is the general objects that show a stronger preference for *preverbal* positions than relative objects (50% for relative objects versus 76% for general objects). Despite the differences between OE2 on the one hand and OE3, OE4, and ME1 on the other just discussed, these situations can be related to heaviness.

Newness was the topic of the third set of questions. As was mentioned above, this was a little more difficult to investigate qualitatively because of the lack of repetition of the same relative object within the same text. However, the quantitative study was complemented with a qualitative investigation of the few instances of ORV order. First, when looking at the raw data for OE2&OE3&OE4 and ME1, both definite and indefinite relative objects seem to prefer a postverbal position with neither type seeming to occur more frequently postverbally. This

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would indicate that newness does not play a role in determining word order, and this is statistically confirmed by the Fisher-Yates test.

The detailed examination of the twelve instances of ORV order in OE2 and OE3 revealed two characteristics shared by the majority of the preverbal relative objects: most of the heads (10 out of the 12) are definite, and the most common relativizer (9 out of the 12) is *þe*. The fact that the majority of the heads are definite is not surprising if newness is indeed a factor: definiteness indicates that an entity is known by the participants, thus given information. The example from ME1, in contrast, is exceptional on a number of accounts.

Table 3.14 summarizes the characteristics of relative objects in English per century. The results of the combined period are not reflected in this table; rather, the characteristics are based on the data of just that century. In the case of <VO and RV, ‘+’ means the presence and ‘-’ the absence of that feature. For the other characteristics, ‘+’ means that statistics confirm that the given

	OE2	OE3	OE4	ME1	ME3	ME4
<VO	-	+	+	+	+	+
RV	+	+	-	+	-	-
Lexical	-	-	(+)	(+)	n/a	n/a
Structural	(+)	+	(+)	+	n/a	n/a
Newness	-	-	(+)	-	n/a	n/a

Table 3.14.: Summary of Relative Objects in English

feature is significant, ‘(+)’ means that the given feature is not statistically significant but that the data suggest that there is a strong tendency that would probably be confirmed with more data, and ‘-’ means that the feature is neither statistically significant nor is there any indication in the data that it might be. Remember that the (+) role that newness plays in OE4 is the opposite of what we initially expected. The periods that seem to have clusters of features in common are OE2 and OE3, OE4 and ME1, and ME3 and ME4; this grouping is different from the original grouping established on the basis of only the word order distributions of relative object heads in subsection 3.4.1. As we will see, comparing the results from English to the results in Dutch will help resolve some of the grouping issues. Moreover, we will be able to get a clearer picture in Chapter 5 when we compare these results with that of directional phrases and naming objects.

3.6. Comparison

Now that we have a clear understanding of the evolution of relative objects in Dutch and English, we can more accurately compare the two languages and see

what this reveals about them as well as about language change in general. I will treat the subsections in the same order as they appear in the previous two sections.

3.6.1. Word Order

The evolution of the word order patterns of relative objects in Dutch and English have clear and opposite developments. In the early period of Dutch, namely 13C and 14C, both OV and VO orders are allowed with a high frequency of VO patterns, 64% and 95%, respectively. Both orders are still found in 15C, 16C, and 17C, but there is a shift wherein OV orders are more frequent. By 18C, OV orders become the only available order. Statistical comparison of these centuries shows that four separate periods can be distinguished in Dutch: 13C, 14C, 15C&16C&17C, and 18C. The English OE2 period has the lowest frequency of VO patterns of any of the English periods at 50%; there is a noticeable increase in VO orders in OE3 to 71%, which seems comparable to the frequencies found in 13C of Dutch. This high frequency of VO orders eventually gives way to a rigid VO order in English. Through statistical comparison, three separate periods could be established: OE2&OE3&OE4, ME1, and ME3&ME4.

If Dutch has no period of competing grammars, then it would seem that even an underlyingly OV language can allow a very high percentage of VO orders. How, then, do the frequencies of the different periods in Dutch compare to those of the different stages of English? When the distribution of OV and VO orders in the two languages are statistically compared with one another using the Fischer-Yates test, we see that for the most part, the patterns in each of the periods are for the most part significantly different from one another, with a few not too unexpected similarities. Dutch 13C is not significantly different from OE2&OE3&OE4 nor from any of the individual periods. Considering that these periods in English are significantly different from the following periods, it is not surprising that they would be so similar to the early period of Dutch. An interesting contrast in this English period, however, is OE2. Unlike OE3 and OE4, which are significantly different from all the other centuries in Dutch, OE2 is not significantly different from 15C, 16C, or 17C. This may indicate that OE2 is more OV than OE3 or OE4 and perhaps that it should actually be grouped by itself. Interestingly, Dutch 14C is not significantly different from ME1, ME3, or ME4. This is surprising because one would normally expect that the word order patterns in any period of Dutch, a language that stays OV throughout its history, would significantly differ from the periods of English with the highest percentage of VO, especially those which only have VO as an option. Though the high frequency of VO in Dutch 14C can be in part attributed to heaviness as we saw in subsection 3.4.2 above, it is not clear why this is the only period in Dutch where heaviness seems to play such a prominent role in the position of relative objects.

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What these data taken together indicate is that the system underlying the early periods of Dutch and the early periods of English are not significantly different from one another though the chronology differs between the two languages. The comparison indicates that the system in OE2 is similar to that of 15C, 16C, and 17C, centuries in Dutch where there is a clear transition from the majority VO stages of 13C and 14C and the rigid OV stage of 18C. In English, this progresses to OE3 and OE4, which are both similar to Dutch 13C, a period where argument extraposition still forms a major part of the system. ME1, then, seems to be the stage in English that is likely to have had competing OV and VO grammars. The one striking exception is 14C in Dutch; this century seems very exceptional because of its very high frequency of VO orders. These data and comparisons suggest that the system in 14C Dutch is quite different from the other centuries though it is not clear what happened or why. Overall, these data support the divisions previously established for Dutch while it shows that the English divisions require some modification, namely by separating OE2 from OE3&OE4, because of differences in the interaction of factors influencing word order.

When we consider Ogura's (2001) analysis, we see that whereas the development in the history of English seems to support the analysis, the Dutch data pose a number of problems. In Dutch, the development moves away from a period where the relative object is combined and appears to the right of the verb to a period where, despite the relative clause's clear subordination to its head, relative objects occur more often split with the head to the left of the verb and the relative clause to the right. Moreover, the occurrence of the orders ORV and VOXR also seem problematic for her analysis, the former a violation of center-embedding and the latter a lack of adjacency between the relative clause and its head despite seeming subordination of the relative clause to the head as evidenced by the object appearing to the right of the verb. There are also a few examples of multiple center-embedding, which would also show that center-embedding is not as difficult to process as Ogura makes such instances seem.

3.6.2. Heaviness

Heaviness was investigated according to two definitions: lexical and structural. Because relative objects are heavy by all definitions of heaviness, modified methods were used to calculate and compare these, as will be discussed below.

A look at the raw data seemed to indicate that lexical heaviness does not in general play a role in determining the position of entire relative objects in either Dutch or English in any period. The few exceptions were 17C in Dutch and OE4 and ME1 in English; in these periods, the average length of relative objects in the ORV and/or OVR positions seemed to be much shorter than the average length in other positions. By statistically comparing the average lengths,

however, it was found that preverbal relative objects are not significantly shorter than relative objects in any other position in either Dutch or English.

This same comparison was made for the heads of these relative objects and for the relative clauses. Again, the raw data did not seem to indicate that lexical heaviness generally played an important role in any period of either language with a few exceptions. The average length of OV heads in 13C and 15C of Dutch seemed to be much shorter than VO heads, and the average length of OV relative clauses in OE3 and ME1 of English seemed to be much shorter than VO relative clauses. As with the whole relative objects, the statistical comparison showed that the average lengths in the two positions were not significantly different from one another.

These comparisons confirm that lexical heaviness does not have an influence on the position of relative objects in any stage of Dutch or English. There were, however, a few instances where the raw data seemed to indicate otherwise, and the amount of data probably also had an influence on the results. I will return to these issues in Chapter 5 when all three constructions are compared with one another.

Because relative objects are always structurally heavy by definition, I could not compare the distribution of “complex” relative objects with “simplex” ones, which do not exist. Therefore, a modified version of my method of comparison was used to be able to investigate the influence of structural heaviness; in this case, the distribution of relative object heads was compared to that of all nonpronominal objects in general. This was done in Dutch by comparing my data on relative objects with Burridge’s (1993) data on *all* objects and in English by extracting *all* nonpronominal objects. What we see is that Dutch and English differ with respect to the influence of structural heaviness. In Dutch, structural heaviness does not consistently play a role throughout the early period; it is only significant in 14C and 17C but not in 15C or 16C. In English, in contrast, structural heaviness plays a consistent role throughout the early periods, from OE2 to ME1, though it is not statistically significant in some of these periods. In both languages, however, the results of these comparisons bring into question the initial period divisions established in subsections 3.4.1 and 3.5.1; it seems that 17C should be separated from 15C&16C&17C and OE2 from OE2&OE3&OE4, both due to significant difference in the distributions of relative objects versus general objects. I will return to these issues in Chapter 5 when the data from relative objects will be compared to that of directional phrases and naming objects. The tendencies in this section, however, indicate considerable differences between Dutch and English relative objects with respect to the influence of structural heaviness on their position, which will be discussed in section 3.7 below.

3.6.3. Newness

In this study, newness is defined by indefiniteness according to Van Kemenade & Los (2006a). If newness plays an important role in word order, then we expect indefinite relative object heads to occur after the verb significantly more often than before the verb. The data seemed to suggest that newness would play an important role in word order in some periods of Dutch and English: in Dutch 13C, 15C, 17C, and 15C&16C&17C and in English OE4. The statistical comparison, however, did not show any significant difference in any of the distributions. Again, we have a situation where the tendencies found in the data do not seem to be confirmed by statistics, perhaps due to the lack of data, a situation to be resolved when relative objects are compared to directional phrases and naming objects in Chapter 5. Based on the tendencies, however, it seems that newness plays a fairly continuous role throughout the early period of Dutch but not in English.

The qualitative analysis of the instances of ORV, especially in Dutch, seemed to point toward newness indeed being a relevant factor. All of the instances of ORV shared a number of characteristics in each language. One of the characteristics was shared between the two languages, namely the fact that most of the heads were definite. The other characteristics, however, differed: first, the relativizer in Dutch was determiner + *welk* whereas in English, it was just *be* without a preceding determiner, and second, the relative clauses in Dutch all seemed to be instances of nonrestrictive relative clauses with an emphasizing function whereas the English relative clauses were not consistently nonrestrictive or restrictive nor did they seem to have a special emphasizing function.

The data in this section seem to indicate underlying differences between Dutch and English relative objects with respect to the influence of newness, or rather focus, on their position.

3.7. Concluding Remarks

I have discussed my data on various aspects of the position of relative objects in Dutch and English. I compared the results of each language and found that there are a few similarities between the two but also a number of apparent differences. In Dutch, there seem to be four distinguishable periods, though this is more the result of the exceptionality of 14C, a century with an overwhelming majority of VO orders, than perhaps actual differences among the various centuries. 15C and 16C definitely form one group because they share a number of features. Not only are the distributions of relative object heads in the two centuries not significantly different from one another, but neither century is significantly different from 13C or 18C, suggesting that they are a sort of transition period

between the two, nor does either century show any tendency toward lexical or structural heaviness as an important factor in determining the position of relative objects. 14C, as we saw above, is very exceptional on a number of accounts: it has a very high percentage of VO orders; its distribution of relative object heads is significantly different from all other centuries in Dutch but not significantly different from ME1, ME3, or ME4; it is only one of two centuries, the other being 17C, where structural heaviness plays an important role in determining the position of the relative object heads; and again it is only one of two centuries, the other being 16C, where there is no indication that newness plays a role. These suggest that the system of 14C is quite different from the other centuries and that it should be in a group by itself. While 13C is not significantly different from 15C or 16C, comparisons with English indicate that it forms a period on its own—unlike either 15C or 16C, the distribution of relative object heads in 13C is not significantly different from OE3 or OE4. This seems to indicate that argument extraposition is fully functional in 13C but that it is in the process of being lost in 15C and 16C. 18C forms its own group; it is the only century where relative object heads are limited to one position, namely OV, and though it is not significantly different from 15C or 16C, it is significantly different from all the periods in English. 17C poses some problems for this method of grouping. While the distribution of its relative object heads is not significantly different from 15C or 16C, it is significantly different from both 13C and 18C, two centuries which are not significantly different from 15C and 16C. Moreover, the position of relative clauses in 17C are clearly influenced by structural heaviness while this is not the case in 15C or 16C. For the moment, I will save grouping 17C until Chapter 5 where relative objects will be compared to directional phrases and naming objects.

On the basis of both internal and external comparison, there seem to be three identifiable periods in English. ME3 and ME4 form one group: neither period allows OV orders, and they are both significantly different from all other English periods except ME1 as well as from all Dutch centuries except 14C. Because relative objects were limited to VO positions, there is no influence of heaviness or newness on their position with respect to the verb. OE3 and OE4 also seem to form a cohesive group: they are not significantly different from one another or from Dutch 13C, but they are significantly different from the other periods and centuries of English and Dutch. The only exception is that OE4 is not significantly different from OE2. There is, however, evidence from the comparisons with Dutch that strongly suggests that OE2 should be treated separately from OE4: while neither OE2 nor OE4 is significantly different from Dutch 13C, OE2 differs from OE4 in that it is not significantly different from Dutch 15C, 16C, or 17C. This indicates that OE2 has a stronger tendency toward surface OV than OE4, which may suggest differences between the two periods. ME1 also should be treated separately. It is not significantly different from ME3, ME4, or, similarly to them, Dutch 14C, but it is significantly different

3. Relative Objects

from the other periods in English as well as all the other periods in Dutch, again like ME3 and ME4. The major point of departure, however, is the fact that there is one instance of ORV order in ME1, which is being used as a diagnostic for underlying OV grammar. This would seem to indicate that ME1 may have both underlying OV, as evidenced by the admittedly exceptional instance of ORV order, as well as underlying VO orders, as evidenced by its statistical similarity to ME3 and ME4.

From this discussion, we have been able to establish different periods in the history of Dutch and English with respect to relative objects. The periods in both languages follow the patterns that one would expect: similar developments but chronologically different. Despite the similarities, however, there are a few points where the languages seem to differ: newness seems to have a tendency to influence word order in Dutch throughout its history, though not continuously, while it only seems to be a potential factor in only one period in English. Moreover, structural heaviness plays a consistent role in the history of English but not in Dutch. These points show that, at least with relative objects, there were already differences between the two languages from the beginning; these initial differences between the two languages may indicate that the Celtic languages of Britain had an earlier and more significant impact on Old English than normally acknowledged, though recent work in this area would further support this hypothesis (see, for instance, Filppula *et al.* (2002) and Filppula *et al.* (2008)). In Chapter 5, the data from relative objects will be compared to those of directional phrases and naming objects; this will help to strengthen any generalizations and conclusions we can make about the two languages.

4. Naming Objects

In chapters 2 and 3, I examined the development of directional phrases and relative objects, respectively, in the history of Dutch and English. Directional phrases serve as the control group for the ‘normal’ development of the position of arguments over time while relative objects, which were described in the literature on (predominantly southern) Middle Dutch as occurring in a VO configuration with an unusually high frequency in comparison to other types of arguments, were investigated as an instance where heaviness plays an important role in determining word order. I now turn to another type of argument that is also often cited in the literature on Middle Dutch as almost categorically appearing to the right of the verb, namely objects of naming verbs, hereafter *naming objects* (see 62a below; Blom 2002; Burrige 1993; De Meersman 1980; Ribbert 2005).

Burrige (1993), among a number of other researchers of Middle Dutch, has noted that naming objects occur almost categorically outside of the sentence brace. These scholars suggest that this phenomenon is related to pragmatics and information structure: naming objects often introduce new information into the discourse, i.e., the name of a participant. We know that these same naming verbs no longer allow their objects to extrapose in Modern Dutch, as can be seen in (62b) and (62c). The only grammatical option is for the object to occur within the sentence brace, as in (62d).¹

- (62) a. **een lant** *dat gheheiten es* **blomevenne**
a land that called is Blomevenne
‘a land that is called Blomevenne’ (13C, alke 1293 nov 25)
- b. ***een land** *dat genoemd wordt* **Blomevenne**
- c. ***een land** *dat wordt genoemd* **Blomevenne**
- d. **een land** *dat* **Blomevenne** *genoemd wordt*

By conducting a diachronic study of naming objects, I will be able to get a better idea of how the various factors determining word order—namely syntax,

¹In the examples throughout this chapter, I use the following conventions: the namer, i.e., the agent of the naming event, is underlined; the namee, i.e., the recipient of the naming event, is in bold; the name, i.e., the object of the naming event, is underlined and in bold; and the verbs and complementizers are italicized. Note that the *name* is not necessarily a proper name but can also be represented by an ordinary noun, as will become clear in some of the examples below. The term *naming object* refers to the name.

heaviness, and newness—interact throughout the history of Dutch. Naming objects lend themselves quite well to a detailed study of newness as a potential factor in word order patterns.² If we assume, as suggested in the literature, that newness is the main factor in the extraposition of naming objects, then we should see that the majority of postverbal naming objects are instances of new information and that at some point, its influence over the position of naming objects has to decrease and eventually disappear. Of course, we need to confirm that newness does indeed play a role in the extraposition of naming objects and not that the VO order is just a characteristic of this construction, free from any other factors. Heaviness is also often given as a factor in extraposition phenomena, particularly in the earlier periods of Dutch; we need to confirm whether this is indeed the case with naming objects and if it is, to see how heaviness is defined in Dutch and how it interacts with newness and syntax. However these constraints interact, it is clear from the literature that they combine to cause naming objects to occur postverbally with a high frequency in Middle Dutch.

Given the similar sensitivity of Old English word order to discourse factors (Van Kemenade & Los 2006a), one would expect a situation similar to that in Dutch with respect to naming verbs, yet no such generalization has been made in the literature. This suggests either that the behavior of naming verbs does not differ from other transitive verbs or that this generalization has simply been overlooked. Many of the factors determining word order suggested for Dutch have also been used to describe the Old English system; these include heaviness and newness. Examining naming verbs will not only allow us to determine whether these factors are indeed relevant but will also allow us to more clearly define how these constraints, if they are found to be important, interact with syntax and each other. If Old English treats naming verbs in the same way as Dutch, that is with an unusually high frequency of VO orders in comparison to other types of arguments, we expect to see a relatively high percentage of postverbal naming objects throughout its history, thereby making the major shift in English syntax from OV to VO less dramatic with respect to naming verbs. If this is not the case, then we expect to see a development similar to other types of transitive verbs—i.e., a gradual increase in the postverbal position of naming objects over time.

Combining the data of this chapter with the results of the other types of arguments already investigated, i.e., directional phrases and relative objects, each of which is representative of a different factor, will give an accurate picture of the syntactic shift in Dutch and English by allowing accurate determination of when the word order becomes rigid; this comparison will occur in Chapter 5.

²Note that since naming objects are generally names and hence never indefinite, I use criteria that differ from directional phrases and relative objects to determine whether a naming object is new or given. Refer to subsection 4.3.4 below for specific details of these new criteria.

If we assume that all of these arguments reduce their word order possibilities as the result of the same shifting factors, then, according to the Constant Rate Hypothesis, we also have to assume that they will do so at a similar rate during a similar period (Kroch 1989). Given the high frequency with which naming objects occur postverbally in Middle Dutch, they should continue to occur more often in VO orders than the other two argument types until the shift to a rigid OV grammar is completely implemented.

In section 4.1, I begin with a discussion of the two types of naming verbs under investigation: transitive naming verbs such as ‘to name’ or ‘to call’ in subsection 4.1.1 and the inherently passive naming verb derived from the originally transitive proto-Germanic **haitan*₁ ‘to call’ (as in Modern Dutch *heten*₂ ‘to be called’) in subsection 4.1.2. The research questions of the study are formulated in section 4.2. Section 4.3 is an explanation of modifications to the methodology used in collecting and categorizing the data. Sections 4.4 and 4.5 are investigations of the facts for Dutch and English, respectively. The data of the two languages are compared in section 4.6.

4.1. Naming Verbs

The Dutch and English naming verbs investigated in this study can be broadly divided into two types: transitive naming verbs (4.1.1) and the inherently passive naming verb descended from the proto-Germanic **haitan* ‘to call, to command’ (4.1.2).³ I will use the form **haitan* when referring to general properties of this verb that are relevant for all the daughter languages (or at least for both Dutch and English). If I use the language-specific form, i.e., *heten* for Dutch or *hātan* for English, I am referring to the specific properties of the verb in that particular language. Moreover, because there are two versions of **haitan*, namely a transitive and an inherently passive version, I will distinguish the two when necessary through the use of subscripts: subscript 1 as in **haitan*₁ refers to the original transitive version while subscript 2 as in **haitan*₂ refers to the later and derived inherently passive version. This subscript distinction will also be used for the language specific versions when necessary. As there is only one inherently passive naming verb, most of the verbs under investigation fall under the first type. For each type, I describe the relevant syntactic properties (the elements forming part of the construction, the ability of the construction to be passivized, etc.), and for **haitan*₂, I start with a general introductory discussion of the origin and development from proto-Germanic since this contributes to

³There is another type of naming construction, namely ‘one’s name is’, which is not considered in this study. Though this construction is similar to **haitan*₂ in that both can be analyzed as copulative constructions, it does not occur frequently in the data set of this study. Moreover, it was not mentioned in any of the studies on Middle Dutch as being particularly exceptional with respect to word order.

the unique characteristics of this verb. I will discuss the word order possibilities of these constructions in the language-specific sections below, i.e., section (4.4) for Dutch and section (4.5) for English.

As will become clear in the following sections, the constructions available for the two types differ in that the reflexes of **haitan* develop an inherently passive meaning in addition to its original active meaning, which is eventually lost. Despite this significant difference, however, these two types are investigated together as Burridge (1993), Blom (2002), and Ribbert (2005) all state that the objects of both types of verb occur with an unusually high frequency of VO orders in Middle Dutch.

4.1.1. Transitive Naming Verbs

Transitive naming verbs are what usually come to mind when talking about naming verbs and are the prototypical type of naming verb. They are found throughout the history of Dutch and English and are the only ones found in Modern English (which no longer has a reflex of **haitan*); they include English ‘to call’ and ‘to name’ and Dutch *noemen* ‘to name’.⁴ Other verbs with similar meanings have also been used in this function, such as Old English *cweðan* ‘to say’. In this section, I examine general properties of this group of verbs. Like the other verbs in this group, **haitan* begins as an active transitive naming verb but differs in that it develops an inherently passive meaning, which will be discussed in the following subsection.

Transitive naming verbs prototypically have three participants: the doer of the action of naming (the namer), the recipient of the action (the namee), and the name itself (the name). An example of such a construction is given in (63a). In such a construction, the namee and the name both refer to the same individual, i.e., the name gives additional information about the namee. (63b) is an example of the passive version of this construction. Note, however, that only the namee can become the subject of a passive clause and not the name

⁴Both Dutch and English have reflexes of the verb ‘to name’. This verb is derived from the noun ‘name’, an originally *n*-stem in proto-Germanic. This is exemplified by the Gothic *namō*. In order to form a verb from a noun, proto-Germanic had the possibility of adding the suffix *-jan* to the stem of the noun, a process inherited from proto-Indo-European; in the case of *namō*, this would have been *namn-*. In Gothic, this resulted in *namnjan*. Reflexes of the *n*-stem origin of this word are found in the Middle Dutch form *nennen* and the Old English *nemn(i)an*. Notice the umlaut in the stem resulting from the original denominative suffix *-jan*. We also find a new formation of this verb created from the nominative singular of the noun, a form without the *-n* in the stem, in Middle Dutch *namen* and Old English *namian*. Moreover, Middle Dutch had a verb, namely *noemen*, formed from the lengthened o-grade of the same nominal root. Being derived from a noun, all instances of these verbs are weak, i.e. they form their preterite tense through the use of a dental suffix instead of changes in the stem vowel. The fact that the original noun from which this verb was created remained in the daughter languages probably contributed to its resistance to developing a passive meaning like **haitan*₂.

(63c).

- (63) a. We_{namer} named him_{namee} John_{name}.
 b. He was named John (by us).
 c. *John was named he/him (by us).

The relationship between the namee and the name has been variously described (Lunsford 2003; Anderson 2004; Neeleman 1994; Matushansky , 2005, 2006). The multitude of analyses lets us know that this construction is structurally complex. At first glance, one may be tempted to say that the high frequency of VO orders may be due to the complexity of such structures, which seems quite reasonable. The high occurrence of VO orders would be a means to accommodate the structural complexity of this construction. We would then expect, however, that other verbs with a similar structure, for instance ‘to consider’, also occur with a high frequency of VO orders in the Middle Dutch period, a generalization that has not been mentioned in the literature. Moreover, this does not account for why we find a similarly high frequency of VO patterns with the structurally different **haitan*₂.

Verbs in this group can also occur with a single direct object, as in example (64). Often, however, these instances have a different meaning than those occurring in the naming constructions discussed above, suggesting a different underlying structure. In this example, for instance, the meaning is ‘to list the members of the committee’ rather than ‘to give the members of the committee names’.

- (64) I named the members of the committee.

Moreover, there are few examples of transitive naming verbs with a single direct object in which the object itself occurs in the relevant clause in the data collected for this study. For these reasons, examples of this type are left out of this study and will not be discussed further.

4.1.2. **haitan*₂

The naming verb that descends from proto-Germanic **haitan* ‘to call, to command’ differs from the transitive naming verbs discussed above in that it develops a passive meaning ‘to be called’ that, once developed, initially co-occurs with the active meanings, which are eventually lost. Morphological evidence in Old English further supports the fact that this verb not only has unique features but is from the beginning strongly associated with passive voice. Note that there are two versions of this verb in the earlier stages of both Dutch and English: a transitive version (represented by **haitan*₁) with all of the properties of the transitive naming verbs described above in 4.1.1 and the inherently passive version (represented by **haitan*₂) described in this section. This divergence is the result of the historical development of this verb, which will now be discussed.

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From the first attestations of Germanic, this verb already had a variety of meanings: ‘to call by name’, ‘to name’, ‘to call to come or do something’, ‘to bid’, ‘to command’ (OED online). According to the entry on *heten* in the *Etymologisch Woordenboek van het Nederlands* (EWN), it is not entirely clear which of these meanings was the original since they are all found in even the earliest stages of the Germanic languages. One thing that is clear, however, is that we only have **haitan*₁ in the beginning; the passive meaning of this initially active verbal stem is a later development.

The reflexes of **haitan* are found throughout the Germanic family, and this verb originally starts as a strong transitive verb belonging to a class that forms its preterite by reduplicating part of the verbal stem, a process that is inherited from proto-Indo-European.⁵ In Germanic, Gothic is the only language that clearly preserves this, as shown in (65) (OED s.v. ‘hight’; EWN s.v. ‘heten’; Robinson 1992, 61; Meillet 1917, 138-141; Wright 1966, 146-149; Bennet 1980, 25).

- (65) a. *háitan* ‘to call, to order’
b. *haiháit* ‘(s/he) called, (s/he) ordered’

No instances of verbal reduplication are found in the history of Dutch and only a few relics can be found in Old English, among them in the verb *hātan*, as seen in (66b)⁶ (Robinson 1992, 214-215 and 161, respectively; Meillet 1917, 138-141). This vestigial reduplicated preterite is found alongside a strong, non-reduplicated preterite, shown in (66c) (Robinson 1992, 161; Meillet 1917, 138-141).

- (66) a. *hātan* ‘to (be) call(ed), to order’
b. *heht* ‘(s/he) (was) called, (s/he) ordered’
c. *hēt* ‘(s/he) (was) called, (s/he) ordered’

The class to which this verb belongs itself, however, does not seem to play a role in its further development. However, the fact that it is one of the few verbs in Old English that preserves this ancient means for forming the preterite contributes to the uniqueness of this verb.

Unlike the other Germanic languages, Gothic preserves passive inflection on most verbs, albeit only in the present tense. The third person singular and plural present passive forms of the verb *háitan*, for example, are *háitada* ‘(s/he) is called’ and *háitanda* ‘(they) are called’, respectively.⁷ The other Germanic languages lose this synthetic passive, having as a result to form the passive

⁵Verbal reduplication was originally a means of expressing the perfect and can be seen, for example, in Sanskrit *riréca* or Greek *léloipa*, both meaning ‘(I) left’ (Meillet 1917: 138).

⁶A few other Old English verbs also retain relic reduplication, for instance *lācan* ‘to play’, which has *leolc* as its preterite (Robinson 1992: 161).

⁷Given that the passive voice ends in a dental suffix, one may think that it is syncretic with the preterite of weak verbs. This is, however, not the case as exemplified by the third

through periphrasis (Robinson 1992: 39, 62). Curiously enough, however, Old English preserves this older synthetic passive in only one verb, namely *hātan*. According to the OED, there were two forms for singular and plural passive, *hätte* and *hātton* respectively, and these forms were used both for the present and the preterite (OED s.v. ‘hight’; Mitchell & Robinson 2001, 111; Robinson 1992, 161-162; Meillet 1917, 126-127, 129). This retention in Old English again suggests the unique properties of this verb; furthermore, it shows that this verb was quite strongly associated with passive voice for Germanic speakers.

As already mentioned, the original Germanic inflection for passive voice is lost in all the daughter languages except for Gothic and only vestigially preserved in Old English *hātan*. The strong association of this verb with passive voice is also evident in Dutch; even though Dutch does not retain a synthetic passive form, this verb most often occurs periphrastically in the passive voice, which contrasts with the verb *noemen* ‘to name’ where the active voice is more common. In the daughter languages except for Gothic, the passive *meaning* of **haitan*, namely ‘to be called’, combines with the originally active meaning ‘to call’ despite the loss of the passive inflection. This results in the reflexes of **haitan* in the daughter languages meaning not only ‘to call’ but also ‘to be called’. In many of the daughter languages, the passive meaning is so strong that it eventually ousts the original active meaning, as is the case in Modern Dutch and Modern German, a tendency that is evident even in the older stages. In fact, the entry for *heten* in the EWN says that the passive meaning, ‘to be named’, is the only one found for this verb in Old Dutch, though this is most probably a result of the lack of texts from this period. In Middle Dutch, however, we get both the active and passive meanings again as well as the meaning ‘to order/command’. In any case, these facts again show the strong association of this verb and passive voice, even in the languages where the synthetic passive is lost. All of these unique characteristics of this verb probably contribute to the development of its inherent passive meaning.⁸

person singular forms of the preterite and passive indicative of the verb *nasjan* ‘to save’, belonging to the first weak conjugation: *nasida* ‘(s/he) saved’ versus *nasjada* ‘(s/he) is saved’ (Wright 1966: 150).

⁸Why this particular verb attains a passive meaning that eventually takes over is not entirely clear. Perhaps a confusion arose between the reflex of the original inflected passive, represented by Gothic *hāitada*, and the preterite inflection of weak verbs. For instance, as we saw above, the strong third person singular preterite of Old English *hātan* is *heht* or *hēt* while the third person singular passive is *hätte*. If you compare this passive form with the third singular preterite of the weak verb *mētan* ‘to meet’, namely *mētte* ‘(s/he) met’, you see that the forms of the infinitives and corresponding passive/preterite parallel one another quite strikingly. After all, when confronted with a phrase as in (1), what is the difference between interpreting *hatton* as the passive form of a strong active verb *hātan*₁ ‘to call’ and interpreting it as the preterite of a weak verb *hātan*₂ that can have both an active meaning, ‘to call’, and a passive one, ‘to be called’?

1. On *ðæm bocum ðe hatton Apocalisin*
in the books which were-called Apocalypse

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All of the above mentioned facts contribute to the unique status of **haitan* in Germanic. However, one should remember that the inherently passive meaning of **haitan* is *in addition to* its active meanings in the early stages of Dutch and English. So not only do we encounter examples of the type found in (67a, Dutch), we also come across examples as in (67b, Dutch).

- (67) a. **een lant dat hiet dyhen campe**
a land that was-called Dyhen camp
'a land that was called Dyhencamp' (13C, koning 1296 aug 15)
- b. **dies name saltu heten Jhesum**
whose name shall-you call Jesus
'whose name you shall call Jesus' (14C, a'damlect)

This means that **haitan* not only has its own unique property of inherent passivity, it can also have the properties of the transitive naming verbs discussed above in subsection 4.1.1, namely a namer, a namee, and a name. For instance, **haitan*₁ can also be passivized, like the other transitive naming verbs, as seen in (68, Dutch).

- (68) **dat si ... gheheten worden vanden lieden meester**
that they ... called become from-the people master
'... that they ... are called master by the people' (14C, a'damlect)

The following properties distinguish **haitan*₂ from the transitive naming verbs: **haitan*₂ occurs with a namee (the subject) and a name (a subject

'In the books that were called Apocalypse' (c897, Gregory's Pastoralis, taken from OED s.v. *hight*, II.5.)

Though this hypothesis is plausible, it is undermined by the fact that **haitan* remains strong in the oldest stages of all of the attested daughter languages. This is not necessarily a problem if the strong preterite coexists with a 'weak preterite' derived from the inflected passive, but this is not the case as no such 'weak preterite' appears to be attested in any of the daughter languages. **haitan* seems to become weak only in Dutch (cf. High German *heißen/hieß*, Icelandic *heita/hét*, Danish *hedde/hed*) but not until around the 15C according to the EWN. Moreover, this account does not explain why this semantic shift only occurs with the verb **haitan* and not with other verbs since the potential to reanalyze the original passive inflection as a weak preterite, one would assume from this explanation, is just as plausible with other verbs. It does, however, provide a potential pathway for this semantic shift (the addition of the passive meaning).

Another probable (and admittedly stronger) contributing factor to this semantic shift is related to the original semantics of **haitan*. As mentioned above, **haitan* had two common meanings from the beginning: 'to call' and 'to command'. It is conceivable that in the beginning, a way to distinguish these two meanings was to associate one meaning, namely 'to command', with active voice and the other, 'to call', with passive. This seems to be confirmed in both Middle Dutch and Old English, where instances of **haitan* with the meaning 'to call' most frequently occur in the passive (this is actually the case for the other naming verbs as well). This reinforces the idea that this meaning is strongly associated with the passive. Despite this strong association, however, *namnjan* 'to name' resists receiving a passive meaning—this is probably due to its obvious relation to the noun *namō*.

complement); it differs from **haitan*₁ in that there is no namer nor is it possible for the namer to appear, unlike what is found with the passivized version of **haitan*₁ in (68) above. I have not come across any examples of **haitan*₂ in which the namer is expressed, and as far as I can tell, it is ungrammatical in Modern Dutch as seen in (69).

- (69) ***Hij** *heet* **Jan** *door zijn ouders*.
 he is-called Jan through his parents
 ‘He is called Jan by his parents.’

This suggests that while the meaning is similar to the passive version of **haitan*₁, it is actually quite a different construction altogether. In the construction with **haitan*₂, the name (subject complement) identifies or describes the namee (the subject). **haitan*₂ is described as a *koppelwerkwoord* ‘copula’ by *Algemene Nederlandse Spraakkunst* (ANS) and as an intransitive verb by the OED. Since the subject complement is necessary in this construction and gives more information about the subject of the sentence, ‘copula’ is a more accurate description and will be adopted for this study. In either case, whether analyzed as a copula or an intransitive verb, **haitan*₂ cannot be passivized as this process is limited to transitive verbs.

The characteristics of both types of naming verb have been discussed and are summarized in table 4.1. The two types differ in that **haitan*₂ never appears with the namer. Moreover, **haitan*₂ patterns more closely with the passivized

	Transitive Naming Verbs	<i>*haitan</i> ₂
namer	+	–
namee	+	+
name	+	+
passivization	+	–

Table 4.1.: Characteristics of Naming Verbs

version of the transitive naming verbs in that the subject of both constructions is the namee while the name remains the complement. Of course, a final point of difference is that as a verb with an inherently passive meaning, **haitan*₂ cannot be reformulated into a periphrastic passive, unlike the transitive naming verbs. Because of these properties, I assume that all instances of ‘to be’ or ‘to become’ plus the past participle of **haitan* are passivized versions of **haitan*₁.

4.2. Research Questions

The discussion in the previous sections and chapters lead us to five sets of questions regarding the development of the word order possibilities of naming

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verbs. In this chapter, we will only be considering the facts regarding naming objects; a comparison of directional phrases, object phrases, and naming objects will be discussed in Chapter 5.

First, given that we are looking at a number of different naming verbs in Dutch and English, what is the distribution of these verbs over time, how does this interact with the development of two types of naming verbs (transitive versus inherently passive), and does either of these have an influence on the word order possibilities of naming objects? In order to answer this, I will count the frequencies of each verb over time and the various functions it fills over time, i.e., whether it occurs in active, periphrastic passive, synthetic passive, or inherently passive contexts. This method should capture any shifts in the behavior of these verbs. In order to see if the lexical properties of the verbs themselves or the type and/or function of the verbs have an influence on word order possibilities, I will also check to see if particular verbs, types or functions correlate strongly with a particular word order.

A second question that arises is how similar (or dissimilar) the development of naming object word order is to other types of arguments. In the literature on Middle Dutch, naming objects seem more prone to extraposition than other types of objects. Does this hold for the Holland dialect of Dutch? At what point does this tendency shift to a more rigid OV order? Do naming objects in the earlier stages of English exhibit a similarly high frequency of VO orders? A frequency count of the word order patterns over time will give us a good indication of the developments in the two languages.

Third, in how far does heaviness play a role in determining word order? In this study, two types of heaviness are examined: lexical and structural. For lexical heaviness, I will look at the distribution of word lengths of naming objects on either side of the verb. This will provide an overall impression of the lexical weight allowed on either side of the verb. If lexical heaviness has any influence on word order, we expect that the word lengths allowed preverbally are shorter than those allowed postverbally. However, given the potential (though in some cases expected) discrepancy in the frequencies of the word orders, I will also examine the structural heaviness of naming objects on either side of the verb. If structural heaviness is an important factor, then we expect that postverbal naming objects are structurally more complex than those that appear preverbally. I will investigate this by looking at the structure of naming objects on either side of the verb. Another related expectation is that structural heaviness has an influence on the position of the (head of the) naming object: structurally complex naming objects occur significantly more often postverbally than preverbally. This will be examined by comparing the distribution of simplex and complex naming objects per position.

Fourth, how important is newness in determining word order? The literature suggests that newness is the reason for the high frequency of postverbal naming objects, but could this word order just be a feature of naming verbs and not

necessarily related to the factor newness? In order to determine this, I will compare the proportion of new to old naming objects per position per century. If newness plays an important role in determining word in any century, then we expect the proportion of new to old naming objects to be significantly higher in the postverbal position than in the preverbal position.

Finally, can we distinguish separate cohesive synchronic syntactic systems by considering word order, heaviness, and newness together? If so, what periods can we distinguish and what characterizes them? If there is a cohesive syntactic system, then we expect that the factors governing word order will be the same in adjacent centuries/periods, i.e., the extent to which heaviness and newness, if relevant factors, influence word order will be the same.

In sections 4.4 and 4.5, I will present the data and results for Dutch and English, respectively. Each of these language-specific sections ends with a subsection where I address the research questions posed here per language and which includes connections between word order, heaviness, and newness. The Dutch and English sections are followed by section 4.6 where I compare and summarize the results for both languages.

4.3. Methodological Considerations

In this section, I will briefly review the way in which I collected and categorized the data and the criteria I used to include or exclude clauses. For detailed information about the texts used in this study, refer to chapter 1.

4.3.1. Naming Verbs

I used the program MicroConcord version 1.0 to find instances of naming verbs (Scott & Johns 1993). I was able to reduce the effects of spelling variation, which mainly effects vowels, by searching for particular combinations of consonants, which remain constant. The program allows wildcards, represented by the symbol <*>, allowing one to search for words with a particular string of letters without regard for preceding, intervening, or following letters depending on where the <*> is placed with respect to the letters. For example, the search string <*>n*>m*> will sort out all words in which the letter <n> precedes the letter <m> with or without letters in the positions where the <*> occurs. This search string is helpful, for instance, in picking out the Dutch words *noemen*, *noemt*, *noem*, *genoemd*, *namen*, *naamt*, *naam* and *genaamd* as well as their spelling variations. Of course, the program included a number of irrelevant words (for instance, forms of the verb *nemen* ‘to take’), which needed to be taken out, but these were in general easy to distinguish from the naming verbs. In ambiguous instances where it was not immediately clear whether the word

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was an instance of a naming verb, a closer look at more of the context was sufficient to determine the intended word.

As mentioned in section 4.1.1, I only included instances where the naming verb occurred with the meaning ‘to give someone a name’. There were a number of instances of the Dutch verb *noemen* with the meaning ‘to name the members of a group’. These were excluded.

4.3.2. Word Order

Once the clauses containing naming verbs were collected, they had to meet a number of syntactic criteria in order to be included in the study. As discussed in chapter 1, I did not include main or conjunct clauses that contained only a single finite verb in order to avoid the potential effects of verb second, which would have resulted in increased VO orders. Moreover, instances where the naming object occurred in the first position (i.e., topicalized) were also excluded as the number of possible positions it can occupy is greatly reduced. In addition to these requirements, clauses needed to meet two additional criteria in order to be included: the naming object had to be a full noun phrase and not a pronoun, and the naming object had to occur in the clause containing the naming verb. There are no instances of the naming object being a pronoun, though in some instances the namee was a pronoun. As many of the examples occur in relative clauses, the naming object is occasionally found outside of the relevant clause, as in (70), though this order is rare.⁹

- (70) In dien tiden ghinghen Jhesus moeder ende **Joceph** *die* **siin vader**
in the times went Jesus mother and Joseph that his father
hiet, elkes jaers in Jherusalem in den dach vander feesten van
is-called each year into Jerusalem in the day of-the feasts of
Paesscen.
Passover
‘In those days, Jesus’ mother and Joseph, which was his father’s name,
went into Jerusalem each year on the day of the feast of Passover.’ (14C,
a’damlect)

Since the naming object in such examples did not occur in the same clause as the naming verb, they were excluded from the study.

One type of construction, namely a past participle with a naming object as in (71), met the two additional criteria but was excluded. These constructions are generally appositive in nature, giving additional but non-essential information about one of the elements in the matrix clause.

⁹Note that the examples are taken from the Dutch data, but the same criteria were also used for the English texts.

- (71) neemt **het Fransch Tooneelstukje**, *genaamd* la Vertu Rouée
 take the French theater-piece named La Vertu Rouée
 ‘take the French theater piece named *La Vertu Rouée*’ (18C, tooneel)

These examples were not included in the analysis in order to prevent their possible influence on word order frequencies. Modern Dutch *genaamd*, for instance, seems to have a preference for a VO order despite Modern Dutch being a fairly strict OV language. One could argue that this should not be a consideration because Modern Dutch *genaamd* has lost its verbal characteristics (since the verb *namen* no longer exists) and therefore should not necessarily be a reason to exclude this construction. We cannot be sure, however, when this word order preference was established; it could have been established at a time when *namen* still existed as a verb. For this reason, I have not included this construction in my data.

In determining whether a clause is OV or VO, I looked at the position of the naming object with respect to the verb. In a few instances, the naming object occurred to the left of the verb but was further modified by a relative clause or coordinated phrase to the right of the verb. As the head of the naming object still occurred preverbally, I counted these tokens as OV. These examples were quite rare, however, and should not have a major impact on the frequencies.

4.3.3. Heaviness

I examine heaviness as a factor both lexically and structurally. In order to get an impression of the lexical heaviness of naming objects on either side of the verb per century, I count and compare the distribution of word lengths of naming objects per position. This gives an impression of the number of words allowed on either side of the verb per period. Again, I counted items between spaces as separate words even if they are written together in the modern standard language.

The investigation of the influence of structural heaviness on word order involved two parts: one, an examination and comparison of the structural heaviness of naming objects on either side of the verb and two, a statistical comparison of the position of simplex versus complex naming objects per period. The former gives an impression of any potential structural restrictions in any given period whereas the latter allows one to see if structural heaviness has an influence on the position of the head naming object. To do this, I compared the position of the head naming object according to the complexity of the entire naming object. Naming objects composed of only one phrase as in (72a) were counted as simplex while naming objects that were a coordination of two or more phrases as in (72b) or that were modified by a relative clause as in (72c) were counted as complex.

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- (72) a. **Dat** *mach een eendehande vuyle ledicheit* *heiten*
that may a sort foul idleness be-called
'That may be called a kind of foul idleness' (15C, blome)
- b. **ende du sult werden gheheten de delicate zaterdach ende**
and you shall become called the delicate Saturday and
de heleche glorieuse dach Gods
the holy glorious day God's
'...and you shall be called the delicate Saturday and the holy, glorious
day of God' (14C, a'damlect)
- c. **Du** best Symoen Jans zone, **du sals heten Cephass** *dats*
you are Simon John's son you shall be-called Cephass that-is
also vele also Pieter ghesproken
by many as Peter said
'You are Simon, John's son; you shall be called Cephass, which is
pronounced by many as Peter' (14C, a'damlect)
- d. **Doe** het spade was, quam **i rijc mensce** van Arimathea *die*
when it late was came a rich person from Arimathea who
Joceph *hiet*, die ooc Jhesus jongre was
Joseph was-called who also Jesus' junior was
'When it was late, a rich man from Arimathea came who was called
Joseph, who was also Jesus' junior' (14C, a'damlect)

Because of the potential ambiguity of relative clauses, I only counted naming objects as complex if the relative clause was clearly modifying the naming object in question. In (72c), for instance, the relative clause *dats also vele also Pieter ghesproken* '...which is pronounced by many as Peter' is clearly a comment on the naming object *Cephass* and was thus counted as a complex naming object. The relative clause *die ooc Jhesus jongre was* '...who was also Jesus' junior' in (72d), however, could be modifying either the naming object *Joceph* or the namee *i rijc mensce van Arimathea* 'a rich man from Arimathea'—in this case, the latter seems more likely. In these examples, I considered the naming object as simplex.

4.3.4. Newness

The final factor under investigation is newness, again examined from a quantitative and a qualitative perspective. I considered the ratio of new to old naming objects per position per period by counting the number of new and old naming objects in my data. I used the following criteria in determining whether a naming object was new or old. If the name did not occur earlier in the text, I counted it as new. If it had occurred earlier in the text, I checked its previous occurrences to see whether the name and the namee were in any

way related or connected. If the name was mentioned in a context where it was clear that the namee and the name referred to the same entity, I counted the name as old; otherwise, I counted it as new. I assume that even if the name itself has already been mentioned, the fact that it refers to the namee will still be new. The qualitative evaluation involved a more detailed examination and comparison of instances in which the same naming object appeared more than once in the same text. By comparing these repeated naming objects, we will be able to observe similarities or differences between the occurrences and to see how these relate to the position of the naming object, if at all. If newness is an important factor, we expect to see that new naming objects occur more often to the right of the verb than old naming objects.

4.4. Dutch

In this section, I will focus on the data from the history of Dutch. The primary concern here is the position of naming objects and how it develops over time. I start with a discussion of the naming verbs considered in this study and their function and show their distribution over time in subsection 4.4.1. This shows how the functions of the verbs shift over time. I then look at the distribution of the frequencies of word orders (OV and VO) over time in subsection 4.4.2 before examining the influence of heaviness (subsection 4.4.3) and newness (subsection 4.4.4) on word order possibilities. It is clear from the developments that these factors have varying and shifting degrees of influence on word order over time. I discuss the evolution of this construction in the history of Dutch in subsection 4.4.5.

4.4.1. Naming Verbs

In Dutch, three different verbs were collected for analysis: *heten* ‘to call, to be called’, *noemen* ‘to name’, and *namen* ‘to name’. Keep in mind that *heten* can be either transitive or inherently passive. Figure 4.1 shows the distribution of these naming verbs over time. The numbers in this table and graph are not the total number of instances of *heten*, *noemen*, or *namen* per century. Rather, they only represent the total number of instances of these verbs in naming constructions. As mentioned before, these verbs also occur in other functions, but these other functions have been excluded in the present study. Moreover, these numbers do not include instances that were excluded for the reasons discussed above in section 4.3 nor examples of transitive naming verbs with only a single object. What is striking in the graph is the dominance of the verb *heten* in the Middle Dutch period, namely from 13C to 15C; this coincides with one of the periods established in subsection 4.4.2 based on word order frequencies. Equally striking is the paucity of *noemen* during the Middle Dutch period and

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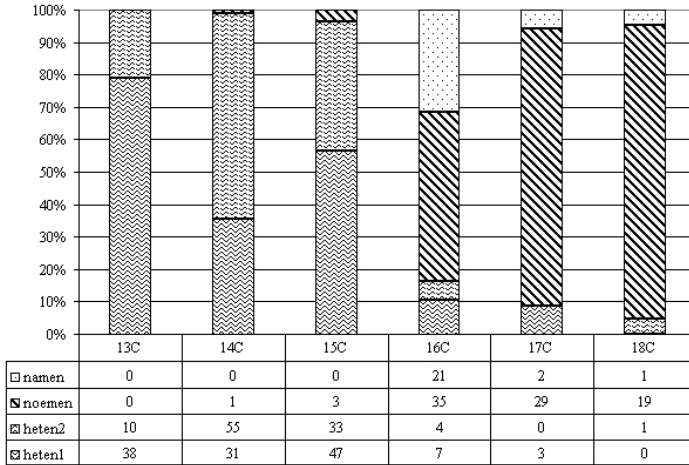


Figure 4.1.: Distribution of Naming Verbs in Dutch

the complete absence of *namen*. As will be seen in the following discussion of each verb, the evolution of the function and meaning of these verbs is quite evident in these data. I will give a summary of the characteristics of each verb and list the various constructions and frequency thereof I found per verb in my data set. I will also consider the function of each verb per period as established above.

The Dutch verb *heten*, a reflex of **haitan*, is the overall most frequent verb (a total of 228 instances) as can be seen in figure (4.1) and is also the only verb that occurs in all centuries in the data set. It is found in all of the possible constructions discussed above in subsection (4.1.2): *heten*₁ occurs in the active voice (73a, 55 instances in 13C–17C) and periphrastic passive (73b, 70 instances in 13C–17C), and *heten*₂ occurs a total of 104 times in all centuries except 17C (73c).

- (73) a. **dies name saltu heten Jhesum**
 whose name shall-you call Jesus
 ‘whose name you shall call Jesus’ (14C, a’damlect)
- b. Een besceet van **den vene**, dat *gheheeten es*, **de Gheer**
 a border of the marshland that called is De Gheer
 ‘a border of the marshland that is called De Gheer’ (13C, hgk 1295 aug 29)

- c. **een lant dat hiet dyhen campe**
 a land which was-called Dyhen camp
 ‘a land that was called Dyhencamp’ (13C, koning 1297 okt 10)

From 13C to 14C, there is a noticeable shift in the use of *heten*: Of the 48 examples in 13C, 34 are active (71%), ten are inherently passive (21%), and only four are periphrastic passives (8%). Of the 87 examples in 14C, only nine are active (10%), 55 are inherently passive (63%) and 23 are periphrastic passives (26%). We see a noticeable decrease in its use as an active transitive verb, which continues into the following centuries and a surge in its use as an inherently passive verb and in periphrastic passive constructions. This shift leaves a gap in the system for an active transitive naming verb, a gap that does not get properly filled until 16C. We can see that it is around this time, i.e., 14C, that *noemen* makes its appearance in these naming constructions, and it eventually comes to dominate in this role.

Noemen appears in the data set with 87 instances. It also occurs in all the possible constructions discussed above in subsection 4.1.1: active (74a, 69 instances in 15C–18C) and periphrastic passive (74b, eighteen instances in 14C–18C).

- (74) a. Jan Claezs met **een oudt Man van lxvij. iaer, diemen**
 Jan Claas with an old man of 67 years who.one
noemde **Besteuaer**
 called Besteuaer
 ‘Jan Claas with an old man of 67, who was called Besteuaer’ (16C, offer)
- b. datter **een zy, wtstekende boven d’ander**
 that-there one may-be exceptionally above the-other
 Bisschoppen, *die* **Aertsbisschop** *ghenoemt wordt*
 bishops who archbishop named becomes
 ‘that there may be one exceptionally above the other bishops who is called archbishop’ (17C, heeren)

As we saw in the above paragraph, *heten* is virtually the only verb used in Middle Dutch naming constructions. During this period, *noemen* does occur and actually rather frequently. However, its primary function is as a transitive verb meaning ‘to mention’ with a single object as in (75a). It also frequently occurs as an adjective describing a noun phrase, for instance ‘the above mentioned land’ or ‘the named lord’ as in (75b). As mentioned above, these types of constructions were not included in this studied.

- (75) a. tote **desen tveen daghen, die hier voren gheuoemt zijn**
 until these two days which here before named are
 ‘...until these two days that are named before’ (13C, d’recht 1291 maa 24)

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- b. die zulle wi ghelden ende betalen, desen *voerghenoemden*
this shall we verify and pay this before-named
Commendoer van Covelense
Commander of Covelense
'This we will verify and pay the above mentioned Commander of
Covelense' (13C, d'recht 1291 maa 24)

Noemen first makes its appearance in naming constructions in 14C. There is only one occurrence, and it is a periphrastic passive. This increases to 3 instances in 15C, one active and two passive. In 16C, it seems to compete with *namen* to fill the gap left by *heten*: there are a total of 23 instances of *namen* and 33 of *noemen*. By 17C, *noemen* has found its niche in the system by successfully filling the gap left by *heten*, namely in the function of a transitive naming verb, to the detriment of *namen*. It occurs most often in active contexts from 16C on (of its 33 occurrences in 16C, 30 (91%) are active and only 3 (9%) passive), and it is by far the most frequent naming verb overall from 17C on. From this data set, however, it cannot be determined why *noemen* beat *namen* in filling the gap. We can, nevertheless, see that the seed of the distribution of the naming verbs in their present-day functions starts in the Middle Dutch period when *heten* loses ground as a transitive verb and that the modern distribution has resolved itself by 17C.

The least frequent verb is *namen* with 24 instances. It also occurs in all the possible constructions discussed above in subsection 4.1.1, though not necessarily in all centuries: active (76a, 3 instances in 16C) and periphrastic passive (76b, 21 instances in 16C–18C).

- (76) a. dan is daar eerst inder waarheyd **een gheweten of**
then is there first in-the truth a conscience or
medeweten, *'twelckmen* **conscientie** *naamt* in latyn
knowledge the-which-one conscientie names in Latin
'then there is first a conscience or knowledge in the truth, which is
called *conscientie* in Latin' (16C, zedekunst)
- b. Ick soude **den Schouten knecht** gaen spreken, *die genaemt is*
I should the Schouten boy go speak who named is
Jan van Delft
Jan van Delft
'I was going to speak to the Schouten boy, who is named Jan van
Delft' (16C, offer)

This verb makes its first appearance in these constructions in 16C and is a competitor of *noemen* for the gap left by *heten*. By 17C, however, *noemen* clearly emerges the victor and *namen* slowly recedes. The consequence of this can be observed in Modern Dutch where *namen* no longer exists as an independent verb, but its past participle, *genaamd*, has survived as an adjective.

4.4.2. Word Order

Figure 4.2 shows the frequencies of the position of naming objects with respect to the verb in Dutch over time. This table gives a clear picture of the development of word order in Dutch. In the Middle Dutch period (13C–15C), there is a high

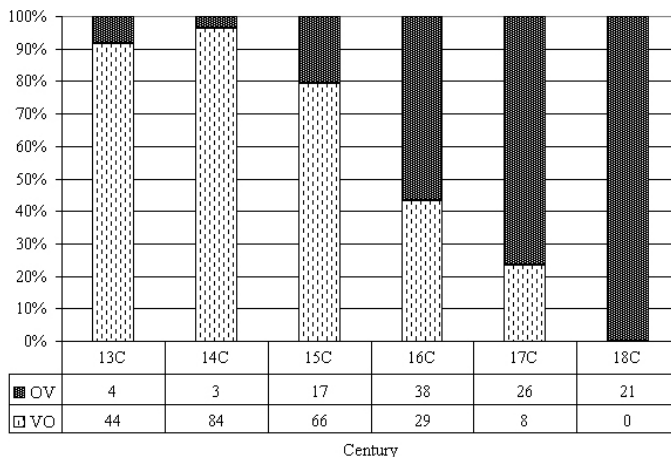


Figure 4.2.: Position of Naming Objects in Dutch

percentage of VO orders, confirming the findings of previous studies. Given the fact that these centuries all have a similarly high percentage of VO orders and that there is no statistically significant difference between 13C and the other two centuries, I assume that the system underlying their word order possibilities is for the most part comparable, i.e., that any ‘rules’ or tendencies governing word order should apply in all of these centuries. There is a statistically significant difference between 14C and 15C; however, two factors lead me to treat them together as one period: there is no statistically significant difference between either century and 13C, and the difference between either century and 16C, 17C, and 18C is statistically significant ($p = .00002$, two-tailed), much more significant than the difference between 14C and 15C. This will be more closely examined in the following subsections. In 16C, there is a noticeable drop in VO orders, which continues until this order no longer occurs in 18C. Because 18C has categorical OV order, the system underlying it must be different from that in the preceding centuries. 16C and 17C, however, appear to be a transition period between the two systems. If this truly is the case, then we expect to see that some of the factors operative in the earlier centuries have less and less influence in determining the position of naming objects. Once the factors

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determining word order in the Middle Dutch period (13C–15C) are discovered and their interaction determined, we can better understand how they interact during the transition period. This, in turn, may help us to better understand the mechanisms involved in this change. In the following subsections, only the centuries that have variation between OV and VO orders will be considered, namely 13–17C. Because of the few tokens in each century, the data for 13C–15C will be combined as will be the data for 16C–17C. This will allow the statistical tests to be more accurate.

The logistic function of these data is given in graph 4.3 below. Note that the line with the dots represents the raw data whereas the smooth S-shaped line represents the logistic function. According to these calculations, the slope of

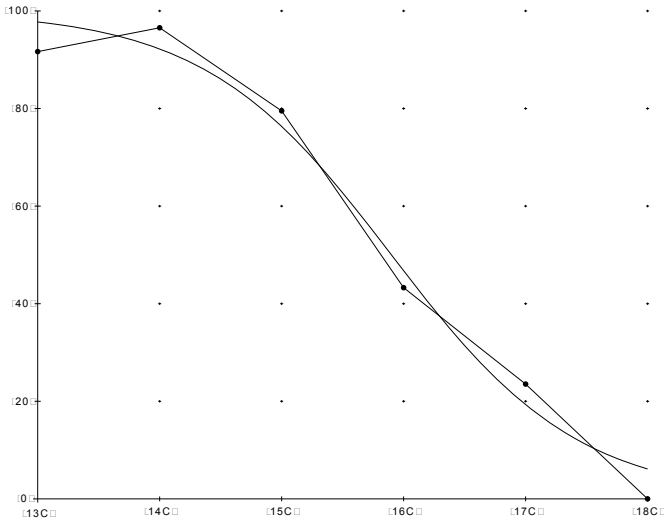


Figure 4.3.: Logistic Function of Naming Objects in Dutch

the curve (i.e., the rate of change) is -1.39 ; the change takes 4.3 centuries to complete itself, and the midpoint of the change is just before 16C. The negative slope means that there is a decline in VO orders. The range of the change suggests that the change begins near the end of 14C and completes itself at the beginning of 18C.

4.4.3. Heaviness

In the previous section, we saw that 13C–15C had a higher frequency of VO orders than the following centuries. I assume, based on this, that the influence of heaviness on word order, if it is indeed an important factor, will be different in these centuries than the later centuries, though it is not clear how the difference will manifest itself. Based on this assumption, I expect to see differences between the various periods with respect to heaviness, i.e., the preverbal naming objects in Middle Dutch will be structurally less complex than those in the following centuries. When we examine the naming objects in each century, we notice that there are indeed noticeable differences between 13C–15C on the one hand and 16C–17C on the other with respect to the lexical and structural heaviness allowed preverbally.

Table 4.2 below gives an overview of the word lengths of naming objects per position in the centuries where they appear on either side of the verb. Already in this table, we get an indication that lexical heaviness plays a role in the early period and can see that the length of preverbal naming objects gradually increases over time. Whereas preverbal naming objects are noticeably shorter

phrase length (words)	13C–15C		16C–17C	
	OV	VO	OV	VO
1	14	98	34	11
2	9	22	15	3
3	0	31	8	7
4	1	8	2	4
> 4	0	35	5	12
<i>Total</i>	24	194	64	37

Table 4.2.: Word Length of Naming Objects per Position in Dutch

than their postverbal counterparts in 13C–15C, by 16C they can get as long as the postverbal ones. Though there is still a visible preference for preverbal naming objects to be short in 16C and 17C, the fact that much longer ones are allowed shows a departure from the Middle Dutch period. A closer examination of the structural complexity of naming objects confirms that there is a break between these two periods.

The Fisher-Yates test confirms that lexical heaviness influences the position of naming objects, but with varying results depending on the period. In 13C–15C, the distribution of one-word naming objects versus multiple-word naming objects per position is not significantly different, but all other divisions are: one-to-two-word versus the rest ($p = .0006$), one-to-three-word versus the rest ($p = .05$), and one-to-four-word versus the rest ($p = .02$). What is interesting in

all of these cases, however, is that no matter the length, the shorter naming objects and the longer ones have a preference for the postverbal position. The difference lies in the extent of this preference; the longer ones apparently have a significantly greater preference for the postverbal position than the shorter naming objects. In 16C–17C, on the other hand, we find that the distribution of shorter versus longer naming objects per position is significantly different for all possible divisions: one-word versus multiple-word ($p = .04$), one-to-two-word versus the rest ($p = .0002$), one-to-three-word versus the rest ($p = .0006$), and one-to-four-word versus the rest ($p = .004$). In this period, however, the distribution more closely parallels our expectations: the longer naming objects in each division have a preference for the postverbal position while the shorter ones prefer to appear preverbally. We see, then, that despite the statistical significance of lexical heaviness as a factor in extraposition in both of these periods of Dutch, there is quite a difference in how this influence manifests itself in each. This would indicate shifting interactions among lexical heaviness, syntax and/or newness in determining the position of naming objects. Moreover, structural heaviness has an influence on the position of the head of naming objects in the Middle Dutch period but not in the later centuries.

When we examine the naming objects in the Middle Dutch period, we notice that preverbal naming objects have a restriction on how structurally complex they can be: of the 24 preverbal naming objects, fourteen are composed of one word (as in 77a), nine of two words (as in 77b and 77c), and one of four words (as in 77d). Note that the two-word naming objects can be either a noun with a determiner as in (77b) or a complex noun phrase where the head noun is modified by another noun, as in (77c). The structure of these preverbal naming objects never gets more complex than a noun phrase, however, not even the four-word naming object.

- (77) a. Doe het spade was, quam **i rijc mense** van Arimathia *die*
 when it late was came a rich person from Arimathea who
Joseph *hiet*, die ooc Jhesus jongre was
 Joseph was-called who also Jesus' junior was
 'When it was late, a rich man from Arimathea came who was called
 Joseph, who was also Jesus' junior' (14C, a'damlect)
- b. dat sii bi horen ghesuoren eden, souden varen, vpt **vene**
 that they by their sworn oath should sail on-the marsh
dat de gheer gheheeten es, ende gheleghen tusschen aelsmaer,
 that De Geer called is and lay between Aalsmeer
 ende Calfloe
 and Calfloe
 '...that they would by their sworn oath sail on the marsh that is
 called De Geer, which lay between Aalsmeer and Calfloe' (13C, hgk
 1295 nov 23)

- c. Salich sijn sy die mynnen ende begheren vrede, want si
 holy are they who love and desire peace because they
sullen kinder gods heiten
 shall children God's be-called
 'Holy are those who love and desire peace because they shall be
 called the children of God' (15C, blome)
- d. **Dat mach een eendehande vuyle ledicheit** heiten
 that may a sort foul idleness be-called
 'That may be called a kind of foul idleness' (15C, blome)

Despite this seeming restriction, however, some of these preverbal naming objects are modified postverbally as in example (77a). In this example, the naming object, *Joceph*, occurs preverbally and is further modified by a relative clause, *die ooc Jhesus jongre was* 'who was also Jesus' junior', which occurs postverbally. Example (77b) demonstrates this as well, albeit not in the form of a relative clause. The naming object *de gheer* is further modified by the phrase *ende ghelegghen tusschen aelsmaer, ende Calflo*. Of course, since the naming object refers to the namee, it is possible that these actually refer back to the namee and not the naming object; this seems the more appropriate interpretation of (77b). In (77a), however, it is not really clear whether the second relative clause refers back to *Joceph* or *i rijc mensce van Arimathia*. The example in 78 is clear, though; the postverbal modification *ende valsch* should be considered part of the naming object contained within the sentence brace.

- (78) *of hij moet een verrader heiten ende valsch*
 whether he must a traitor be-called and false
 '...whether he must be called a traitor and false' (15C, blome)

This split naming object as well as the other examples just discussed suggest that there is indeed a heaviness restriction on preverbal naming objects in the Middle Dutch period: they cannot be more structurally complex than a phrase. If the naming object is a coordination of two phrases, as in (78), or modified by a clause, as in (77a) and (77b), then the additional modification has to occur outside of the sentence brace. This contrasts with what we see in the postverbal position, to which we will turn now.

As is the case with preverbal naming objects, postverbal naming objects in the Middle Dutch period can be either a single noun or a complex noun phrase. We also find naming objects with more structural complexity than those occurring before the verb, including coordinated phrases (79a) and nouns being modified by relative clauses (79b). In (79b), it is clear that the relative clause refers to the naming object itself since the information contained in it addresses the pronunciation of the name mentioned; it cannot modify the namee of the clause.

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- (79) a. ende **du** *sult werden gheheten* **de delicate zaterdach ende**
and you shall become called the delicate Saturday and
de heleche glorieuse dach Gods
the holy glorious day God's
'...and you shall be called the delicate Saturday and the holy, glorious
day of God' (14C, a'damlect)
- b. Du best Symoen Jans zone, **du** *sals heten* **Cephas** *dat*
you are Simon John's son you shall be-called Cephas that-is
also vele also Pieter ghesproken
by many as Peter said
'You are Simon, John's son; you shall be called Cephas, which is
pronounced by many as Peter' (14C, a'damlect)

These facts further confirm the fact that heaviness plays an important role in determining the position of naming objects in the Middle Dutch period. After 15C, however, we see some big changes in the length of preverbal naming objects.

In 16C and 17C, we see a difference in the complexity of preverbal naming objects when compared to the Middle Dutch period. In addition to the simple or complex phrases occurring preverbally as in the previous centuries, there are also examples of coordinated naming objects (example 80a) and naming objects modified by relative clauses (example 80b) where one of the phrases occurs preverbally while the other part of the naming object occurs postverbally, reminiscent of the situation in Middle Dutch.

- (80) a. en *maghmen* **zulx** in gheender wysen **starckheyd** *noemen*
and may-one such in no ways strength name
of dueghde, *maar wel zondelycke onzinnicheyd*
or virtue but indeed sinful nonsense
'...and such things may in no way be called strength or virtue, but
rather sinful nonsense' (16C, zedekunst)
- b. **Dit** *zyn* *dan duysterlinghen ende oock niet t'onrecht*
this are then obscurantists and also not to-injustice
duysternissen *ghenaamt die des liches niet deelachtigh*
darknesses named that of-the light's not participatory
en worden
not become
'These are then obscurantists and are also not unjustly named
darknesses, who do not participate in the light' (16C, zedekunst)

We also find naming objects that are more complex than what was found in Middle Dutch: example (81a), for instance, has four coordinated naming objects, one of which is a complex noun phrase, occurring to the left of the verb. This

example already shows a departure from Middle Dutch, but what appears preverbally can be even more complex: the example in (81b) has two namees, *dat eerste* ‘the first’ and *het laatste* ‘the last’, as well as two separate naming objects per namee, *een weldaad* ‘a benefit’ and *bermherticheyd* ‘charity’ for the former and *een mesdaad* ‘a crime’ and *dronckenschap* ‘drunkenness’ for the latter, all of which occur preverbally.

- (81) a. *dat hy hare verleyder wijnsuyper, Samaritaen, ende*
 that he her tempter wine-addict Samaritan and
een inhebber des Duyuels *moeste hieten*
 a vessel-of-the devil must call
 ‘...that he must call her tempter, wine-addict, Samaritan and a vessel
 of the devil’ (16C, offer)
- b. *Want dat eerste* *beter een weldaad* *dan bermherticheyd*
 because that first better a benefit than charity
ende het laatste *beter een mesdaad* *dan dronckenschap*
 and the last better a crime than drunkenness
ghenaamt moghen worden
 named may become
 ‘...because the first may be better called a benefit than charity and
 the last better a crime than drunkenness’ (16C, zedekunst)

Admittedly, the namees and naming objects themselves in this example are only simple noun phrases; however, the fact that so many namees and naming objects can be contained within the sentence brace distinguishes this period from the Middle Dutch period. These two examples are not representative of the average preverbal naming object, which remains primarily noun phrases, but they do demonstrate a marked change in the complexity allowed in this position. These data show that heaviness has lost its importance in determining the position of elements.

When we examine postverbal naming objects in 16C, we do not find much of a change from Middle Dutch: simple and complex phrases occur postverbally as well as coordinated phrases (example 82a) and naming objects modified by relative clauses (example 82b).

- (82) a. *Deze noemtmen inden Latyne Continentia ende*
 these name-one in-the Latin Continentia and
Incontinentia, diemen *eyghentlyck in Nederlandsch zoude*
 Incontinentia which-one actually in Dutch should
moghen benamen tem-lust ende volgh-lust
 may name self-restraint and unrestrainedness
 ‘These are called *continentia* and *incontinentia* in Latin, which should
 be named *temlust* (self-restraint) and *volghlust* (unrestrainedness)
 in Dutch’ (16C, zedekunst)

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- b. Men maghse oock *noemen* een welgheoeffende krachte
one may-them also name a well-trained power
die bescheydelyck de hertstochten beheert met bezatichde
which clearly the passions manages with steady
gherustheyd
ease
'They may also be called a well-trained power that clearly manages
passion with steady ease' (16C, zedekunst)

In 17C, however, there seems to be a slight change: of the naming objects occurring postverbally, only one is a coordinated naming object, given below in (83). This example is interesting because, though it is a coordination of two noun phrases, they actually form one title since being *Capiteyn Generael* was tied to being *Stadt-houder* in 16C to 18C in the Netherlands.

- (83) Den derden is een Brief van Don Ferdinando de Lannoy, *de welcke*
the third is a letter from Don Ferdinando de Lannoy who
hem te dier tijden *noemde* **Stadt-houder ende Capiteyn**
him to the times named Stadtholder and Captain
Generael over Hollant, Zeelant, Vrieslant ende Vtrecht
General over Holland Zeeland Friesland and Utrecht
'The third is a letter from Don Ferdinando de Lannoy, who at that
time called him Stadtholder and Captain General of Holland, Zeeland,
Friesland, and Utrecht' (17C, leyden)

In this way, this naming object could perhaps better be interpreted as a complex phrase rather than a coordination of two independent phrases. The fact that both titles are modified by the prepositional phrase *over Hollant, Zeelant, Vrieslant ende Utrecht* seem to provide further support for this analysis of the naming object. If this is indeed the appropriate interpretation of this example, then the postverbal naming objects in the 17C are not more complex than a phrase, which almost seems like a reversal of the heaviness restriction. Given the few examples of postverbal naming objects, however, no definitive claims can be made.

From the qualitative look at the structural heaviness of naming objects, we see that there is a restriction on how complex a naming object can be when it is preverbal in 13C–15C. However, this does not necessarily mean that the position of the head of these complex naming objects is influenced by its complexity. We need to further examine the data to see if structural heaviness does have an influence on the position of the head of the naming object. If structural heaviness has an influence on the position of the head of naming objects, then we expect the heads of complex naming objects, i.e., coordinated phrases and/or naming objects modified by a relative clause, to occur postverbally significantly more often than simplex naming objects. Table 4.3 shows the distribution

of simplex and complex naming objects per position per period. Note that

	13C-15C		16C-17C	
	OV	VO	OV	VO
Simplex	21	157	49	21
Complex	3	37	17	14
Total	24	194	66	35

Table 4.3.: Position and Heaviness in Naming Objects in Dutch

naming objects that are OV and complex may be split, i.e., the head is preverbal but the additional coordinated phrase or the modifying relative clause occurs after the verb. In neither period is the difference between simplex and complex naming objects statistically significant nor is the difference in any one century statistically significant. This means that though there is a restriction on the structural complexity of preverbal naming objects, i.e., there is a preverbal restriction, the structural complexity of the naming object does not influence the position of its head, i.e., there is no postverbal constraint.

These facts show a marked difference between the Middle and Modern Dutch periods. In the Middle Dutch period, preverbal naming objects have relatively short word lengths and can be no more than a phrase; if they are further modified or coordinated with another phrase, then the additional modification or coordinated phrase appears postverbally, either with or without the head phrase. In 16C and 17C, we see a change in that naming objects that are coordinated phrases are allowed to appear preverbally. By 18C, the rigid OV syntax of Modern Dutch has set in, and arguments no longer appear to the right of the verb. Though there is a structural heaviness restriction on preverbal naming objects, this structural heaviness does not have a significant influence on the position of the head of the naming object, i.e., the frequency with which both complex and simplex naming objects occur on either side of the verb is not significantly different.

4.4.4. Newness

Newness is the next factor under investigation. To determine if it is a relevant factor in determining the position of naming objects, I will look for whether the naming objects have been mentioned earlier in the text. If newness is an important factor in the position of naming objects, then we expect that a majority of the extraposed naming objects are instances of new information. We also expect that instances of old information will occur more often to the left of the verb.

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In 13C, there are four instances of OV order, all of which were new information. One of these instances had a similar parallel in another text with a VO order, suggesting that newness perhaps is not an important factor in determining word order. In (84), I give the two clauses. The two texts concern an agreement made between a group of men (four in the first text and five in the second) and the count of Holland, Zeeland and Friesland. This group of men was charged with discovering the boundaries of a marsh called *De Gheer*. The content of the two texts is quite similar, often with the exact same formulations. The main difference between the two texts is the perspective from which each is written: the earlier text is written from the point of view of the group of men while the later text is from the point of view of the count. Each text contains one instance of a naming verb, which is contained in a relative clause and in which the same entity is named with the same name. The relevant clauses occur after the introduction common in official texts, and the entity being named is being mentioned for the first time in each text. Moreover, both clauses contain more or less the same words in roughly the same order. What is interesting is that when we look at the relative clauses containing the naming verb, we see that the naming object *De Gheer* occurs to the right of the verbal cluster in (84a) while it occurs to the left in (84b).

- (84) a. dat wi vp onse ziele, Ende bi onsen ghesuoren Eeden,
that we on our souls and by our sworn oaths
ondervinden souden, Een besceet van **den vene**,
discover should a boundary of the marsh
dat gheheeten es, de Gheer, Ende ghelegghen es tusschen
that called is de Gheer and located is between
Aelsmaer, Ende Calfsloe
Aalsmaar and Calfsloe
'...that we, on our souls and by our sworn oaths, should discover
a boundary of the marsh that is called de Gheer and is located
between Aalsmaar and Calfsloe' (13C, hgk 1295 aug 29)
- b. dat sii bi horen ghesuoren eden, souden varen, vpt **vene**
that they by their sworn oaths should sail on-the marsh
dat de gheer gheheeten es, ende ghelegghen tusschen aelsmaer,
that de Gheer called is and located between Aalsmaar
ende Calfloe
and Calfloe
'...that they by their sworn oath should sail on the marsh that is
called de Gheer and located between Aalsmaar and Calfloe' (13C,
hgk 1295 nov 23)

This is quite interesting given the fact that both texts are so similar in other respects. Even the order of 'main verb + auxiliary' is the same in the two

relative clauses, though the subordinate clauses containing these relative clauses themselves have different orders with respect to the main verb and auxiliary: ‘main verb + auxiliary’ *ondervinden souden* in (84a) and ‘auxiliary + main verb’ *souden varen* in (84b). The different position of the naming objects in the two texts indicates that though newness is perhaps a motivation for extraposition, it is not as important as a constraint as we saw with heaviness.¹⁰

Of the 44 examples of VO order, 40 are new information. The four examples that clearly give old information occur in two texts from the Holland Grafelijke Kanselarij dating from 1297 September 29. As in the above two texts, these two texts describe the same situation from two different points of view. In each text, one particular person is mentioned three times, and each time he is mentioned, his title is given by means of a relative clause containing the naming verb *heten*. If the position of the naming object is indeed sensitive to whether the naming object is new or not, we would expect the naming object to occur after the verb at the first mentioning of this person’s title and before the verb in the following two instances. Contrary to this expectation, however, we see that the naming object occurs after the verb in all three instances. Example (85a) is the first occurrence, and example (85b) is the second.

- (85) a. alle dat ghoet dat **ghisebrecht** *diemen hiet*
 all the good that Ghisebrecht who-one called
here van aemstele, hadde
 lord of Amstel had
 ‘All the land that Gijzebrecht, who is called Lord of Amstel, had’
 (13C, hgk 1297 sept 29)
- b. alsen **ghisebrecht** voerseyt *diemen hiet*
 as Ghisebrecht aforementioned who-one called
here van aemstele, die wile dat hi een besitter daer of
 lord of Amstel he may-want that he an owner there of
 was
 was
 ‘...as the aforementioned Gijzebrecht, who is called Lord of Amstel,
 he may want to be an owner of it’ (13C, hgk 1297 sept 29)

I have given the second example because the use of the adjective *voerseyt* ‘aforementioned’ emphasizes the fact that this occurrence is a repetition. These

¹⁰An observation made by Olga Fischer (personal communication) with respect to these two examples is the syntactic parallelism found in (84a) that is lacking in (84b). In (84a), the structure ‘past participle + *es*’ is repeated and the complement of the verb in both instances appears after the verb. Fischer suggests that the position of the naming object may be influenced by the position of the prepositional phrase of the following verb. In (84b), the auxiliary *es* does not occur with the past participle *gheleghen*; therefore, there is less motivation to make the two structures parallel. This is an interesting observation that requires further investigation to verify it.

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examples provide further counterevidence to the idea that newness influences word order.

In the 14C text *A'dam Lect*, we have an indication that newness is a factor in determining word order. There are only three examples of OV order. One of these is an example of new information, but the other two are clearly old information. In fact, they both occur in the same paragraph of the text, given in (86).

- (86) *dat si willen ghezien worden vanden lieden, ... ende gheheten worden vanden lieden meester. Maer ghine wilt meester niet werden gheheten, want een es u meester, ende ghi sijt alle ghebroadere. ... Noch ghine sult niet meester worden gheheten, want een es u meester, dat es Cristus.*
'that they want to be seen by the people, ... and to be called master by the people. But you do not want to be called master because there is one who is your master, and you may all be siblings. ... Nor will you be called master because there is one who is your master, that is Christ'
(14C, a'damlect)

This passage is revealing because the first instance that *meester* is mentioned, it is obviously new information and also occurs to the right of the verb. In the following two instances, it is clearly being repeated, and it occurs to the left of the verb. This seems to support the claim that newness is a factor in extraposition, but given the overall inconsistency of the position of these examples, we cannot conclude that newness plays an important role in determining word order in Dutch.

The previous discussion suggests that newness does not play a consistent role in determining the position of naming objects. In order to test this, I compare the distribution of old and new naming objects per position in each of the two periods. If newness does play a role in word order contrary to what was just observed, then we expect that new naming objects occur significantly more often postverbally than old naming objects. Table 4.4 gives the data for the two periods. The Fisher-Yates exact test indicates that the difference in

	13C–15C		16C–17C	
	OV	VO	OV	VO
Old	4	15	13	0
New	20	179	53	35
Total	24	194	66	35

Table 4.4.: Position and Newness in Naming Objects in Dutch

the distribution of old and new naming objects in 13C–15C is not statistically significant, so newness is not an important factor in the Middle Dutch period.

In 16C–17C, however, newness does play a significant role in determining the position of naming objects ($p = .006$, two-tailed).

The preceding facts again confirm that there is a difference among the periods of Dutch. In 13C–15C, newness does not play an important role in determining the position of naming objects; the distribution of OV and VO in new and old naming objects is not significantly different. In the 16C and 17C, however, newness does become an important factor; only new naming objects appear to the right of the verb. By 18C, the rigid OV syntax of Present-day Dutch has set in, and arguments no longer appear to the right of the verb. These data may suggest that the shift to the rigid OV order first effects instances of old information before spreading to all types of arguments.

4.4.5. Discussion

I will address the research questions posed in section 4.2 above in this subsection. In response to the first set of questions regarding the distribution of the naming verbs over time and the interaction of these in the development of the two types of naming verbs (transitive versus inherently passive), we saw in subsection 4.4.1 that *heten* dominates naming constructions from 13C to 15C, i.e., the Middle Dutch period. Already in the later part of this period, however, we see *noemen* make its appearance in these constructions as it slowly creeps in to take over the function of the transitive naming verb while *heten* loses ground and takes its position as an inherently passive naming verb. In the 16C, *namen* also competes with *noemen* for the function of transitive naming verb but slowly recedes until it is lost as a verb in Modern Dutch. These data give a pretty clear picture of the evolution of naming verbs and the shift in their functions over time.

Is the shift in word order seen in subsection 4.4.2 related to lexical properties of the naming verbs? After all, the high frequency of VO orders in Middle Dutch seems to correlate with the high frequencies of *heten* in the same period. This is particularly suspicious given the fact that both decline rather sharply in the 16C. If the word order is lexically determined, we expect to see an equally high frequency of VO in clauses with *heten* as opposed to either *noemen* or *namen* in 16C and the following centuries. This is not the case, however; of the eleven instances of *heten* in the 16C, nine (82%) are OV and only two (18%) are VO, suggesting that the word order facts are independent of the lexical properties of *heten*.

The second set of questions address the development of the word order possibilities of naming verbs, as discussed above in subsection 4.4.2. It is clear from the data that Holland Middle Dutch, like what was found in the other dialects of Middle Dutch, has a high frequency of VO orders in naming constructions. The 16C seems to be the point where the word order shifts toward a more rigid system: this is the first century where the occurrence of

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VO orders is less than 50%. This claim is further supported by the facts with respect to the heaviness of preverbal naming objects discussed in section 4.4.3.

Heaviness is the third research question. The data discussed in 4.4.3 show that there is a difference in the relative word lengths (lexical heaviness) found preverbally in 13C–15C as opposed to the 16C–17C. A look at the structural heaviness on either side of the verb reveals a restriction in the Middle Dutch period: a preverbal naming object cannot have more structure than a single complex phrase. If the naming object is a coordination of two phrases or is modified by a relative clause, the naming object is either split with the head occurring preverbally and the rest postverbally or the entire naming object occurs postverbally. From 16C on, coordinated naming objects are allowed preverbally, suggesting that the restriction on the structural heaviness of preverbal objects no longer influences their position. Despite the presence of this restriction, however, we also discovered that the structural heaviness of a naming object does not have an influence on the position of its head in any period.

Fourth, newness was investigated in subsection 4.4.4. In 13C–15C, there were a few instances where a naming object was later repeated in another naming construction. In some cases, the first naming object appeared postverbally whereas the later instances occurred preverbally as one would expect if newness were an important factor. However, there were more examples where all instances of the same naming object in one text occurred postverbally, which goes against expectation. This shows that newness does not play a consistent role in determining word order. This was confirmed by a statistical test that showed that the distribution of OV and VO in new and old naming objects is not significantly different in the Middle Dutch period, i.e., newness does not play an important role in determining the position of naming objects. In 16C and 17C, however, new naming objects occur on either side of the verb while old naming objects always appear preverbally: this distribution is statistically significant, revealing that newness is a factor in word order in this period.

All of these data taken together suggest three distinct periods in response to the fifth set of questions. The first period, 13C–15C, is characterized by the dominance of *heten* as the naming verb, a high percentage of VO orders, and a preverbal restriction limiting the structural heaviness of preverbal naming objects. The postverbal constraint and newness do not play a role in determining word order in this period. Given the high percentage of VO orders and the inconsistency of newness, we should probably interpret this word order as being associated with naming constructions. The second period, 16C–17C, is characterized by an increase in the use of *noemen* and *namen* as naming verbs, a majority of OV orders, and no clear restriction on the complexity of preverbal naming objects nor is there a postverbal constraint. Newness, however, appears to play a role in word order, in contrast to what we saw in 13C–15C. It is interesting to note this difference in the two periods: in the earlier period,

the influence of complexity on the position of naming objects is clearly visible while newness does not seem to play a role whereas the opposite is true in the following period. This may indicate that in the earlier period, the role of newness is masked by the overwhelming influence of heaviness, and it thus only become visible once heaviness becomes a less important factor; this should be investigated in future research. In this later period, the VO order of naming constructions slowly gives way to the eventual rigidity of OV word order found from 18C. The naming verbs more or less specialize to their current functions in the final period, 18C, and OV order is the only one available for naming objects.

A point of future research is the possibility that the high frequency of VO orders in the Middle Dutch period may not be a characteristic that is specific to naming verbs but rather to any verb that takes an object and an object complement. The observation made in the literature may have been limited to naming verbs because of the relative frequency with which they occur in Middle Dutch texts in comparison to other object complement verbs like ‘to consider’. It is, however, quite possible that the structure itself is what lends itself to VO orders. Another possibility is that the high frequency of VO orders is due to specific properties of names and not necessarily the verbs or the structure associated with them.

4.5. English

In this section, I will focus on the data from the history of English. The primary concern here is the position of naming objects and how it evolves over time. I start with a discussion of the English naming verbs considered in this study and their use and show their distribution over time in subsection 4.5.1. Note that there was only one example found in the OE2 period, so this period has not been included in this study. Also remember that there are no texts from the ME2 period because no texts in the appropriate dialect (either the Southwest or the West Midlands) could be found. I then look at the distribution of the frequencies of word orders (OV and VO) over time in subsection 4.5.2 before examining the influence of heaviness (subsection 4.5.3) and newness (subsection 4.5.4) on word order possibilities. It is clear from the developments that these factors have varying and shifting degrees of influence on word order over time. I finally discuss the evolution of this construction in the history of English in subsection 4.5.5.

4.5.1. Naming Verbs

In English, instances of five different verbs were collected though they did not necessarily appear in each period: *hātan* ‘to call, to be called’, *nemnian/name(n)*

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‘to name’, *cweðan* ‘to say’, *clīpian* ‘to call’, and *call*. Collecting so many verbs, most of which are not in any way related to the ones collected for Dutch, brings into question the comparability of the English data with the Dutch (only two of these, namely *hātan* and *nemnian*, are cognate with the verbs collected for Dutch). I decided to collect all of these verbs for two reasons, both purely practical and related: I would not have had enough examples if I had limited myself to *hātan* and *nemnian*, and none of the verbs consistently appears in all periods under investigation in this study. Moreover, the evolution of the naming verbs in English and Dutch show quite different patterns because English has undergone a much more massive re-organization of its vocabulary, further necessitating the investigation of more naming verbs.

The graph in 4.4 gives the distribution of each naming verb over time. Again, the reader should keep in mind that the numbers in this table and graph are not all occurrences of these verbs in each period. Rather, they only represent the instances of these verbs in naming constructions. It does not include instances that were excluded for the reasons discussed above in section 4.3 nor examples of transitive naming verbs with only a single object. There is quite a bit of variation in each period, and no clear patterns seem to emerge. There is no real continuity between the periods. The only verb to occur in all periods is

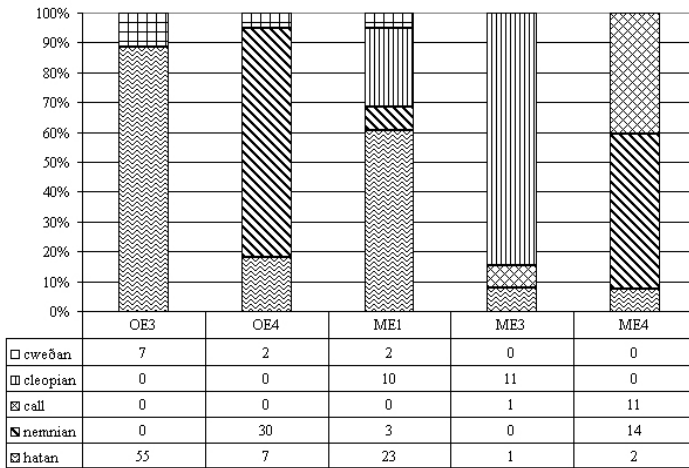


Figure 4.4.: Distribution of Naming Verbs in English

hātan, but it is only minimally present in the later centuries. It is perhaps not surprising that there is no clear pattern: of the five verbs investigated, only two survive in Present-Day English, one of which is homophonous with the noun

name and the other, *to call*, a borrowing from Scandinavian. The wide variation of naming verbs and the different frequencies in each century are perhaps a reflection of the intense contact English speakers have had with foreigners. The Scandinavian ‘to call’, which only first appears in ME3, is the result of such contact.

The English verb *hātan* is the overall most common verb, occurring 88 times. The majority, 55 instances in OE3–ME1, are periphrastic passives as in (87a), and twenty found in OE3 and ME1 are active as in (87b). The remaining fourteen instances, spread in OE3–OE4 and ME3–ME4, are ambiguous between a synthetic passive formation and the inherently passive *hātan*₂ as found in (87c) and (87d).

- (87) a. on **pære byrig** *seo wæs haten* **Narmenti**
 into the town which was called Narmenti
 ‘into the town which was called Narmenti’ (OE4, mart2)
- b. on **pæs deofles** mihte *þe men hataþ* **Beelzebub**
 in the devil’s might who men call Beelzebub
 ‘...in the might of the devil, who is called Beelzebub’ (OE3, ælhom)
- c. *þæt ure Hælend wæs mid anum Sunderhalgum, se hatte*
 that our Healer was with a Pharisee, who is-called
Simon
 Simon
 ‘...that our Lord was with a Pharisee who is called Simon’ (OE3, ælhom)
- d. *Sum men makeþ poudur of a gras þat hate orygan*
 some men make powder from a grass that is-called oregano
 ‘Some men make a powder from a grass that is called oregano’ (ME3, horses)

What the distribution of *hatan* shows is a shift in function from a transitive verb in OE3–ME1, marked by a majority of periphrastic passives and some active and synthetic passives, to an inherently passive verb from ME3. There is strangely no overlap in these two functions in these data. The most interesting period where there must have been some overlap is of course lacking in the data, namely ME2.

The next frequent verb is *nemnian/name(n)* with 47 instances. It occurs in both the active voice (88a, eight instances in OE4 and ME4) and periphrastic passive (88b, 39 instances in OE4, ME1, and ME4).

- (88) a. *Ande that yere there was on namyd hym selfe* **Jacke Sharpe**
 and that year there was one named himself Jack Sharp
 ‘And that year, there was one who named himself Jack Sharp’ (ME4, gregor)

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- b. þæs bisceopes **gewytennys** *se wæs nemned* **Sanctus Cassius**
the bishop's witness who was named Sanctus Cassius
'the bishop's witness who was named Sanctus Cassius' (OE4, mart2)

What is noticeable about this verb is that it is the only one that has a gap in its occurrence in the periods under investigation: in this data set, no examples are found in ME3. In OE4 and ME1, the form of the verb is *nemnian*, the most common form in Old English and an originally i-mutated Germanic formation derived from the noun *nama* plus the suffix *-jan* used to derive verbs from nouns. There was another form of the verb in Old English without i-mutation but with the derivational suffix, namely *namnian*¹¹, but this form was much less frequent and does not occur in the texts of this study. After the gap in ME3 where no instances of either *nemnian* or *namnian* is found, however, we find the newer form *to name* in ME4. This new form and the gap in the use of this verb suggest discontinuity between *nemnian/namnian* on the one hand and *to name* on the other and not just an instance of phonological change: this newer form is derived through conversion directly from the noun without any additional morphology. It is perhaps due to this new word formation process that this is one of the two naming verbs that survives in Modern English; the clear relationship between the noun *name* and the new verb *to name* helps its survival.¹²

Clipian occurs 21 times in my data in both the active (89a, five instances in ME3) and periphrastic passive voice (89b, sixteen instances in ME1 and ME3).

- (89) a. with þe gresse of **an erbe þat men clepuþ hemloke**
‘...with the grease of an herb that men call hemlock’ (ME3, horses)
b. & **it is cleped þe corn**
‘...and it is called the corn’ (ME3, horses)

The original and main meaning of *clipian* is ‘to speak, cry out, call’.

Call occurs twelve times in my data set and only occurs in periphrastic passive constructions (90, in ME3–ME4).

- (90) And that yere ther was **an heretyke**, *that was callyd* **John of Badby**
‘And in that year, there was a heretic who was called John of Badby’
(ME4, gregor)

This might be the result of the texts involved; after all, it seems a bit odd for the periphrastic passive version of *call* to exist without an active version. Of course, this is similar to the situation with *hātan*, which originally meant ‘to

¹¹This form suggest that the *-jan* suffix was still a productive means of forming new words after i-mutation had occurred.

¹²This also seems to be the case with other verbs, for instance, *lendan* ‘to land’, formed by the same process as *nemnian* and which was later replaced by the newer form *to land* Tacho (forthcoming).

command' as well as 'to call' and which occurs more often in the passive when it means 'to call'. As mentioned above, this is a loan from Scandinavian and is one of the few verbs that survives into Modern English.

The least frequent naming verb is *cweðan* at eleven occurrences in both the active (91a, 2 instances in OE3 and ME1) and periphrastic passive voices (91b, nine instances in OE3–ME1).

- (91) a. On þam feowerteogoðan dæge fram his acennednyse,
 in the forty days from his birth
ðe we cweðað on Englisc Candelmæssedæg
 which we call in English Candlemas
 'During the forty days from his birth, which we call Candlemas in English' (OE3, ælhom)
- b. Ic wat þæt Mæssias cymð *se ðe ys Crist gecweden*
 I knew that Messiah comes who is Christ called
 'I knew that the Messiah, who is called Christ, is coming' (OE3, ælhom)

Again, this verb primarily means 'to say' but can also serve the function of a naming verb.

What is interesting about these naming verbs is that only two of them, *hātan* and *nemnian*, serve primarily as naming verbs.¹³ The other verbs are primarily used with other meanings, and their use in naming constructions is only minor. Of the five verbs investigated, only two survive into Modern English: 'to name', which is actually a reformation and should perhaps not be considered the same verb as *nemnian*, and 'to call', which is a borrowing from Scandinavian. Not only have the other verbs fallen out of use as naming verbs, they no longer exist in standard Modern English. Moreover, Modern English no longer has a verb filling the function of an inherently passive naming verb: *hātan*, the verb that initially filled this function, was lost, and no other verb replaced it, thereby resulting in the loss of this function.

4.5.2. Word Order

Graph 4.5 shows the frequency of the position of naming objects with respect to the verb in English over time. We can see from these data that the system in ME3 and ME4 is different from the earlier periods; in these two periods, a rigid VO syntax is clearly what determines the position of naming objects. The percentage of VO orders of naming objects in OE3–ME1 seems to be high. While the frequencies of VO order in OE3 and ME1 are quite similar at just below 80%, OE4, which appears in between the two, has a higher percentage

¹³*hātan* also has another primary meaning, namely 'to bid/to command', but this is in addition to its function as a naming verb. Both meanings occur from the earliest texts.

4. Naming Objects

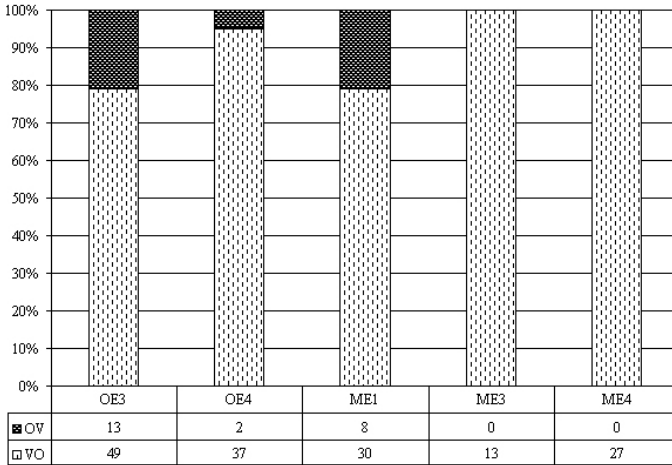


Figure 4.5.: Position of Naming Objects in English

of VO orders at 95%. Conducting a Fisher-Yates test on these frequencies, however, shows that the difference between these three periods is not statistically significant, so I will assume that they form one uniform period where both preverbal and postverbal naming objects are allowed as opposed to ME3 and ME4 where only postverbal naming objects appear.

The logistic function of these data are given in graph 4.6 below. Note that the line with the dots is the raw data whereas the smooth line is the logistic function. According to these calculations, the slope of the curve (i.e., the rate of change) is 0.52; the change takes 11.5 centuries to complete itself, and the midpoint of the change is around 680, in OE2. The range of the change suggests that the change starts in 105 and completes itself in the middle of 13C, at the beginning of ME2. Refer to section 1.4.3 of Chapter 1, however, on the problems with the logistic function.

4.5.3. Heaviness

I investigate heaviness as a potential factor in the position of naming objects by counting and comparing the word lengths of naming objects per position in each period as well as examining the structural complexity of preverbal and postverbal naming objects in each period. On the basis of the data on word order frequencies in the previous subsection, we can distinguish two syntactic systems: the earlier period (OE3–ME1) where both preverbal and postverbal

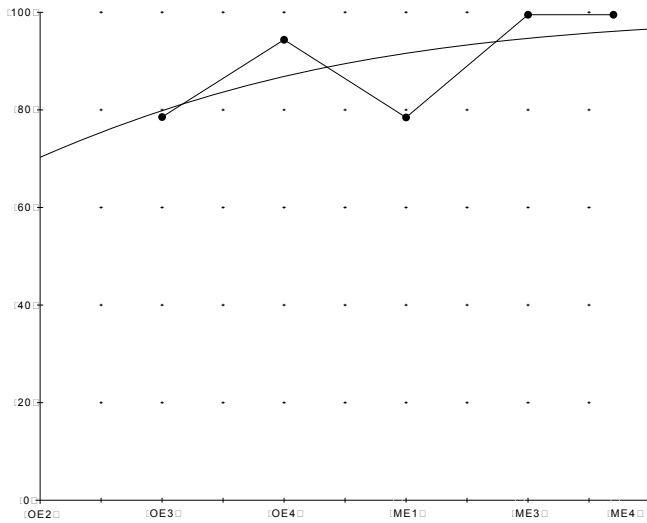


Figure 4.6.: Logistic Function of Naming Objects in English

naming objects occur and the later period (ME3–ME4) where only postverbal naming objects occur. Is there some sort of structural complexity restriction on preverbal naming objects in these three earlier periods? If so, is the restriction the same or different throughout these periods? When we examine the naming objects in OE3–ME1, we will see that there is a heaviness restriction (in terms of structural complexity) and that there is consistency throughout these three periods with respect to this constraint, which shows that all three have one uniform system underlying them.

Table 4.5 below gives an overview of the word lengths of naming objects per position in OE3–ME1, the only periods where naming objects can appear on either side of the verb. We see that the majority of the naming objects are only one word, but even these one-word naming objects have a preference for a postverbal position. The word lengths of preverbal naming objects rarely are much longer than this whereas postverbal naming objects can be composed of more than six words.

The Fisher-Yates test confirms that lexical heaviness influences the position of naming objects. The distribution of shorter versus longer naming objects per position is significantly different for all possible divisions: one-word versus multiple-word ($p = .02$), one-to-two-word versus the rest ($p = .02$), and one-to-three-word versus the rest ($p = .002$). What is interesting in all of these

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phrase length (words)	OE3–ME1	
	OV	VO
1	20	71
2	2	12
3	1	2
> 3	0	31
<i>Total</i>	23	116

Table 4.5.: Word Lengths of Naming Objects per Position in English

cases, however, is that no matter the length, the shorter naming objects and the longer ones have a preference for the postverbal position. The difference lies in the extent of this preference; the longer ones apparently have a significantly greater preference for the postverbal position than the shorter naming objects. Moreover, we will see that structural heaviness also has an influence on the position of the head of naming objects.

When examining the 23 preverbal naming objects in OE3–ME1, we see that the vast majority are composed of only one word as in (92a); this is the case for twenty of the 23 preverbal objects (twelve of the thirteen in OE3, both in OE4, and six of the eight in ME1). Further, there are two naming objects composed of two words, given in (92b) and (92c), though these examples may better be considered compounds, and one composed of three, given in (92d).

- (92) a. on **pæs caseres** arweorðnysse þe **Iulius** wæs *nemned*
in of-the emperor's honor who Julius was named
‘...in honor of the emperor who was named Julius’ (OE4, mart2)
- b. We ræadað on **pære bec** þe is **liber regum** *gehaten*
we consult in the book which is liber regum called
‘We consult the book that is called Liber Regum’ (OE3, ælhom)
- c. ah we sculen don nu al swa þe mon þe *bið* efter criste
but we shall do now al so the man who is after Christ
selue **cristene mon** *inemned*
himself Christian man named
‘But we shall now also do the man who is called a Christian man
after Christ himself’ (ME1, lambx1)
- d. **peos wimmen** þe þus luuieð *beoð* **þes deofles musestoch**
these women that thus believe are of-the devil's mousetrap
iclepede
called
‘these women who believe these things are called the devil's mouse-
trap’ (ME1, lambx1)

These examples show that the preverbal naming objects are never more structurally complex than a complex noun phrase. These same types of naming objects also occur postverbally, but we only find more structurally complex naming objects after the verb.

Postverbal naming objects, as was the case with their preverbal counterparts, can be composed of a single noun as well as complex nouns. In addition, we find more complex structures postverbally, such as coordinated noun phrases (example 93a) and noun phrases being modified by relative clauses (example 93b). The fact that there are no examples of such naming objects preverbally suggests that heaviness plays an important role in determining the position of naming objects in the earlier periods of English. One particularly suggestive observation is that naming objects that are further elaborated, whether in a relative clause as in (93b), a conjunct clause as in (93c), or an additional explanatory clause, always occur postverbally.¹⁴ These additional explanations of the naming objects appear particularly frequently when the naming object is given in either Greek or Latin and then translated into English.

- (93) a. se ðrowode matirdom mid **twæm mæssepreostum** þa
 who suffered martyrdom with two clergymen who
wæron gehatene **Euentius and Theodolus**
 were called Eventis and Theodolus
 ‘...who suffered martyrdom with two clergymen who were called
 Eventis and Theodolus’ (OE3, ælhom)
- b. **sixte** is *ihaten*, **Desida**, þæt is slewðe on englisc
 sixth is called Desida that is sloth in English
 ‘The sixth is called Desida, which is sloth in English’ (ME1, lambx1)
- c. On þone XXI dæg þæs monðes byð **Sancte Thomas** tyd
 on the 21 day of-the month’s is Saint Thomas time
 þæs apostoles, *se wæs on Grecisc nemned* **didimus** ond on
 of-the apostle who was in Greek named Didimus and in
 Romanisc geminus, þæt ys on ure geþeode getwyn
 Latin Geminus that is in our language twin
 ‘On the 21st day of the month is the time of the apostle Saint
 Thomas, who is named Didimus in Greek and Geminus in Latin,
 which is ‘twin’ in our language’ (OE4, mart2)

If the elaborating information always occurred in a relative clause, then we would expect a structural relationship between the naming object and the relative clause that would cause the naming object to be considered heavy.

¹⁴In examples like (93b) and (93c), I counted the following relative clause or additional information as part of the naming object. Given the fact that these often give more information about the name itself, they contribute to the ‘heaviness’ of the naming object, which in turn causes the entire entity to extrapose.

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However, it does not seem to matter whether the elaborating information (i.e., the translation) is in a relative clause or a coordination; no matter how the additional information is presented, there seems to be some connection between the naming object and the elaborating information, causing the naming object to be considered heavy and hence to appear postverbally. The fact that there are no examples of a naming object occurring in a preverbal position while its elaboration occurs postverbally suggests that there is a close connection between the naming object and its elaborating information. ‘Heaviness’ in this case is perhaps best interpreted as informational heaviness. The similarity between the English periods in the operation of heaviness as a factor in determining word order suggests that despite the oddity of the word order frequencies in these three periods, they actually represent a similar system.

Another means of avoiding structurally complex preverbal naming objects is placing the adverb *þus* ‘thus’ to the left of the verb whereas the real naming object (in both instances, they are coordinated noun phrases) to the right.

- (94) Ond æfter Cristes upastigennysse he gecyrde **twa mægða** to Godes
and after Christ’s resurrection he turned two tribes to God’s
geleafan, *þa wæron þus genemned*, **Scyððiam þa mægðe**
belief who were thus named Scythia the tribe
ond Achaïam þa mægðe
and Achaïam the tribe
‘And after Christ’s resurrection, he converted two peoples to God’s belief
who were thus named: the people of Scythia and the people of Achaïam’
(OE4, mart2)

This construction occurs twice, once in OE4 and once in ME1. In this way, an OV order can be maintained by *þus* while the heaviness restriction can be met by placing the true naming object to the right of the verb.

We have seen that there is a restriction on the structural complexity of preverbal naming objects; they can be no more than a phrase. This does not necessarily mean that the position of a structurally complex naming object is influenced by its structure. We have to further investigate the data to see if this is the case. If structural complexity does have an influence on the position of naming objects, then we expect structurally complex naming object to occur postverbally more often than simplex naming objects. Table 4.6 shows the distribution of simplex and complex naming objects per word order in OE3–ME1. The Fisher-Yates exact test informs us that difference between the word order distributions of simplex versus complex naming objects is statistically significant ($p = .0003$, two-tailed).¹⁵ This means that in addition to the structural complexity restriction on preverbal naming objects in English,

¹⁵The difference between the two types is not statistically significant in OE3 or OE4 but is in ME1.

	OE3–ME1	
Simplex	23	85
Complex	0	31
Total	23	116

Table 4.6.: Position and Heaviness in Naming Objects in English

the position of naming objects is strongly influenced by its structural complexity.

4.5.4. Newness

Newness is the next factor under investigation. To determine if it is a relevant factor in determining the position of naming objects, I will look for whether the naming objects have been mentioned earlier in the text. If newness is an important factor in the position of naming objects, then we expect that a majority of the extraposed naming objects are instances of new information. We also expect that instances of old information will occur more often to the left of the verb.

We see a few pairs of examples where the first instance(s) of a naming object occurs to the right of the verb while the second instance is to the left as seen in (95) and (96). In (95), the actual naming object is not the same in the two examples. However, the first sentence, given in (95a), makes clear that *Mæssias* refers to the same entity as the term *Hælend Crist*. It is also possible that this naming object is postverbal because it is being modified by a relative clause, but this is irrelevant for the placement of the naming object in the second sentence. In (95b), *Mæssias* is repeated, though it appears as the subject, and the name *Crist*, which is again attributed to it, occurs preverbally.

- (95) a. Ic wat þæt us cymð *se ðe is gehaten* **Mæssias**, þæt is
 I knew that to-us comes he who is called Messiah that is
 Hælend Crist
 healing Christ
 ‘I knew that he who is called the Messiah, that is the healing Christ,
 is coming to us’ (OE4, ælhom)
- b. Ic wat þæt **Mæssias** cymð *se ðe ys* **Crist** *gecweden*
 I knew that Messiah comes he who is Christ said
 ‘I knew that the Messiah, who is called the Christ, is coming’ (OE4,
 ælhom)

It seems then that the repetition may have had an influence on the preverbal position of the naming object in the second sentence.

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Example (96) also seems to demonstrate that newness can play a role in determining word order. The clause in (96a) occurs first in the text, and the naming object, *pentecostes*, occurs after the verb. The second instance, given in (96b), occurs fifteen clauses later and has the same naming object occurring before the verb.

- (96) a. and **þes dei is ihaten pentecostes** þet is þe fiftuða dei fram
and this day is called Pentecost that is the fiftieth day from
þan ester tid
the Easter time
‘...and this day is called Pentecost, which is the fiftieth day from
Easter’ (ME1, lambx1)
- b. þa wes **þe dei pentecostes** ihaten on þere alde isetnesse.
then was the day Pentecost called in the old ordinance
‘Then the day was called Pentecost in the old law’ (ME1, lambx1)

What occurs between these two clauses is the story of the day itself. Since this particular day clearly remains the topic throughout these lines, it seems safe to assume that the second instance gives old information despite the potential ambiguity of the subject *þe dei*. Another interesting observation about this particular pair is that the two instances seem to delimit the bounds of an episode: the first clause serves the function of introducing a topic, in this case *pentecostes*, which is followed by a flashback, i.e., the story of the origin of the day. The second clause seems to signal to the reader that the flashback is complete, and it is followed by an explanation of the significance of the day in relation to Easter. Of course, this one example is not enough to show that this is the case.

The examples discussed above suggest that newness plays a role in determining the position of naming objects; however, there are also counterexamples, as in the pair of clauses given in (97). The second occurs seven sentences after the first, and in both clauses, the same entity, *deofles*, is attributed the same name, *Beelzebub*. Despite the repetition and being relatively close to one another, the naming object *Beelzebub* occurs postverbally in both instances.

- (97) a. þæt ure Drihten sceolde þa wundra wyrcan on **þæs deofles**
that our Lord should the miracles work on of-the devil’s
mihte *þe men hataþ* **Beelzebub**
might who men call Beelzebub
‘...that our Lord should work miracles on the power of the devil who
is called Beelzebub’ (OE3, ælhom)
- b. þæt ic adræfde deofla of mannum þurh **ðæs deofles**
that I drive-away devils’ from men through of-the devil’s
mihte *þe menn hataþ* **Beelzebub**
might who men call Beelzebub

‘...that I drive away the devils’ men through the power of the devil who is called Beelzebub’ (OE3, ælhom)

Both of these naming constructions are repeated 29 sentences later, and both of them have the naming object occurring after the verb. This suggests that newness is not an important factor in determining word order in these periods in English. However, these examples also seem to be formulaic, almost like a set expression. In all four cases, the same devil is referred to with the same name expressed with the same relative clause in exactly the same order, so these examples may not be as contradictory as they at first may appear.

Table 4.7 shows the combined distribution of new versus old information per position. While the VO order has a higher percentage of new naming objects

	OE3–ME1	
Old	10	23
New	13	93
Total	23	116

Table 4.7.: Position and Newness in Naming Objects in English

than the OV order, new naming objects make up the majority in both word orders. The Fisher-Yates Exact test shows that newness does play a role in determining the position of naming objects ($p = .036$): a new naming object is more likely to appear postverbally than preverbally.¹⁶

4.5.5. Discussion

In this section, I will address the research questions posed in 4.2. The first set addresses the distribution of naming verbs and their functions over time. The data discussed in subsection 4.5.1 show that English naming verbs have undergone a major shift: of the five naming verbs investigated, only one occurs in all five periods whereas the others occur in no more than three. Of the different functions, the transitive naming verbs are the only type found in the first three periods: the inherently passive *hātan*₂ only occurs in ME3–ME4, so there is no competition to fill the gap left by *hātan*. Because of this constant flux of naming verbs and the consistency of the functions filled by these verbs, word order is independent of these two factors.

The second set of questions address the development of the word order possibilities of naming verbs as was discussed above in subsection 4.5.2. The data

¹⁶The combination of the data of the three periods shows that newness plays a role in word order even though this is not the case for any individual period. This is probably due to the fact that there are not enough examples of OV in any given period for accurate statistical tests to be carried out.

4. Naming Objects

show that OE3–ME1 allow OV orders whereas these orders do not appear in ME3–ME4. Despite allowing OV orders, however, OE3–ME1 have high frequencies of VO orders. The proportion of OV to VO orders is not significantly different among these three periods. On the basis of these data, we can distinguish two syntactic systems: on the one hand, we have OE3–ME1 where both preverbal and postverbal naming objects occur, and on the other, we have ME3–ME4 where only postverbal naming objects occur.

Heaviness as a factor in determining the word order of naming objects in OE3–ME1 is suggested in looking at lexical heaviness. A closer examination of structural heaviness reveals that it is an important factor that manifests itself in two ways: a structural heaviness restriction on preverbal naming objects and a higher likelihood that structurally heavy naming objects will occur postverbally than preverbally. The structural heaviness restriction does not allow preverbal naming objects to have more structure than a phrase. If the naming object is a coordination of two phrases or is modified by a relative clause, the naming object occurs postverbally with its supplementary elements. Based on the fact that this structural heaviness restriction on preverbal naming objects seems to apply in all three periods, we can conclude that OE3–ME1 form a cohesive system. From ME3, English shifts to a rigid VO language and preverbal naming objects are no longer allowed. In addition to this restriction, structural heaviness also influences the position of the head of naming objects: complex naming objects occur postverbally statistically significantly more often than simplex naming objects.

In response to the fourth set of research questions, newness does play an important role in determining the position of the naming object, though not to the same extent as structural heaviness. There are a few cases where repeated naming objects go against expectation: all the instances of the same naming object occur postverbally. In some cases, these repetitions seem to be instances of formulaic language, a set expression that almost never changes orders. There are, however, more examples that show the expected pattern: the first instance is postverbal and subsequent instances are preverbal. Moreover, there is a statistically significant difference in the distribution of new and old naming objects per word order, further supporting the claim that newness has an influence on word order in the history of English.

When we consider all of these factors together, we can distinguish two separate periods with respect to naming objects. OE3–ME1 is characterized by the occurrence of both preverbal and postverbal naming objects, a high frequency of VO orders, a restriction on the structural heaviness of preverbal naming objects, and the influence of both structural heaviness and newness on the position of naming objects. ME3–ME4, on the other hand, only has postverbal naming objects and therefore does not have a heaviness restriction.

4.6. Comparison

Now that we have a clear understanding of the evolution of naming constructions in Dutch and English, we can more accurately compare the two and see what this reveals about the two languages themselves as well as about language change in general. I will treat the subsections in the same order as they appear in the previous two sections.

4.6.1. Naming Verbs

In comparing the evolution of naming verbs in Dutch and English, it is immediately clear that the Dutch verbs have much more continuity over time than the English ones. Even though the use and meaning of the verbs change, Dutch keeps the same verbs whereas English is marked by a number of different naming verbs used for varying amounts of time, most of which are eventually lost. Of the English verbs cognate with the Dutch, only ‘to name’ survives. The major changes in English vocabulary over time can in part be attributed to its intense contact with speakers of other languages. The contact with Scandinavian led to the borrowing of the verb ‘to call’ and presumably to its use in naming constructions. This hypothesis seems to be supported by the fact that according to both the *EWN* and the *CD-Rom Middelnerlands*, the Dutch verb *roepen* ‘to call’ was never used in naming constructions. This use in English was perhaps further reinforced by French, where the verb of naming is most often *appeler* ‘to call’. The *Middle English Dictionary* (MED online, <http://quod.lib.umich.edu/m/med>), for instance, gives an example of the verb *ap(p)elen* used to mean ‘to call (sth. by a name)’, given in (98).¹⁷

- (98) Fyrst when hertez beþ assembled, And ‘herde’ hy3t ys appeled
 first when deer are assembled and herd is-called is called
 ‘First when deer are assembled and is called a herd’ (c1400 *Femina*
 (TrinC B.14.40), taken from MED s.v. *ap(p)elen*)

We saw that Old English used verbs meaning ‘to say’ in naming constructions; the Dutch verb *zeggen* ‘to say’ was also used in such constructions. This suggests that whereas the use of verbs meaning ‘to say’ in naming constructions is perhaps an inherited feature of at least West Germanic languages if not Germanic languages in general, the use of verbs meaning ‘to call’ does not seem to be and is most probably the result of contact.

The shift in function among the naming verbs is quite clear in Dutch: *heten*₁ and *heten*₂ are initially *the* naming verbs in Dutch from 13C–15C, filling the functions of both a transitive and an inherently passive naming verb. Over time,

¹⁷Note that this example is a translation of the French: ‘Vn herde donq3 est appelle’. As this example is used to illustrate the meaning and use of this word, the fact that it is a translation is not as relevant as for the data in the rest of the study.

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*heten*₁ gives way to *noemen* as the transitive naming verb, leaving *heten*₂ to specialize as the inherently passive naming verb. The other competitor for the function of transitive naming verb, *namen*, is eventually lost as a verb, though its past participle, *genaamd*, survives as an adjective in Modern Dutch. The situation in English, in contrast, is confused by the number of and constant shift among the naming verbs. The inherently passive function of *hātan*₂ only emerges in ME3 in these data so there is no major shift in function among the naming verbs. Moreover, *hātan*₂ does not survive into the modern standard language, so it is short-lived. This may have contributed to the eventual loss of most of these verbs as naming verbs in English.

4.6.2. Word Order

The evolution of the word order patterns of naming constructions in Dutch and English have clear patterns. In the early periods of both languages, both OV and VO orders are allowed with a high frequency of VO patterns. In Dutch, there is a change in the 16C whereby OV orders become the dominant order. This pattern continues until the OV order is the only possibility in 18C. In English, the high frequency of VO order eventually gives way to a rigid VO order. The consistently high frequency of VO orders in the early periods of Dutch (13C–15C) and English (OE3–ME1) suggest that the naming construction is associated with the VO order. This hypothesis will be considered in more detail in Chapter 5 when this construction is compared to directional and object phrases.

4.6.3. Heaviness

Heaviness was examined from two perspectives: lexical heaviness gave us an impression of the word lengths allowed in each position over time, and structural heaviness allowed us to determine the extent to which heaviness impacts word order. With respect to lexical heaviness, we observed that in both the Middle Dutch period (13C–15C) and the early stages of English (OE3–ME1), the word lengths found preverbally were much shorter than their postverbal counterparts. This already hints at certain heaviness constraints on the position of naming objects. In Dutch, the preverbal word lengths get longer over time until we no longer find postverbal naming objects whereas in English, preverbal naming objects eventually do not occur.

When examining the structural heaviness of naming objects, we again saw similarities between the early stages of Dutch (13C–15C) and English (OE3–ME1): both have a structural heaviness restriction on preverbal naming objects, which are never more complex than a single phrase. The languages differ, however, in how they deal with this restriction. If a naming object is composed of coordinated phrases or is modified by a clause, both Dutch and English allow

the entire naming object to occur to the right of verb. Dutch, however, also has the possibility of allowing the head of the naming object to remain preverbal while the rest occurs postverbally, thereby splitting the naming object. The possibility of splitting a complex object also occurs in older stages of English as we saw in the previous chapter, but there are no examples of split naming objects. This is probably in part due to the fact that naming objects have a general tendency to be single phrases, though there were not many more complex naming objects in the Middle Dutch period than in the early periods of English: 40 out of 218 for Middle Dutch (18%) versus 31 out of 149 for English (21%). This difference between the two languages may also suggest that even in its early period, Dutch had a stronger tendency toward OV orders than English. After this period of the structural heaviness restriction, each language goes in its own direction: Dutch goes through a transitional period (16C–17C) where both OV and VO orders are allowed without a structural heaviness restriction before becoming a rigid OV language, and English becomes a rigid VO language.

Another difference between the two languages with respect to structural heaviness is its influence on the position of the head of the naming object. As just mentioned, Dutch allows complex naming objects to split while there were no instances of this found in English. A comparison of the position of the head of the naming object and its complexity revealed that structural heaviness does not have an influence on word order in either stage of Dutch while it does play a rather strong role in English. Though the effects of structural heaviness are not statistically significant in either period of Dutch, we can see that the earlier period is more like the earlier stages of English than it is to the later period of Dutch. In the first two instances, complex naming objects clearly have a strong preference for VO orders whereas they have a slight preference for OV orders in the later period of Dutch.

4.6.4. Newness

The qualitative examination of newness as a factor in word order gave contradictory results. On the one hand, there were examples in both Dutch and English of what one would expect if newness played an important role in word order: the first occurrence of a naming object is postverbal while the later occurrences are preverbal. There were also a few examples that undermined this expectation: most of the preverbal naming objects in both Dutch and English present new information, and a few of the postverbal naming objects present old information. Some of these counterexamples could perhaps be attributed to formulaic expressions that always appeared in the same order with the same information. Statistical tests conducted on the two periods of Dutch and OE3–ME1 in English showed interesting results: newness does not play a role in Middle Dutch (13C–15C) word order whereas it plays a rather strong role in 16C and 17C of Dutch and a minor role in the early stages of English.

4.7. Concluding Remarks

The early periods of both Dutch and English are quite similar with respect to the position of naming objects; in both languages, there is a very high frequency of VO orders. However, the summary of the properties of each of the periods investigated given in table 4.8 show that each of the periods has quite distinct properties; no two periods are like one another. The property that both 13C–15C Dutch and OE3–ME1 English, the periods where the majority of the naming objects are postverbal, share is the structural heaviness restriction on preverbal naming objects. All of these facts taken together seem to point

	Dutch		English
	13C–15C	16C–17C	OE3–ME1
Majority VO	+	–	+
Preverbal restriction	+	–	+
Structural heaviness	–	–	+
Newness	–	+	+

Table 4.8.: Summary of Characteristics of Naming Objects in Dutch and English

toward a specific structure, namely VO order, being associated with naming constructions (or possibly with object complement constructions in general). Over time, this structure gives way to the emerging rigid word order patterns in each language, namely OV in Dutch and VO in English. This analysis is further strengthened by comparing naming objects with directional phrases and objects phrases, which I turn to in Chapter 5.

5. Comparative Analysis

In Chapter 1, I introduced the premise of this study: the evaluation of different theories on the word order of early West Germanic and on how word order has changed in the different languages over time. The two general approaches to the word order phenomena were represented by one analysis each: the construction-specific approach by the analysis of Van Kemenade (1987) and the construction-related approach by Neeleman & Weerman (1999). In addition to the two general approaches mentioned above, one other theory, which has only been proposed for Old English, was also examined, namely the competing-grammars approach of Pintzuk (1999). These approaches were examined by considering three specific constructions, specifically directional phrases, relative objects, and naming objects, in the history of Dutch and English, treated in Chapters 2, 3, and 4, respectively. In this chapter, I compare the results of the three different constructions with one another per language, making pertinent observations, before comparing the combined results of each language to one another and drawing final conclusions.

In section 5.1, I summarize the issues that were brought up in the previous chapters and that will be addressed here. In section 5.2, I briefly restate the research questions that were explored in this study. These include questions about the development of syntax in each of the languages as well as evaluation of different theories of syntactic change. In sections 5.3 and 5.4, I summarize and compare the data of the three constructions for Dutch and English, respectively, against the theoretical background. The implications of these results on theories of syntactic change as well as what they reveal about the history of each language will be discussed in section 5.6.

5.1. Issues

As mentioned in the previous section, two basic approaches are evaluated in this study: the construction-specific approach and the construction-related approach. Recall from Chapter 1 that both the construction-specific and construction-related approaches assume only one underlying order. The difference between them is the mechanism(s) they do or do not have to account for deviant orders. In the construction-specific approach, constituents can appear in a non-underlying position only when various factors, such as heaviness, newness, or discourse, play a role. In contrast, in the construction-related approach, the

appearance of a constituent in a non-underlying position is not *restricted* by such factors, which is not to say that these factors do not increase the incidence of non-underlying orders, since the extraposition of a constituent is related to other properties of the language; in the case of Flexible Syntax, this property is morphological case. We expect to be able to evaluate the accuracy of these approaches by observing the evolution of the word order patterns of different constructions. If the construction-specific approach is more accurate, then the rate of change between the three constructions investigated in this study should differ over time. If, however, the construction-related approach is more accurate, then we expect to see these three constructions developing at a similar rate.

I also considered the competing grammars approach, an analysis put forth by Pintzuk (1991) for Old English syntax. This analysis claims that Old English had two underlying word orders available: OV and VO. So, an Old English SVO sentence in a subordinate clause could be an underlying VO sentence, or it could be an underlying OV sentence where the object has undergone extraposition. Given the two possible sources of a surface SVO order, we can evaluate this theory by comparing the English data to the data from Dutch, which no one has claimed has competing grammars. This competing grammars model would predict a higher percentage of surface VO orders than the analyses discussed above since in addition to the percentage of VO orders derived from OV, there would also be the underlying VO orders in the language. In each of the previous chapters, we have discussed the results of the word order patterns of the three constructions. In this chapter, I will bring the results together and compare the evolution of the three constructions.

I investigated three different constructions that have various exceptional syntactic characteristics at some point in the history of Dutch: directional phrases are unique among prepositional phrases in Modern Dutch for their behavior, which patterns with objects rather than other prepositional phrases, and both relative objects and naming objects have been noted as having an exceptionally high percentage of VO orders in Middle Dutch. Given the unique status of each of these, we need to find out if their developments are indeed actually related. It is possible that independent factors played important roles in the evolution of the syntax of these constructions. However, if they are all influenced by similar changes, à la construction-related approach, we will expect that their changes in word order patterns over time are similar. In particular, their logistic functions, which calculate the rate at which the shift occurs, should be similar.

An assumption of this study, based on previous work on Dutch historical syntax, is that Dutch has always been a language that is underlyingly OV. In its earlier stages, it also had argument extraposition, allowing arguments to occur to the right of the verb. From the data of the various centuries of Dutch, we can see how the word order patterns develop over time. We can also determine how VO-like an underlying OV language can appear, which will help to evaluate the

different theories on word order in English.

In the early stages of English, like the early stages of Dutch, arguments could occur on either side of the verb. A number of analyses have been proposed in an attempt to capture the underlying structure of the syntax at these stages, and they have done so in different ways. By comparing the frequencies in the English data to that in the early stages of Dutch, we will be able to determine how similar the distributions in the two languages are. If English is, as the traditional analysis claims, underlyingly OV with optional argument extraposition, then the distributions in the early stages of the two languages should be similar. If, however, English has both underlying OV and VO, then the distribution of VO in the relevant stages of English should be higher than what we find for Dutch. We will return to this issue in section 5.5 where the Dutch and English data are compared to one another.

Another way in which we can determine which analysis of the early stages of English is more plausible is by looking at the influence of other factors. In a language that is underlyingly OV with optional argument extraposition, we would expect either that the distribution of arguments with respect to the verb is in free variation, i.e., that no factors can be identified that determine the position of arguments, or that certain factors play a role in determining the position of arguments. If that latter is the case, then we would expect that elements effected by a given factor, say structural heaviness, occur either to the left or to the right of the verb significantly more often than elements which are not effected by structural heaviness. In the case of Dutch, which in its early stages is underlying OV with argument extraposition, the effects of structural heaviness should be clearly visible if it is an important factor. If to this situation an underlying VO grammar is added as is proposed for English, then we would not expect there to be any significant difference in the distribution of structurally heavy elements versus elements that are not structurally heavy.

In this study, I chose to focus on two particular factors, heaviness and newness, to see if their effects can be seen in the word order patterns of Dutch and English. Heaviness was investigated both lexically (number of words in the relevant constituent) and structurally (the complexity of the constituent).

5.2. Recapitulation

For each of the three constructions, we looked at a number of factors: the word order patterns over time, lexical and structural heaviness, and newness. In this chapter, I compare the patterns in the three different constructions to see how similar they are to one another and what clarity may be reached by considering them together. The main questions addressed in this study are restated below.

5.2.1. **Word Order**

One of the hypotheses of this study is that these three constructions are influenced by the same factors, namely heaviness and newness. To see if this holds, I compare the word order distributions per century in each of the three constructions. So, for instance, the distribution of OV and VO in 13C Dutch relative objects are compared to that of 13C Dutch directional phrases and 13C Dutch naming objects. If the interaction of word order, heaviness, and newness is similar across the three constructions, then we expect that the distributions per century will not be significantly different from one another within a particular century.

In the chapters on each of the constructions, I grouped together centuries that were not significantly different from one another in order to have enough data for the following sections. How do the clusters of centuries for each language compare to the word order distributions? Ideally, the groupings of centuries will correspond to changes in word order distributions. If they do not match, what does that reveal about the groupings? What do the differences say about the different constructions, if anything?

Another question is whether the shifts of the different constructions follow the same pattern. This will be examined by comparing the logistic functions of the different constructions. Following Kroch (1989), I assume that if the logistic functions are similar, then the changes undergone by the different constructions are caused by the same factors. If the logistic functions are different from one another, then the changes are also different.

We can also use these data to gain insight into the competing-grammars analysis by comparing the development in Dutch and English. The data from Dutch will reveal how frequent VO can occur in an underlying OV language. With this, we can see how the frequencies in the English data compare and what this reveals about its underlying word order. The expectation is that VO orders should be more frequent in English if it does indeed have two competing grammars. If the distributions of OV and VO in Dutch and English is not significantly different from one another, this would bring into question the usefulness of the competing-grammars hypothesis in English.

5.2.2. **Heaviness**

For each construction, I looked at the influence of lexical and structural heaviness on the position of the particular constituent in question. How do the results per construction compare with one another? In some cases, there were clear indications that these either did or did not play an important role, but a number of cases were unclear. By comparing the developments in the three different constructions, we will be able to determine whether the word order patterns of either language is influenced by heaviness.

5.2.3. Newness

Newness was also investigated per construction. Again, how do the results per construction compare with one another with respect to newness? Does newness play a significant role in determining the position of sentential elements? As with heaviness, there were some clear indications that newness either did or did not play an important role, but a few cases were not clear.

5.3. Dutch

5.3.1. Word Order

For each of the three constructions, I looked at the distribution of the heads with respect to the verb over time. Now I will compare the data from the different constructions to see how similar their developments are. If the changes in their syntax is related to the same factor(s), then we expect that any irregularities will occur for all the constructions at the same time and that the change in syntax will occur at similar rates. Figure 5.1 summarizes the raw data for each construction. In all of the constructions, the decline in VO orders seems

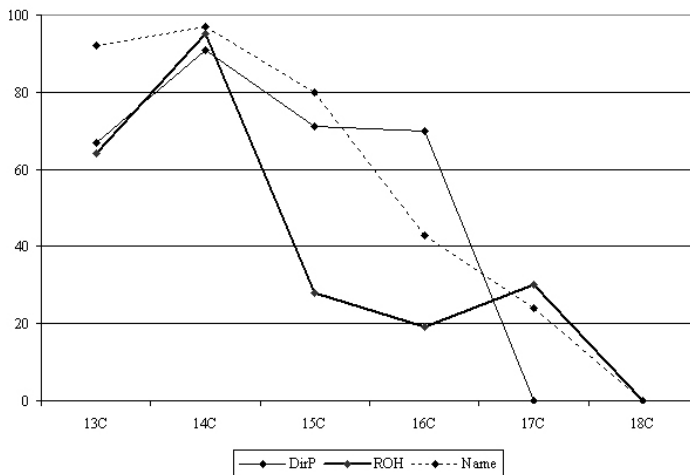


Figure 5.1.: Comparison of Distribution of Directional Phrases, Relative Object Heads, and Naming Objects in Dutch

to occur in the period including 15C, 16C, and 17C. Some other similarities include all three constructions having a noticeable increase in VO orders in 14C

(which is not as noticeable with naming objects) and that they all lose argument extraposition (i.e., VO order) by 18C. For the most part, the word order distributions per century is not significantly different between the constructions. The notable exceptions are 13C naming objects, 15C relative object heads and 17C directional phrases: the distribution of VO in these particular constructions in the given century are significantly different from the other two, whether it be significantly higher, as in 13C naming objects, or significantly lower, as in 15C relative object heads and 17C directional phrases. Another exception involves the word order distributions of directional phrases and relative object heads in 16C, which are significantly different from one another but neither is significantly different from naming objects. The overall similarity in the history of these three constructions indicate that the factors that cause each to change are related, but a fuller account of the development of the word order patterns should be able to account for the irregularities just mentioned, namely 13C naming objects, 15C relative object heads, and 16C and 17C directional phrases. Moreover, 14C in general behaves differently from the other centuries, another issue that needs to be addressed.

A summary of the period divisions of the three different constructions is given in table 5.1. In the table, 3 represents a period with OV and VO orders with a higher frequency of VO, 2 represents a period with OV and VO orders with a lower frequency of VO orders, and 1 represents a period of exclusive OV orders. The letters represent the periods that are *not* significantly different from one another based on statistical comparison of the word order frequencies.

The data in this table correspond in large part to the periods established in

	13C	14C	15C	16C	17C	18C
Directional Phrases	3 A	3 A	3 A	3 A	1 D	1 D
Relative Object Heads	3 A	3 B	2 C	2 C	2 C	1 D
Naming Objects	3 A	3 A	3 A	2 C	2 C	1 D

Table 5.1.: Word Order Patterns in Dutch (3=more VO, 2=less VO, 1=only OV)

the previous chapters. The one discrepancy is found in relative object heads between 13C and 14C: the distribution of relative object heads in 14C was significantly more VO than in 13C. Notice that directional phrases are the only construction that does not have a period of OV and VO order with a lower frequency of VO orders. This may be evidence that directional phrases have not always acted in the same way as objects in the history of Dutch (and

should therefore not have been used as a control group), but, rather, that their object-like properties develop in the Modern Dutch period. This table shows word order consistencies in the beginning (13C and 14C) and in the end (18C) but considerable variation in the middle (15C, 16C, and 17C). The variation in the middle suggests that the shift in these orders begins with relative object heads and then spreads to naming objects and directional phrases.

Figure 5.2 presents the logistic function calculated for each construction. When we compare the logistic functions of the three constructions, we see that

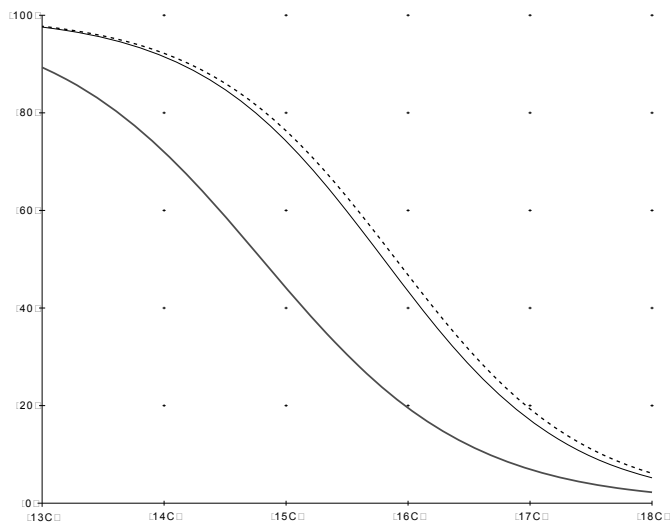


Figure 5.2.: Comparison of Logistic Function of Directional Phrases (grey), Relative Object Heads (solid black), and Naming Objects (dotted) in Dutch

despite the discrepancies in the raw data observed in figure 5.1 above, the logistic functions (i.e., the S-curves) calculated from the data are remarkably similar, meaning they all have similar rates of change. This indicates that their evolution over time can be attributed to the same factors. Moreover, the midpoints of the changes are quite close, particularly that of directional phrases and naming objects, giving further support.

5.3.2. Heaviness

Two types of heaviness were investigated: lexical and structural. Lexical heaviness was measured by counting the number of words in the relevant constituent, and structural heaviness took into account the internal structure. The characteristics of the constituents on both sides of the verb were compared to one another to see if the position of the elements could be attributed to their heaviness. There were some similarities and differences between the constructions, which we will now turn to.

Lexical heaviness was not found to be a significant factor in any of the constructions. That is, in none of the constructions can the position of the relevant element be attributed to the number of words contained in that constituent. This is logical since the number of words at which a constituent can be said to be “heavy” would have to be fairly arbitrary, excepting, perhaps, processing considerations. Moreover, constituents with a larger number of words also have additional features that might contribute to their position, for instance, structural heaviness.

When we look at the effect of structural heaviness in the different constituents, we get rather mixed results, as seen in table 5.2. Recall that for all three constructions, I make a distinction between a preverbal restriction (labeled *pre* in table 5.2) and a postverbal constraint (labeled *post* in table 5.2). The preverbal restriction restricts the complexity of preverbal elements—they can only be simplex constituents. The postverbal constraint results in the extraposition of structurally heavy elements to the right of the verb. In this table, ‘+’ means that structural heaviness was found to be statistically significant in that century, ‘-’ that it was not statistically significant, and ‘(+)’ that it was not statistically significant but that it was statistically significant when the data were considered together with other centuries. One thing that is consistent throughout the three

		13C	14C	15C	16C	17C	18C
Directional Phrases	pre	(+)	(+)	(+)	(+)	n/a	n/a
	post	-	-	-	-	n/a	n/a
Relative Object Heads	pre	n/a	+	-	-	+	n/a
	post	n/a	+	-	-	-	n/a
Naming Objects	pre	+	+	+	-	-	n/a
	post	-	-	-	-	-	n/a

Table 5.2.: Structural Heaviness in Dutch

constructions and throughout the centuries is the lack of a postverbal constraint, meaning that structurally heavy constituents are not forced to occur after the verb; in other words, they can occur preverbally just like simplex constituents.

The only evidence of this postverbal constraint is with relative object heads in 14C, a century that has already been noted as having a frequency of VO that is significantly higher than most other centuries. This means that we can, for the most part, say that Dutch did not have this constraint. However, this does not mean that structural heaviness does not have any sort of influence in Dutch; the preverbal restriction is more common and consistent throughout the centuries in the three constructions. This restriction limits the structural heaviness before the verb. The fact that this preverbal restriction does have an influence in Dutch while the postverbal constraint does not means that Dutch has had from the beginning a tendency toward OV orders by splitting structurally heavy constituents, i.e., that the head of the constituent appears before the verb while any additional modification appears after. It is also noteworthy that for each of the constructions, the loss of the preverbal constraint, as seen in table 5.2, is in the same century that the word order shifts to majority OV, i.e., the shift from 3 to either 2 or 1 seen in table 5.1 above.

5.3.3. Newness

Table 5.3 presents the results of newness in the different constructions. Remember that newness is being defined in this study as indefiniteness while definite constituents are considered given information. In this table, it is clear the

	13C	14C	15C	16C	17C	18C
Directional Phrases	–	–	–	–	n/a	n/a
Relative Object Heads	(+)	–	(+)	–	(+)	n/a
Naming Objects	–	–	–	+	+	n/a

Table 5.3.: Newness in Dutch

newness does not play a consistent role in Dutch. It does not play a role at all with directional phrases, a very discontinuous role with relative object heads, and only a significant role late in the development of naming objects. Moreover, the tendencies observed for directional phrases with respect to newness were the opposite of what we expected: definite directional phrases (given information) occurred far more frequently postverbally than indefinite ones (new information). The results of the qualitative study also showed this mixed influence: there were as many examples supporting the influence of newness and those going against it.

One observation that is quite striking, however, is that newness only seems to play a role in the centuries and constructions when structural heaviness does not. This is most clearly visible with naming objects; compare naming objects in table 5.3 with those in table 5.2. Structural heaviness has a statistically

significant influence in 13C–15C but not in 16C–17C whereas newness does not play a significant role in 13C–15C but becomes more important in 16C–17C. It might be that the influence of newness was important in the earlier stages, but its role was masked by the influence of structural heaviness. Naming objects, because they tend to be new information, were shown to gain OV and therefore newness shows up as a factor longer than with the other two constructions. In any case, it seems quite clear that newness did not contribute to the shift in the word order patterns over time.

5.3.4. Concluding Remarks

In Dutch, all three constructions follow the same general development, undergoing their shifts at the same rate as evidenced by the similarities in their logistic functions. Relative object heads, however, undergo the shift earlier than directional phrases and naming objects. I will begin this discussion by addressing the issue of 14C, the most irregular century in the Dutch data.

One strong divergence in the history of Dutch is 14C, which behaves noticeably differently from the other centuries by having a much higher percentage of VO orders. In one notable instance, namely naming objects, where 14C is not statistically different from 13C or 15C, these latter two centuries also have a higher percentage of VO orders in naming objects than in the other two constructions; in 13C, the difference between naming objects and either directional phrases or relative objects is even statistically significant. Moreover, 14C is the only century in Dutch that, no matter what the construction, is consistently *not* significantly different from ME3 and ME4, periods in English that are exclusively VO as will be discussed in section 5.4.1. These striking irregularities cannot be attributed to genre. Texts of two genres were included in 14C: official texts and one religious text. If the oddity of 14C could be attributed to genre, then we would expect that the data from one of these two genres are significantly different from the other, which is not the case—the distribution of word orders between these two genres in 14C is not significantly different from one another. Moreover, if it were an issue of genre-specific stylistic factors, then we would expect texts of the same genre in 13C or 15C to have the same word order patterns, which is again not supported by the data: the data in 13C come from official texts, yet the distributions in 13C and 14C are often significantly different from one another. These facts indicate that something is very different about the word order patterns in 14C, but it is not immediately clear what the cause might be. Gerritsen (1980) suggests that Dutch, like all of the Germanic languages, initially shifts from an OV language toward a VO language but that this process is reversed, resulting in Modern Dutch's current OV syntax. I suspect that some sort of contact, whether with another language or dialect, influenced the word order patterns in 14C, but this should be investigated further by detailed historical research of the writing

tradition and relations with other areas in 14C.¹

Disregarding the surge of VO orders in 14C, the developments of all three of the constructions show a steady decline in VO orders over time. Relative objects are the first to have a noticeable decline in VO, and directional phrases and naming objects follow. This suggests that the shift in syntax occurs in 15C, the midpoint of the change in relative objects, whereby argument extraposition begins to be lost. It first effects the relative objects before spreading to special cases, namely naming objects and directional phrases, indicated by the delay in their shift. The influence of structural heaviness as seen in table 5.2 above also corroborates with this sequence of events—as argument extraposition is lost, structural heaviness also loses its importance.

Directional phrases are striking because, according to these data, they lack a “transition” period. They never have a period where both OV and VO are allowed with a majority of OV; rather, they shift from a majority of VO orders (62%) to rigid OV in one century while this shift is much more gradual in the other two constructions. Moreover, the frequency of VO stays relatively high until 16C, later than for the two other constructions. De Schepper & Lestrade’s (2008) interpretation of these facts (based on earlier but similar data reported in Cloutier (2006)) is that there is a difference in the nature of directional phrases in Middle Dutch versus Modern Dutch. In their proposal, directional phrases are adverbial in Middle Dutch, like other prepositional phrases. This could potentially account for the fact that the proportion of VO in directional phrases is significantly higher than in relative object heads in 16C. As a result of the collapse of the case system, directional phrases become predicative in early Modern Dutch, i.e., the original preposition becomes analyzed as a verbal particle and its complement becomes reinterpreted as an object. This results in the directional phrases losing the syntactic features of prepositional phrases, i.e., the ability to extrapose, and adopting the syntactic patterns of objects. This reanalysis later results in the development of the Modern Dutch postpositions, which are absent in Middle Dutch.

This proposal goes against my original assumption that directional phrases act as arguments throughout the history of Dutch. A potential problem with De Schepper & Lestrade’s (2008) interpretation is that it does not explain why it is only directional phrases that are effected by this reanalysis; after all,

¹After a quick cursory online search, the only significant political event that I could find in 14C is the union of the counties of Holland and Hainaut (*Henegouwen* in Dutch) in 1299 under the House of Avesnes, a union that lasted until the establishment of the Dutch Republic in 1581. After the union, there may have been increased contact between Holland and Hainaut, which bordered French-speaking areas. It is possible that the writing style in Hainaut was influenced by the bordering French-speaking areas and that this influence spread to Holland. Another major event in 14C that would have resulted in major demographic shifts in the population is the Black Plague. More in-depth research should be conducted to investigate the influence these events had on Holland society and thereby the language in 14C.

prepositional phrases of location relied as much as directional phrases on the case system for their interpretation. It may perhaps be related to the resultative nature of predicate complements and of directional phrases, which is absent in locational phrases; this meaning analogy may have resulted in the original prepositional nature of directional phrases giving way to predicate complement structure, but this is something that needs to be worked out. Something that is not clear, though, is why directional phrases go from majority VO order to exclusive OV in such a short period of time. Even a situation of reanalysis as proposed by De Schepper & Lestrade (2008) would not account for such a sudden and quick shift. These facts would best be augmented, as mentioned in Chapter 2, by data from other adpositions of direction. The sudden and complete shift to OV may be a combination of the reanalysis and the need to distinguish directional and locational prepositional phrases. This reanalysis, however, does not have to entail that directional phrases become predicate complements in Modern Dutch. These data on the development, however, can potentially contribute to the discussion.

Naming objects also have some significant differences when compared to directional phrases and relative object heads, which are possibly related to the factor newness. In 13C, for instance, naming objects already have a significantly higher percentage of VO orders than the other two. This combined with the delayed shift to OV indicate that the VO order may have been a construction-specific feature of naming verbs and their objects.

From these results, it seems that the shift in word order patterns can be attributed to the same factors, but that construction-specific factors influence when the shift takes place. This would suggest that the best account of the development of at least Dutch syntax should include a combination of a construction-specific approach and a construction-related approach.

5.4. English

5.4.1. Word Order

For each of the three constructions, I looked at the distribution of the heads with respect to the verb over time. Now I will compare the data from the different constructions to see how similar their developments are. If the changes in their syntax is related to the same factor(s), then we expect that any irregularities will occur for all the constructions at the same time and that the change in syntax will occur at similar rates. Figure 5.3 summarizes the raw data for each construction. In directional phrases and relative object heads, OE2 is the period with the lowest frequency of VO.² From then on, the frequency of VO increases

²There were no data from naming objects, so we cannot make any claims about the word order patterns in that period.

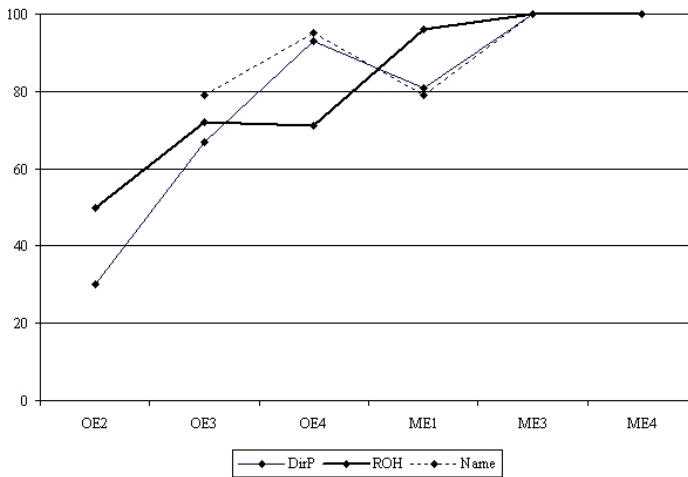


Figure 5.3.: Comparison of Distribution of Directional Phrases, Relative Object Heads, and Naming Objects in English

until it is the only order found. The developments in directional phrases and naming objects are very similar to one another while relative object heads seem to diverge, having a slightly different pattern, particularly in OE4 and ME1. However, the word order distributions per century is, for the most part, not significantly different between the constructions. The notable exception is ME1 relative object heads, which have a significantly higher frequency of VO orders than the other two constructions. Another exception involves the word order distributions of relative object heads and naming objects in OE4, which are significantly different from one another though neither is significantly different from directional phrases.

A summary of the period divisions of the three different constructions is given in table 5.4. In the table, 2 represents a period with OV and VO orders with a lower frequency of VO, 3 represents a period with OV and VO orders with a higher frequency of VO orders, and 4 represents a period of exclusive VO orders. The letters represent the periods established based on word order distributions. The raw data in this table, i.e., the numbers, correspond roughly to the periods established per construction by statistical analysis, i.e., the letters. There are a number of discrepancies, however. For instance, OE2 was always combined with OE3, despite the superficial differences in word order distributions. Also, OE3, OE4, and ME1 were variously grouped despite the fact that they all have a majority of VO orders: for naming objects, they were all grouped together;

5. Comparative Analysis

	OE2	OE3	OE4	ME1	ME3	ME4
Directional Phrases	2	3	3	3	4	4
	A	A/B	B	B	C	C
Relative Object Heads	2	3	3	3	4	4
	A	A	A	B	C	C
Naming Objects	n/a	3	3	3	4	4
	n/a	B	B	B	C	C

Table 5.4.: Word Order Patterns in English (2=less VO, 3=more VO, 4=only VO)

for relative object heads, OE3 and OE4 were grouped together with OE2, but separately from ME1; for directional phrases, OE4 and ME1 were grouped separately from OE2 and OE3. The distribution of relative object heads in ME1 was significantly different from those in OE3 and OE4 but not from those in ME3 and ME4, which is not evident from this table. While the numbers in this table show extreme consistency in the word order patterns between the different constructions in the different periods in English, they mask the differences expressed by the groupings represented by the letters.

Figure 5.4 presents the logistic function calculated for each construction. When we compare the logistic functions of the three constructions, we see that there are indeed some noticeable differences between them. The rate of change for relative object heads (0.68) and naming objects (0.52) is similar, both being rather slow changes, while the rate of change for directional phrases (1.34) indicates a considerably faster change. This would initially lead us to conclude that the syntax of relative object heads and naming objects shift under the influence of the same factors but that the factors involved in the shift in directional phrases are different. These results are actually surprising given the data in figure 5.3 above: in the graph, directional phrases and naming objects seem to follow the exact same patterns over time while relative object heads have quite a different pattern. The logistic functions, however, suggest that relative object heads and naming objects follow a similar pattern, or rather that the same factors play a role in their shift, while the factors involved in the shift in directional phrases are different. The discrepancy between the raw data and the logistic functions may in part be due to the lack of data in OE2 for naming objects. However, data in the following sections will show that there are actually other differences between directional phrases on the one hand and relative object heads and naming objects on the other.

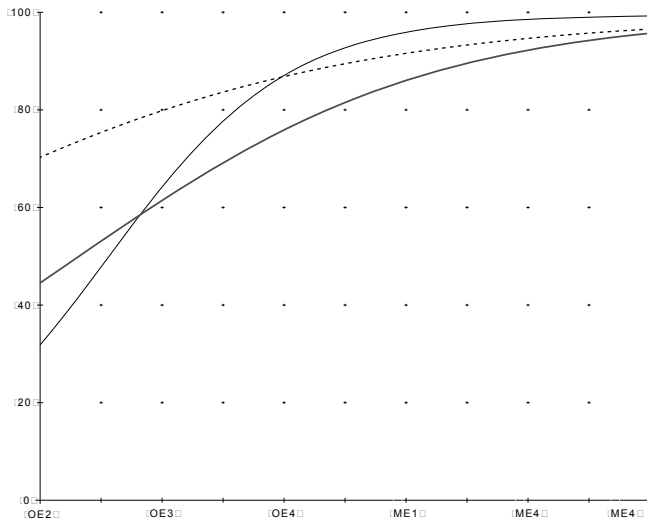


Figure 5.4.: Comparison of Logistic Function of Directional Phrases (grey), Relative Object Heads (solid black), and Naming Objects (dotted) in English

5.4.2. Heaviness

Two types of heaviness were investigated: lexical and structural. Lexical heaviness was measured by counting the number of words in the relevant constituent, and structural heaviness took into account the internal structure. The characteristics of the constituents on both sides of the verb were compared to one another to see if the position of the elements could be attributed to their heaviness. There were some similarities and differences between the constructions, which we will now turn to.

As we saw in Dutch, lexical heaviness in English was not found to be a significant factor in any of the constructions. That is, in none of the constructions can the position of the relevant element be attributed to the number of words contained in that constituent. This makes a lot of sense since the number of words at which a constituent can be said to be “heavy” would have to be fairly arbitrary, excepting, perhaps, processing considerations. Moreover, constituents with a larger number of words also have additional features that might contribute to their position, for instance, structural heaviness.

When we look at the effect of structural heaviness in the different constituents, we get rather mixed results, as seen in table 5.5. Recall that *pre* represents

5. Comparative Analysis

the preverbal restriction, *post* the postverbal constraint (post), ‘+’ means that structural heaviness was found to be statistically significant in that century, and ‘-’ that it was not statistically significant. Note, however, that the symbol ‘(+)’ differs from previous tables: it means that structural heaviness was not statistically significant in that particular century but that the tendency was clear in the data. A striking observation is the difference between directional phrases

		OE2	OE3	OE4	ME1	ME3	ME4
Directional Phrases	pre	-	-	-	-	n/a	n/a
	post	-	-	-	-	n/a	n/a
Relative Object Heads	pre	(+)	+	(+)	+	n/a	n/a
	post	-	+	(+)	+	n/a	n/a
Naming Objects	pre	n/a	+	+	+	n/a	n/a
	post	n/a	+	+	+	n/a	n/a

Table 5.5.: Structural Heaviness in English

and the other two constructions. Directional phrases are never influenced by structural heaviness while relative object heads and naming objects almost always are. This is further support that directional phrases are influenced by different factors than the other two constructions.

Another noteworthy observation is that the position of the heads of relative object heads and naming objects are influenced by structural heaviness in both possible ways: not only do preverbal elements have a tendency to be simplex, but complex constituents also have a tendency to occur to the right of the verb. This suggests that even from the beginning English had a stronger tendency toward VO orders.

5.4.3. Newness

Table 5.6 presents the results of newness in the different periods of English. Remember that newness is being defined as indefiniteness while definite elements are considered given information. In this table, it is clear that newness is

	OE2	OE3	OE4	ME1	ME3	ME4
Directional Phrases	-	-	(+)	(+)	n/a	n/a
Relative Object Heads	-	-	(+)	-	n/a	n/a
Naming Objects	n/a	+	+	+	n/a	n/a

Table 5.6.: Newness in English

very important in determining the position of naming objects but that it does

not play a consistent role in directional phrases or relative objects. Recall, however, that newness in naming objects had to be determined by different criteria than for the other two constructions; more specifically, since naming objects are often names, which are almost always definite, I checked earlier in the text to see whether the name appeared in a context where it was clear that the name referred to the same namee. Newness in directional phrases and relative objects was determined by whether the appropriate head was definite or indefinite, with definite heads being considered given information and indefinite new information. This discrepancy may indicate that using (in)definiteness as a criterion for newness is not as reliable as checking the earlier occurrences of the relevant element.

5.4.4. Concluding Remarks

In English, we see quite a big difference in the development of directional phrases on the one hand versus relative object heads and naming objects on the other, especially in OE4 and ME1. Looking at the raw data for these three constructions, relative object heads appear to have a lower frequency of VO orders than the other two constructions in OE4 but a greater frequency of these orders in ME1. Remember that the texts in ME1 come from a different dialect area, i.e., the West Midlands, than the other texts considered in this study, which come from the Southwest, the area of the Old English West Saxon dialect. Because of this, it makes some sense that there would be some irregularities in this period, for instance the fact that the frequency of VO orders is greater in OE4 than ME1 for directional phrases and naming objects. The ME1 texts from the West Midlands draw more on the older West Saxon written language. This may explain why the frequency of VO orders in directional phrases and naming objects is similar to that of OE3. However, the behavior of relative objects diverges from this pattern—the frequency of VO orders significantly increases in ME1. This increase is unexpected because it is *not* similar to the earlier stages of Old English, quite the opposite: it is more similar to the later stages of Middle English that are exclusively VO. This may suggest that even though scribes from ME1 relied on the older West Saxon written language as a model for composition, the position of objects could not escape the shifting nature of English syntax.

What is more interesting is that even though the raw data show very similar patterns for directional phrases and naming objects as opposed to relative object heads, the logistic functions show quite different patterns: directional phrases have a different pattern than naming objects and relative object heads. However, the logistic function of naming objects is greatly influenced by the fact that there is no data in OE2. What is clear from comparing the logistic functions, even if we disregard the discrepancy of naming objects, is that the factors influencing the word order patterns of directional phrases is quite different from

those influencing relative object heads. All of the constructions show a steady increase in VO orders, though relative object heads are the only ones that do not have a drop in ME1. This seems to suggest that there are construction-specific factors influencing the development of the word order of these three different constructions.

5.5. Comparison of Dutch and English

5.5.1. Word Order

Remember that an underlying assumption of this study is that Dutch remains OV throughout its history. The difference between Middle and Modern Dutch then is that Middle Dutch has argument extraposition while this has been for the most part lost in Modern Dutch. The data from the Middle Dutch period, moreover, allow us to see the percentage of VO allowed in an underlying OV language. Keep in mind, however, that on the basis of the data and discussion in section 5.3, Dutch 14C is an exceptional case, having a higher percentage of VO than the other centuries of Dutch. Given these assumptions, we would expect that the word order patterns in English be significantly different from those found in the different centuries of Dutch if English does indeed have a period of competing grammars. With this in mind, I statistically compare the word order patterns of the various periods of Dutch and English with one another per construction, and the results are presented in the following tables. What will be particularly interesting and telling are 18C in Dutch, which is exclusively OV across the three constructions, and ME3 and ME4 in English, which are exclusively VO across the three constructions. If a period of English is *not* significantly different from Dutch 18C, this would indicate that that period of English has underlying OV whereas a period of Dutch not being significantly different from ME3 and/or ME4 would indicate heavy use of argument extraposition or construction-specific factors influencing word order. The general expectations of these comparisons are that the early stages of English will be more similar to the early stages of Dutch but that the similarities will decrease over time.

In table 5.7, I compare the word order patterns of directional phrases in the different centuries of Dutch with those of the different centuries of English. In the tables, I use the symbol ‘*’ when a given Dutch century and an English period are significantly different from one another and the symbol ‘-’ when the difference between the periods is *not* significant. I am more interested in the instances of ‘-’ because these show the similarities between the languages.

Remember that among the Dutch centuries, both 17C and 18C are strictly OV; as expected, they differ from almost all of the periods of English. The only deviation is that 18C is not significantly different from OE2—I take this to

		English					
		OE2	OE3	OE4	ME1	ME3	ME4
Dutch	13C	—	—	*	—	*	*
	14C	*	*	—	—	—	—
	15C	—	—	—	—	*	*
	16C	—	—	*	—	*	*
	17C	*	*	*	*	*	*
	18C	—	*	*	*	*	*

Table 5.7.: Comparison of Dutch and English Directional Phrase Word Order Patterns

mean that OE2 is more ‘OV’ than the other periods of English. 14C differs from the remaining centuries in that it is the only one that *is* significantly different from OE2 and OE3 as well as the only one that is *not* significantly different from ME3 and ME4—this affirms its exceptional status among the centuries of Dutch as discussed in subsection 5.3.1 above. 13C, 15C, and 16C all share similarities with OE2, OE3, and ME1, and 15C is also similar to OE4.

Considering these data from the English point of view, we notice that ME3 and ME4, both of which are strictly VO, differ from almost all the centuries of Dutch, sharing similarities only with 14C; this shows that they are clearly different from the other English periods. OE2, OE3, and ME1 are all similar to 13C, 15C, and 16C; OE2 differs from the other two in that it is also similar to 18C, and ME1 differs by being similar to 14C. These three show a nice chronological development from OE2, a period that has more similarities to the strictly OV 18C of Dutch, to OE3, a period that has no clear affinity for OV or VO, to ME1, a period that has similarities to the predominantly VO 14C of Dutch. OE4 is the odd period out—from these data, it seems that OE4 is a transition between ME1 and ME3.

Table 5.8 shows the comparisons between the different periods of relative object heads in Dutch and English. These data are more clear-cut than those of directional phrases and are closer to our initial expectations: the different periods of Dutch and English are, for the most part, significantly different from one another with a concentration of ‘—’ in the upper left corner and a concentration of ‘*’ in the lower right corner. From the Dutch perspective, 18C, which is strictly OV, differs from all of the English periods, as we expected. 15C, 16C, and 17C are all similar to OE2 while significantly differing from the other periods of English. 13C is similar to OE2, OE3, and OE4. 14C, as in the previous construction, is similar to ME1, ME2, and ME4, again differing from the other centuries of Dutch and further confirming its exceptional status.

The English periods show a clear progression. OE2 is the period of English that is similar to most centuries of Dutch, namely 13C, 15C, 16C, and 17C.

5. Comparative Analysis

		English					
		OE2	OE3	OE4	ME1	ME3	ME4
Dutch	13C	—	—	—	*	*	*
	14C	*	*	*	—	—	—
	15C	—	*	*	*	*	*
	16C	—	*	*	*	*	*
	17C	—	*	*	*	*	*
	18C	*	*	*	*	*	*

Table 5.8.: Comparison of Dutch and English Relative Object Head Word Order Patterns

The later periods of Dutch become progressively more OV so this indicates that OE2 has more OV patterns than the other periods of English. OE3 and OE4 both are similar to Dutch 13C, which has a higher frequency of VO patterns but also a considerable occurrence of OV, and ME1, ME3, and ME4 are all similar to Dutch 14C, the period of Dutch with the highest percentage of VO.

Table 5.9 shows the comparisons between the different periods of naming objects in Dutch and English. Remember that there were not enough examples of naming objects in OE2, so it was excluded from the study. From this table,

		English					
		OE2	OE3	OE4	ME1	ME3	ME4
Dutch	13C	n/a	—	—	—	—	—
	14C	n/a	*	—	*	—	—
	15C	n/a	—	*	—	—	*
	16C	n/a	*	*	*	*	*
	17C	n/a	*	*	*	*	*
	18C	n/a	*	*	*	*	*

Table 5.9.: Comparison of Dutch and English Naming Object Word Order Patterns

we observe that Dutch 16C, 17C, and 18C are not similar to any period in English. Dutch 13C, in contrast, is not statistically different from any of the periods in English.

These comparisons confirm a number of observations made about Dutch and English in the previous sections as well as bring new ones, which were not as evident, to light. For Dutch, the oddity of 14C is confirmed by its consistent similarity in all three of the constructions to ME3 and ME4, the periods of English where we only find VO patterns. The VO nature of naming verbs in Middle Dutch is also demonstrated by the similarity of 13C to both ME3 and

ME4 and by the similarity of 15C to ME3.

In English, we see that OE2 is consistently similar to a number of the majority-OV centuries of Dutch, more so than any other period of English. This suggests that, unlike what the statistical comparisons of the different English periods showed, OE2 should be treated differently from the other English periods. The patterns of OE4 and ME1 remain mixed: depending on the construction, either shows more OV patterns than the other.

5.5.2. Heaviness

In neither language does lexical heaviness play a significant role. That is, the position of the relevant sentential elements analyzed in this study did not significantly differ based on the number of words.

When we look at the influence of structural heaviness, we notice a difference between the two languages. Dutch has a preverbal restriction that only allows simplex constituents to appear before the verb. This restriction is lost once the language becomes majority OV. This restriction in Dutch, however, does not translate into complex constituents appearing postverbally; rather, complex constituents have a stronger tendency to split with the head occurring to the left of the verb and any additional modification to the right. English also has a preverbal restriction. However, it differs from Dutch in that complex constituents also are significantly more likely to appear postverbally than preverbally. While this difference did not contribute to English becoming VO versus Dutch staying OV, it shows that even in the beginning, each language already shows different preferences with respect to word order possibilities. After all, both languages allow complex constituents to either split or to appear wholly to the right of the verb. The fact that they split more often in Dutch and extrapose more often in English indicates that Dutch already had a stronger tendency toward OV orders whereas English had a stronger tendency toward VO orders.

5.5.3. Newness

In both Dutch and English, newness plays an inconsistent role across the three constructions. It did not play a statistically significant role in directional phrases or relative object heads in either language though the tendency was evident in some of the periods. What is interesting, however, is that newness played a statistically significant role in determining the position of naming objects in both languages, though in Dutch, it is only in 16C and 17C. This is quite telling as the criteria used for determining newness or givenness of naming objects had to be modified: since most naming objects are names, which are by definition definite, I checked the preceding text to determine whether the naming object appeared in reference to its namee. If it occurred in the preceding text, I counted it as given whereas it was counted as new if it had not occurred

before the relevant instance. This suggests a number of things: in Dutch and English, newness is best defined as “not previously mentioned in the text” and not according to definiteness. If these criteria were applied to directional phrases and relative object heads, the word order distributions in the different periods might have been statistically significant.

5.6. Concluding Remarks

Now that we have compared the data of the different constructions with one another in Dutch and English, we have gained a better understanding of the historical development of syntax in these two languages specifically and West Germanic generally. When we consider the three different approaches to West Germanic syntax in light of the preceding discussion on Dutch and English, it seems that bits of all the theories play a role in the gradual evolution of syntax in these languages. In Dutch, there are clear indications that the shift in the syntax of the three different constructions result from the same interaction of factors as evidenced by the similarity of their calculated logistic functions. However, the differences in the timing of the changes in Dutch as well as the discrepancies of the development of the constructions in English suggest that there are some construction-specific factors that played a role in either delaying or speeding up the process in some of the constructions.

Some of the construction-specific factors that play a role in determining the position of sentential elements in both Dutch and English include structural heaviness and newness. Their expression in either language, however, differ to some extent. When encountered with a structurally heavy element, Dutch and English both employ two methods for avoiding placing it before the verb: either the entire element is extraposed or the head remains before the verb while the rest of the element appears after. Each language had a clear preference for one of these two methods: Dutch preferred splitting such complex elements while English preferred extraposing the entire constituent. This shows that already from the beginning, there were some differences between these two languages that probably contributed to their diverging developments over time. In the case of English, these initial syntactic preferences may have been the result of Celtic influence in its earliest stages.

The comparison of Dutch and English also lends support to a competing-grammars period in the history of English, and OE3, OE4, and ME1 seem to be likely candidates. The earliest stage of English investigated, namely OE2, is similar enough to the various stages of Dutch, sometimes even the stages where OV is the only word order found, to be considered underlying OV with argument extraposition. The latest stages of English, ME3 and ME4, where only VO orders are found, consistently diverge from the Dutch data, indicating the shift to rigid VO has already taken place. We find that the middle periods, OE3,

OE4, and ME1, have a lot of variation with respect to the Dutch data—they are not always significantly similar to the same periods in Dutch. This variation among the English periods is the result of competing grammars.

A. Dutch Texts

- 13th Century

official 331 official texts from various cities across North and South Holland. Charters. 128,903 words. Texts taken from the Corpus Gysseling, a part of the *CD-Rom Middelnederlands*. The name of the city/area and month/year of the text is given with the relevant examples. These are the city abbreviations used in the examples (though note that the official texts are not limited to these cities):

a'dam Amsterdam

alke Alkemade

d'recht Dordrecht

hgk Hollands grafelijke kanselarij

koning Koningsveld

- 14th Century

a'damlect Anonymous (1348). *Amsterdam lectionarium (Lectionarium van Amsterdam)*. Amsterdam. Prose. 120,333 words. www.dbnl.nl

official official text from various cities across North and South Holland. Charters. ~40,000 words. Texts taken from a 14th-century Middle Dutch corpus as described in Van Reenen & Mulder (1993). The same city/area abbreviations as used for the texts in 13C are used.

- 15th Century (all texts taken from www.dbnl.nl)

blome Potter, Dirc (1475–1495). *Blome der doechden, Bouck der bloemen*. Hollands. Prose. 81,765 words.

gheest Anonymous (1480~). *Die gheestelicke melody*. North Holland. Songs. 2,740 words.

pseudo Anonymous (1409). *(Pseudo-)Bonaventura-Ludophiaanse leven van Jezus (Leven ons heren Ihesu Cristi)*. South Holland. Prose. 7,747 words.

- 16th Century (all texts taken from www.dbnl.nl)

exempel Anonymous (1500–1520). *Exempel van een soudaensdochter*. Delft. Prose. 2,134 words.

- offer** Anonymous (1562). *Het Offer des Heeren*. Miscellaneous (only letters written by prisoners from the provinces of North or South Holland). Letters. 24,866 words.
- zedekunst** Coornhert, D.V. (1585). *Zedekunst dat is wellevenskunste*. Amsterdam. Traktaat. 151,365 words.
- 17th Century (all texts taken from www.dbnl.nl)
 - heeren** de Groot, Hugo (1613). *Der heeren Staten van Hollandt ende West-Vrieslandt godts-diensticheyt*. Delft. Traktaat. 36,414 words.
 - historien** Hooft, P.C. (1642–1647). *Nederlandsche historien*. Amsterdam/The Hague. Chronicle. 15,122 words.
 - leyden** Orlers, Jan Jansz. (1614). *Beschrijvinge der stad Leyden*. Leiden. Nonfiction. 36,307 words.
 - LvJvdV** Brandt, Geeraardt (1682). *Het leven van Joost van den Vondel*. Amsterdam/Rotterdam. Biography. 23,849 words.
 - vb** Koelman, Jacobus (1682). *De vruchteloose bid-dagen van Nederlandt*. Utrecht. Pamphlet/brochure. 10,372 words.
 - 18th Century (all texts taken from www.dbnl.nl)
 - almanak** Anonymous (1798). *Almanak voor de beschaafde jeugd voor het jaar 1799*. Amsterdam. Letters, almanac, fables. 5,659 words.
 - keuken** Anonymous (1746). *De volmaakte Hollandsche keuken-meid*. Amsterdam. Non-fiction/lifestyle. 6,725 words.
 - tooneel** Corver, Marten (1786). *Tooneel-aantekeningen*. Amsterdam. Letters. 60,776 words.

B. English Texts

- OE2 (850-950)

lawaf Laws of Alfred. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 3,314 words.

lawafint Alfred's Introduction to Laws. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 1,966 words.

lawine Laws of Ine. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 2,755 words.

prefcura Preface to Cura Pastoralis. Preface. Sweet, Henry. 1958 (1871). *King Alfred's West-Saxon Version of Gregory's Pastoral Care*. EETS 45, 50: 3-9. London: OUP. 831 words.

- OE3 (950-1050)

aelhom Ælfric's Homilies Supplemental. Homilies. Pope, J.C. 1968. *Homilies of Ælfric, A Supplementary Collection*. Early English Text Society, 260. London: OUP. 62,669 words.

aelive Ælfric's Lives of Saints. Biography, Lives. Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114. London: OUP. 100,193 words.

canedgD Canons of Edgar. Ecclesiastical laws. Fowler, Roger. 1972. *Wulfstan's Canons of Edgar*. EETS 266. London: OUP. 1,765 words.

cathom1 Ælfric's Catholic Homilies I. Homilies. Clemons, P. 1997. *Ælfric's Catholic Homilies: The First Series*. EETS s.s. 17. Oxford: OUP. 106,173 words.

cathom2 Ælfric's Catholic Homilies II. Homilies. Godden, M. 1979. *Ælfric's Catholic Homilies: The Second Series*. EETS s.s. 5. London: OUP. 98,583 words.

epigen Ælfric's Epilogue to Genesis. Epilogue. Crawford, Samuel J. 1922. *The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis*. EETS 160: 333-76. London: OUP. 965 words.

- euphr** Saint Euphrosyne. Biography, Lives. Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 334-54. London: OUP. 3,658 words.
- inspolX** Institutes of Polity. Ecclesiastical Laws. Jost, K. 1959. "Die 'Institutes of Polity, Civil and Ecclesiastical.'" *Swiss Studies in English* 47. Bern. 4,896 words.
- law1cn** Laws of Cnut. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 2,386 words.
- law2cn** Laws of Cnut. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. pp 308-370. 4,761 words.
- law5atr** Laws of Æthelred V. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. pp 236-246. 1,228 words.
- law6atr** Laws of Æthelred VI. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. pp 246-258. 2,096 words.
- lawnorthu** Northumbra Preosta Lagu. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 1,330 words.
- mart1** Martyrology. Biography, Lives. Herzfeld, George. 1973 (1900). *An Old English Martyrology*. EETS 116: 2-10. London: Trübner. Corrected by Kotzor, G. 1981. *Das Alternenglische Martyrologium, vol. II*. Bayerische Akademie der Wissenschaften, Philosophisch-Historische Klasse. Abhandlungen, Neue Folge, Heft 88/2. München: Verlag der Bayerischen Akademie der Wissenschaften. 1,300 words.
- mary** Mary of Egypt. Biography, Lives. Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 2-52. London: OUP. 8,181 words.
- prefcath1** Ælfric's Preface to Catholic Homilies I. Preface. Clemoes, P. 1997. *Ælfric's Catholic Homilies: The First Series*. EETS s.s. 17: 174-77. Oxford: OUP. 1,035 words.
- prefcath2** Ælfric's Preface to Catholic Homilies II. Preface. Godden, M. 1979. *Ælfric's Catholic Homilies: The Second Series*. EETS s.s. 5: 1-2. London: OUP. 223 words.
- prefgen** Ælfric's Preface to Genesis. Preface. Crawford, Samuel J. 1922. *The Old English Version of the Heptateuch. Ælfric's Treatise on the Old and New Testament and His Preface to Genesis*. EETS 160: 76-80. London: OUP. Reprinted with additions by N.R. Ker 1969. 1,399 words.

- preflives** Ælfric's Preface to Lives of Saints. Preface. Skeat, Walter William. 1966 (1881-1900). *Ælfric's Lives of Saints*. EETS 76, 82, 94, 114: 4-6. London: OUP. 373 words.
- sevensl** The Seven Sleepers. Biography, Lives. Magennis, Hugh 1994. *The Anonymous Old English Legend of the Seven Sleepers*. Durham Medieval Texts 7. Durham. 9,143 words.
- OE4 (1050-1150)
 - august** Augustine. Homilies. Warner, Rubie D.-N. 1917 (1971). *Early English Homilies from the 12th Century Ms. Vespasian D.XIV*. EETS 152. P.65. London: Trübner. [repr. 1971]. 103 words.
 - canedgX** Canons of Edgar. Ecclesiastical Laws. Fowler, Roger. 1972. *Wulfstan's Canons of Edgar*. EETS 266. London: OUP. 2,118 words.
 - lawwillad** Laws of William. Laws. Lieberman, F. 1903-16. *Die Gesetze der Angelsachsen*. Halle. Reprinted Aalen 1960. 220 words.
 - leofri** Visions of Leofric. Religious treatise. Napier, Arthur S. 1907-10. "An Old English Vision of Leofric, Earl of Mercia". *Transactions of the Philological Society*: 180-88. 1,017 words.
 - mart2** Martyrology. Biography, Lives. Herzfeld, George. 1973 (1900). *An Old English Martyrology*. EETS 116: 40-222. London: Trübner. Corrected by Kotzor, G. 1981. *Das Alterenglische Martyrologium, vol. II*. Bayerische Akademie der Wissenschaften, Philosophisch-Historische Klasse. Abhandlung, Neue Folge, Heft 88/2. München: Verlag der Bayerischen Akademie der Wissenschaften. 4,391 words.
 - prefsolilo** Preface to St. Augustine's Soliloquies. Preface. Endter, W. 1922. *König Alfreds des Grossen Bearbeitung der Soliloquien des Augustinus*. Bibliothek der Angelsaechsischen Prosa, 11: 1-2. Darmstadt: Wissenschaftliche Buchgesellschaft. Reprinted Darmstadt 1964. Corrections by Carnicelli, T.A. 1969. *King Alfred's Version of St. Augustine's Soliloquies*. Cambridge, MA: Harvard University Press. 441 words.
 - solsat1** Solomon and Saturn I. Religious treatise. Cross, James E. and Thomas D. Hill. 1982. *The "Prose Solomon and Saturn" and "Adrian and Ritheus"*. Pp. 25-34. Toronto, Buffalo, London: University of Toronto Press. 2,046 words.
 - ME1 (1150-1250)
 - ancriw1** Ancrene Riwe. Ackerman, Robert W. and Roger Dahood. 1984. *Ancrene Riwe. Introduction and Part I*. Medieval and Renaissance Texts and Studies 31. Binghamton, NY: Center for Medieval and

Early Renaissance Studies, State University of New York at Binghamton. 48,566 words.

ancriw2 Ancrene Riwe. Dobson, Eric J. 1972. *The English Text of the Ancrene Riwe edited from B.M. Cotton ms. Cleopatra C vi.* EETS O.S. 267. London: Oxford University Press. 15,224 words.

hali Hali Meidhad. Religious Treatise. D'Ardenne, S.R.T.O. 1977. *The Katherine Group edited from ms. Bodley 34.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège fasc. 215. Paris: Société d'Édition Les Belles Lettres. 8,495 words.

julia St. Juliana. Biography, Lives. D'Ardenne, S.R.T.O. 1977. *The Katherine Group edited from ms. Bodley 34.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège fasc. 215. Paris: Société d'Édition Les Belles Lettres. 6,810 words.

kathe St. Katherine. Biography, Lives. D'Ardenne, S.R.T.O. 1977. *The Katherine Group edited from ms. Bodley 34.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège fasc. 215. Paris: Société d'Édition Les Belles Lettres. 8,699 words.

lamb1 Lambeth Homilies. Homilies. Morris, Richard. 1969. *Old English Homilies and Homiletic Treatises. Part I.* EETS O.S. 29, 34. New York: Greenwood Press. Originally published by Trübner (London, 1868). 6,459 words.

lambx1 Lambeth Homilies. Homilies. Morris, Richard. 1969. *Old English Homilies and Homiletic Treatises. Part I.* EETS O.S. 29, 34. New York: Greenwood Press. Originally published by Trübner (London, 1868). 20,752 words.

marga St. Margaret. Biography, Lives. D'Ardenne, S.R.T.O. 1977. *The Katherine Group edited from ms. Bodley 34.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège fasc. 215. Paris: Société d'Édition Les Belles Lettres. 8,069 words.

sawles Sawles Warde. Homilies. D'Ardenne, S.R.T.O. 1977. *The Katherine Group edited from ms. Bodley 34.* Bibliothèque de la Faculté de philosophie et lettres de l'Université de Liège fasc. 215. Paris: Société d'Édition Les Belles Lettres. 4,111 words.

• ME3 (1350-1450)

horses A Late Middle English Treatise on Horses. Handbook Medicine. Svinhufvud, Anne Charlotte. 1978. *A Late Middle English Treatise on Horses.* Stockholm Studies in English 47. Stockholm: Almqvist & Wiksell. 5,902 words.

purvey Purvey's General Prologue to the Bible. Religious Treatise. Forshall, Josiah and Frederic Madden. 1850. *The Holy Bible, containing the Old and New Testaments, with the Apocraphal Books, in the Earliest English Versions made from the Latin Vulgate by John Wycliffe and His Followers, Vol. 1.* Oxford: Oxford University Press. Reprinted 1982 (New York: AMS Press). 39,704 words.

- ME4 (1450-1550)

gregor Gregory's Chronicle. History. Gairdner, James. 1876. *The Historical Collections of a Citizen of London in the Fifteenth Century.* Camden Society, N.S. XVII. Westminster: Camden Society. 37,326 words.

Bibliography

- ANDERSON, JOHN M. 2004. On the grammatical status of names. *Language* 80.435–474.
- ANDREW, S.O. 1966. *Syntax and Style in Old English*. New York: Russell & Russell.
- ANTONSEN, ELMER H., & HANS HENRICH HOCK (eds.) 1991. *Stæfcræft: Studies in Germanic Linguistics*. Amsterdam: John Benjamins Publishing Company.
- BATLLORI, MONTSERRAT (ed.) 2005. *Grammaticalization and Parametric Variation*. Oxford: Oxford University Press.
- BEAN, MARIAN C. 1983. *The Development of Word Order Patterns in Old English*. London: Croom Helm.
- BECH, KRISTIN, 2001. *Word Order Patterns in Old and Middle English: A Syntactic and Pragmatic Study*. Bergen: University of Bergen dissertation.
- BELIËN, MAAIKE. 2006. *Uit: meer plaats dan pad. Voortgang, Jaarboek voor de Neerlandistiek* 24.25–35.
- BENNET, WILLIAM HOLMES. 1980. *An Introduction to the Gothic Language*. New York: Modern Language Association of America.
- BIBER, DOUGLAS, STIG JOHANSSON, GEOFFREY LEECH, SUSAN CONRAD, & EDWARD FINEGAN. 1999. *Longman Grammar of Spoken and Written English*. Pearson ESL.
- BIBERAUER, THERESA, & IAN ROBERTS. 2005. Changing EPP parameters in the history of English: Accounting for variation and change. *English Language and Linguistics* 9.5–46.
- BLOM, CORRIEN. 2002. Word order in Middle Dutch: The interpretation of different types of data. *Linguistics in the Netherlands* 19.13–24.
- . 2005. *Complex Predicates in Dutch: Synchrony and Diachrony*. Utrecht: LOT.

BIBLIOGRAPHY

- BOLKESTEIN, A.M., C. DE GROOT, & J.L. MACKENZIE (eds.) 1991. *Syntax and Pragmatics in Functional Grammar*. Dordrecht: Foris Publications.
- BOSSUYT, ALAIN. 1978. Woordvolgorde in het Middelnederlands: Thema's, staarten en samengestelde zinnen. *Université Libre de Bruxelles Rapport d'Activités de l'Institut de Phonétique* 12.37–45.
- . 1991. The typology of embedded predications and the SOV/SVO shift in Western Germanic. In (Bolkestein *et al.* 1991), chapter 2, 15–29.
- BRACHIN, PIERRE. 1985. *The Dutch Language: A Survey*. Leiden: E.J. Brill.
- BREIVIK, LEIV EGIL. 1991. On the typological status of Old English. In (Kastovsky 1991), 31–50.
- BROEKHUIS, HANS. 2006. The universal base hypothesis: VO or OV? In (Van de Weijer & Los 2006), 28–39.
- BURKE, PETER. 2005. *Towards a Social History of Early Modern Dutch*. Amsterdam: Amsterdam University Press.
- BURRIDGE, KATE. 1993. *Syntactic Change in Germanic: A Study of Some Aspects of Language Change in Germanic with Particular Reference to Middle Dutch*. Amsterdam Studies in the Theory and History of Linguistic Science: Current Issues in Linguistic Theory. Amsterdam: John Benjamins Publishing Company.
- BURROW, J.A., & THORLAC TURVILLE-PETRE. 1996. *A Book of Middle English*. Oxford: Blackwell Publishers.
- CLOUTIER, ROBERT ALLEN. 2006. Adpositional phrases of direction in the history of Dutch: The case of *in*. *ACLCL Working Papers* 1.67–77.
- DAVIS, NORMAN. 1980. *Sweet's Anglo-Saxon Primer*. Oxford: Clarendon Press, 9th edition.
- DE MEERSMAN, ALFONS. 1980. Woordvolgorde in 14de-eeuws Brabants. *Verlagen en Mededelingen van de Koninklijke Academie voor Nederlandse Taal- en Letterkunde* 1.94–128.
- DE SCHEPPER, KEES, & SANDER LESTRADE, 2008. Dutch postpositions. Rec'd 20080310.
- DE SCHUTTER, GEORGES. 1985. Typological aspects of Dutch and German. In *Antwerp Studies in Functional Grammar*, ed. by Jan Nuyts, chapter 3, 73–112. Antwerp: Universitaire Instelling Antwerpen.

- . 1988. In en uit de tang in de Middelnederlandse bijzin. *Leuvense Bijdragen* 77.385–401.
- . 1991. Pragmatic and syntactic aspects of word order in Dutch. In (Bolkestein *et al.* 1991), chapter 10, 137–154.
- DE VRIES, MARK. 2003. *The Syntax of Relativization*. Utrecht: Landelijke Onderzoeksschool Taalwetenschap.
- DELSING, LARS-OLOF. 2000. From OV to VO in Swedish. In (Pintzuk *et al.* 2000), 255–274.
- DEN DIKKEN, MARCEL. 1995. *Particles: On the Syntax of Verb-Particle, Triadic and Causative Constructions*. Oxford: Oxford University Press.
- DIAMOND, ROBERT E. 1970. *Old English: Grammar and Reader*. Detroit, MI: Wayne State University Press.
- DIK, SIMON. 1978. *Functional Grammar*. Amsterdam: North-Holland Publishing Company.
- . 1997. *The Theory of Functional Grammar Part 1: The Structure of the Clause*. Berlin: Mouton de Gruyter, 2nd, revised edition.
- DONALDSON, B.C. 1983. *Dutch: A Linguistic History of Holland and Belgium*. Leiden: Uitgeverij Martinus Nijhoff.
- ELENBAAS, MARION. 2003. Particle verbs in Early Middle English: The case of up. *Linguistics in the Netherlands* 20.45–57.
- FILPPULA, MARKKU, JUHANI KLEMOLA, & HELI PAULASTO. 2008. *English and Celtic in Contact*. New York: Routledge.
- , JUHANI KLEMOLA, & HELI PITKÄNEN (eds.) 2002. *Studies in Languages: The Celtic Roots of English*. Joensuu, Finland: University of Joensuu Faculty of Humanities.
- FISCHER, OLGA. 1991. The rise of the passive infinitive in English. In (Kastovsky 1991), 141–188.
- . 1994a. The development of quasi-auxiliaries in English and changes in word order. *Neophilologus* 78.137–164.
- . 1994b. The fortunes of the Latin-type accusative and infinitive construction in Dutch and English compared. In (Swan *et al.* 1994), 91–133.
- . 2007. *Morphosyntactic Change: Functional and Formal Perspectives*. Number 2 in Oxford Surveys in Syntax and Morphology. Oxford: Oxford University Press.

BIBLIOGRAPHY

- , & FREDERIKE C. VAN DER LEEK. 1983. The demise of the Old English impersonal construction. *Journal of Linguistics* 19.337–368.
- , ANS VAN KEMENADE, WILLEM KOOPMAN, & WIM VAN DER WURFF. 2000. *The Syntax of Early English: Cambridge Syntax Guides*. Cambridge Syntax Guides. Cambridge: Cambridge University Press.
- FLORIJN, A.F., J.A. LALLEMAN, & J.H. MAUREAU. 1994. *De regels van het Nederlands: Grammatica voor anderstaligen*. Groningen, The Netherlands: Wolters-Noordhoff.
- FRANCK, JOHANNES. 1971. *Mittelniederländische Grammatik mit Lesestücken und Glossar*. Arnhem, The Netherlands: Gysbers en Van Loon.
- GARDNER, FAYE F. 1971. *An Analysis of Syntactic Patterns of Old English*. The Hague: Mouton.
- GERRITSEN, MARINEL. 1980. An analysis of the rise of SOV patterns in Dutch. In *Papers from the 4th International Conference on Historical Linguistics*, ed. by Elizabeth Closs Traugott, Rebecca Labrum, & Susan Shepherd, 123–136.
- . 1988. *Syntaktische Veranderingen in Kontrolezinnen: Een Sociolinguïstische Studie van het Brugs van de 13e tot de 17e Eeuw*. Dordrecht: Foris.
- . 1990. The relationship between punctuation and syntax in Middle Dutch. In *Historical Linguistics and Philology*, ed. by Jacek Fisiak, volume 46 of *Trends in Linguistics: Studies and Monographs*, 187–225. Berlin: Mouton de Gruyter.
- . 1992. Internal and external factors in the stabilization of verb-last order in Dutch infinitive clauses. In *Internal and External Factors in Syntactic Change*, ed. by Marinel Gerritsen & Dieter Stein, volume 61 of *Trends in Linguistics: Studies and Monographs*, 355–394. Berlin: Mouton de Gruyter.
- , & DIETER STEIN. 1992. Introduction: On “internal” and “external” in syntactic change. In *Internal and External Factors in Syntactic Change*, ed. by Marinel Gerritsen & Dieter Stein, volume 61 of *Trends in Linguistics: Studies and Monographs*, 1–15. Berlin: Mouton de Gruyter.
- HAESERYN, W., K. ROMIJN, G. GEERTS, J. DE ROOIJ, & M.C. VAN DEN TOORN. 1997. *Algemene Nederlandse Spraakkunst*. Groningen/Deurne: Martinus Nijhoff Uitgevers/Wolters Plantyn, second edition.
- HALE, MARK. 2007. *Historical Linguistics: Theory and Method*. Number 21 in Blackwell Textbooks in Linguistics. Malden, MA: Blackwell Publishing.

- HARRIS, ALICE C., & LYLE CAMPBELL. 1995. *Historical Syntax in Cross-linguistic Perspective*. Number 74 in Cambridge Studies in Linguistics. Cambridge: Cambridge University Press.
- HATCH, EVELYN, & HOSSEIN FARHADY. 1982. *Research Design and Statistics for Applied Linguistics*. Rowley, Massachusetts: Newbury House Publishers, Inc.
- HELMANTEL, MARJON. 2002. *Interactions in the Dutch Adpositional Domain*. Utrecht: LOT.
- HERRING, SUSAN C. (ed.) 2000. *Textual Parameters in Older Languages*. Amsterdam: Benjamins.
- HOCK, HANS HENRICH. 1991a. On the origin and development of relative clauses in early Germanic, with special emphasis on Beowulf. In (Antonsen & Hock 1991), 55–89.
- . 1991b. *Principles of Historical Linguistics*. Berlin: Mouton de Gruyter, second revised and updated edition.
- HOGENHOUT-MULDER, MAAIKE. 1983. *Cursus Middelnederlands*. Groningen: Wolters-Noordhoff.
- HOPPER, PAUL J. 1992. A discourse perspective on syntactic change: Text-Building strategies in Early Germanic. In (Polomé & Winter 1992), 217–238.
- HUDSON, RICHARD A. 1997. The rise of auxiliary DO: Verb-non-raising or category-strengthening. *Transactions of the Philological Society* 95.95–72.
- HYMAN, LARRY. 1974. On the change from SOV to SVO: Evidence from Niger-Congo. In (Li 1974).
- JANSSENS, GUY, & ANN MARYNISSEN. 2005. *Het Nederlands Vroeger en Nu*. Leuven: Uitgeverij Acco, 2nd edition.
- JUCKER, ANDREAS H. 1990. Word order changes in Early Middle English: Some evidence against the conservatism of subordinate clauses. *Studia Anglica Posnaniensia* 23.31–42.
- KASTOVSKY, DIETER (ed.) 1991. *Historical English Syntax*. Hawthorne, NY: Mouton de Gruyter.
- KAYNE, RICHARD S. 1994. *The Antisymmetry of Syntax*. Cambridge, MA: Massachusetts Institute of Technology.
- KILIÄSLAN, YILMAZ. 2004. Syntax of information structure in Turkish. *Linguistics* 42.717–765.

BIBLIOGRAPHY

- KOELMANS, L. 1978. *Inleiding tot het Lezen van Zeventiende-eeuws Nederlands*. Utrecht: Bohn, Scheltema & Holkema BV.
- KOOPMAN, WILLEM, 1990. *Word Order in Old English with Special Reference to the Verb Phrase*. Universiteit van Amsterdam dissertation.
- , 1994. The order of dative and accusative objects in Old English. Manuscript.
- , & WIM VAN DER WURFF. 2000. Two word order patterns in the history of English: Stability, variation and change. In (Sornicola *et al.* 2000), 259–283.
- KOSTER, JAN. 1973. PP over V en de theorie van J. Emonds. *Spektator: Tijdschrift voor Neerlandistiek* 2.294–309.
- . 1974. Het werkwoord als spiegelcentrum. *Spektator: Tijdschrift voor Neerlandistiek* 3.601–618.
- . 1975. Dutch as an SOV language. *Linguistic Analysis* 1.111–136.
- . 1978. Waar PP niet over kan. *De Nieuwe Taalgids* 71-6.556–564.
- . 1999. De primaire structuur. *Tabu* 29.131–140.
- . 2001. Links en rechts van het werkwoord. *Nederlandse Taalkunde* 6.38–53.
- KROCH, ANTHONY. 1989. Reflexes of grammar in patterns of language change. *Language Variation and Change* 1.199–244.
- , & ANN TAYLOR. 2000. Verb-Object in Early Middle English. In (Pintzuk *et al.* 2000), 132–163.
- , —, & DONALD RINGE. 2000. The Middle English verb-second constraint: A case study in language contact and language change. In (Herring 2000), 353–91.
- KUNO, SUSUSMU. 1974. The position of relative clause and conjunctions. *Linguistic Inquiry* 4.117–136.
- LE ROUX, T.H., & J.J. LE ROUX. 1945. *Middel nederlandse Grammatika: Van Stamverwante Bodem*. Pretoria: Van Schaik.
- LI, CHARLES-N. (ed.) 1974. *Word Order and Word Order Change*. Austin, TX: University of Texas Press.
- (ed.) 1977. *Mechanisms of Syntactic Change*. Austin, TX: University of Texas Press.

- LIGHTFOOT, D. (ed.) 2002. *Syntactic Effects of Morphological Case*. Oxford: Oxford University Press.
- LUNDSÆR-NIELSON, TOM. 1993. *Prepositions in Old and Middle English: A Study of Prepositional Syntax and the Semantics of At, In and On in some Old and Middle English Texts*. Gylling: Odense University Press.
- LUNSFORD, ANDREA A. 2003. *The St. Martin's Handbook*. Boston, MA/New York, NY: Bedford/St. Martin's, 5th edition.
- MATUSHANSKY, ORA. Naming names: On structural complexity of proper names. Manuscript.
- . 2005. Call me Ishmael. *Proceedings of SuB9* 226–240.
- . 2006. Why Rose is the Rose: On the use of definite articles in proper names. *Empirical Issues in Syntax and Semantics 6: Papers from CSSP 2005* 6.285–307.
- MCKNIGHT, GEORGE. 1897. The primitive Teutonic order of words. *Journal of English and Germanic Philology* 1.136–219.
- MCLAUGHLIN, JOHN. 1983. *Old English Syntax: A Handbook*. Tübingen: Max Niemeyer Verlag.
- MEILLET, A. 1917. *Caractères généraux des langues germaniques*. Paris: Librairie Hachette et Cie.
- MILROY, JAMES. 2000. On some consequences of language standardization. *Papers from the Regional Meetings* 36.251–74.
- MITCHELL, BRUCE, & FRED C. ROBINSON. 2001. *A Guide to Old English*. Oxford: Blackwell Publishers, 6th edition.
- MOERENHOUT, MIKE, & WIM VAN DER WURFF. 2005. Object-Verb order in early sixteenth-century English prose: An exploratory study. *English Language and Linguistics* 9.83–114.
- MOORE, SAMUEL, THOMAS A. KNOTT, & JAMES R. HULBERT. 1977. *The Elements of Old English*. Ann Arbor, MI: The George Wahr Publishing Co., 10th edition.
- NEELEMAN, AD. 1994. *Complex Predicates*. Utrecht: Onderzoek Instituut voor Taal en Spraak.
- , & FRED WEERMAN. 1999. *Flexible Syntax: A Theory of Case and Arguments*. Dordrecht: Kluwer.

BIBLIOGRAPHY

- NEGGERS, A., & A. ZIEGLER, 2000. Manuscript.
- OGURA, MIEKO. 2001. Perceptual factors and word order change in English. *Folia Linguistica Historica* 22.233–253.
- PINTZUK, SUSAN, 1991. *Phrase Structures in Competition: Variation and Change in Old English Word Order*. University of Pennsylvania dissertation.
- . 1995a. Variation and change in Old English clause structure. *Language Variation and Change* 7.229–260.
- . 1995b. Verb-seconding in Old English. *Historical Linguistics: Selected Papers from the 11th International Conference on Historical Linguistics 1993*.
- . 1996. Old English verb-complement word order and the change from OV to VO. *York Papers in Linguistics* 17.241–264.
- . 1999. *Phrase Structures in Competition: Variation and Change in Old English Word Order*. New York, NY: Garland Publishing.
- . 2002a. Morphological case and word order in Old English. *Language Sciences* 24.381–395.
- . 2002b. Verb-object order in Old English: Variation as grammatical competition. In (Lightfoot 2002), 276–299.
- . 2005a. Arguments against a universal base: evidence from Old English. *English Language and Linguistics* 9.115–138.
- . 2005b. The syntax of objects in Old English. In (Batllori 2005), 251–266.
- , & ANTHONY S. KROCH. 1989. The rightward movement of complements and adjuncts in the Old English of Beowulf. *Language Variation and Change* 1.115–143.
- , & ANN TAYLOR. 2004. Objects in Old English: Why and how Early English is not Icelandic. *York Papers in Linguistics* 2:1.137–150.
- , & ANN TAYLOR. 2006. The loss of OV order in the history of English. In (Van Kemenade & Los 2006b), 249–278.
- , GEORGE TSOULAS, & ANTHONY WARNER (eds.) 2000. *Diachronic Syntax: Models and Mechanisms*. Oxford: Oxford University Press.
- POLANYI, LIVIA, MARTIN VAN DEN BERG, & DAVID AHN. Discourse structure and sentential information structure: An initial proposal.

- POLOMÉ, EDGAR C., & WERNER WINTER (eds.) 1992. *Reconstructing Languages and Cultures*. Berlin: Mouton.
- POPLACK, SHANA, & ELISABETE MALVAR. 2006. Modelling linguistic change: The past and present of the future in Brazilian Portuguese. In *Language Variation: European Perspectives 2006*, ed. by Elisabete Malvar & Frans Hinskens, Studies in Language Variation, 169–199. John Benjamins.
- QUAK, A., & J.M. VAN DER HORST. 2002. *Inleiding Oudnederlands*. Leuven: Universitaire Pers Leuven.
- RADFORD, ANDREW. 1997a. *Syntactic Theory and the Structure of English: A Minimalist Approach*. Cambridge: Cambridge University Press.
- . 1997b. *Syntax: A Minimalist Introduction*. New York: Cambridge University Press.
- RANDALL, BETH. 2003. *CorpusSearch 1.1*. Philadelphia, PA: University of Pennsylvania.
- REM, MARGRIT. 2003. *De Taal van de Klerken uit de Hollandse Grafelijke Kanselarij (1300-1340): Naar een Lokaliseringsprocedure voor het Veertiende-eeuws Middelnederlands*. Amsterdam: Stichting Neerlandistiek VU.
- RIBBERT, ANNA, 2005. Modern Dutch on the rise: Word order variation between 1400 and 1700. Status Quaestionis.
- . 2006. Object preposing in 15th century Drenthe. In (Van de Weijer & Los 2006), 174–185.
- ROBERTS, IAN. 1997. Directionality and word order change in the history of English. In (Van Kemenade & Vincent 1997), 397–426.
- . 2007. *Diachronic Syntax*. Oxford Textbooks in Linguistics. Oxford: Oxford University Press.
- , & ANNA ROUSSOU. 2005. *Syntactic Change: A Minimalist Approach to Grammaticalization*. Number 100 in Cambridge Studies in Linguistics. Cambridge: Cambridge University Press.
- ROBINSON, ORRIN W. 1992. *Old English and Its Closest Relatives: A Survey of the Earliest Germanic Languages*. Stanford: Stanford University Press.
- SCHIFFRIN, DEBORAH, DEBORAH TANNEN, & HEIDI E. HAMILTON (eds.) 2001. *The Handbook of Discourse Analysis*. Malden, MA: Blackwell.

BIBLIOGRAPHY

- SCHWEGLER, ARMIN. 1983. Predicate negation and word-order change: A problem of multiple causation. *Lingua* 61.297–334.
- SCOTT, MIKE, & TIM JOHNS. 1993. *MicroConcord 1.0*. Oxford: Oxford University Press.
- SEOANE, ELENA. 2006. Information structure and word order change: The passive as an information-rearranging strategy in the history of English. In (Van Kemenade & Los 2006b), 360–391.
- SHANNON, THOMAS F. 1995. Extraposition of NP complements in Dutch and German: An empirical comparison. In (Shannon & Snapper 1995), 87–116.
- , & JOHAN P. SNAPPER (eds.) 1995. *The Berkeley Conference on Dutch Linguistics 1993: Dutch Linguistics in a Changing Europe*. Lanham, MD: University Press of America.
- SORNICOLA, ROSANNA, ERICH POPPE, ARIEL SHISHA-HALEVY, & PAOLA COMO (eds.) 2000. *Stability, Variation and Change of Word Order Patterns over Time*, volume 213 of *Amsterdam Studies in the Theory and History of Linguistic Science, Series 4, Current Issues in Linguistic Theory*. Amsterdam: John Benjamins Publishing Company.
- STOCKWELL, ROBERT P. 1977. Motivation for exbraciation in Old English. In (Li 1977), 291–314.
- STOETT, F. A. 1923. *Middelnederlandsche Spraakkunst: Syntaxis*. 's-Gravenhage: Nijhoff.
- SUÁREZ-GÓMEZ, CRISTINA. 2006. *Relativization in Early English (950-1250): the Position of Relative Clauses*. Bern: Peter Lang.
- SWAN, TORIL, ENDRE MORCK, & OLAF WESTVIK (eds.) 1994. *Language Change and Language Structure: Older Germanic Languages in a Comparative Perspective*. Berlin: Mouton de Gruyter.
- TACHO, ELISABETH. forthcoming. When *arīven* came to England: Tracing lexical re-structuring by borrowing in Middle and Early Modern English. a case study.
- TAYLOR, ANN. 2004. Some evidence for the effect of translation from Latin on Old English syntax. In *3rd York-Holland Symposium on the History of English Syntax*, York.
- . 2006. Contact effects of translation: Distinguishing two kinds of influence in Old English. *York Papers in Linguistics Series 2* 5.105–125.

- , & WIM VAN DER WURFF, 2007. Relative THAT in Old English. Presentation at the 6th Holland-York Symposium on Historical English Syntax.
- , ANTHONY WARNER, SUSAN PINTZUK, & FRANK BETHS. 2003. *The York-Toronto-Helsinki Parsed Corpus of Old English Prose*. York: Department of Language and Linguistic Science, University of York.
- TE WINKEL, J. 1901. *Geschiedenis der Nederlandsche Taal*. Culemborg: Blom & Olivierse. Translated by Wieder, F.C.
- 1905. *Inleiding tot de Geschiedenis der Nederlandsche Taal*. Culemborg: Blom & Olivierse.
- THOMASON, OLGA A., 2006. *Prepositional Systems in Biblical Greek, Gothic, Classical Armenian, and Old Church Slavic*. University of Georgia dissertation.
- Forthcoming. Notion of direction and Old English prepositional phrases.
- TRIPS, CAROLA. 2002. *From OV to VO in Early Middle English*. Linguistik-Aktuell. Amsterdam: John Benjamins Publishing Company.
- VAN BREE, C. 1987. *Historische Grammatica van het Nederlands*. Dordrecht: Foris.
- VAN DE KETTERIJ, C. 1973. *Middel nederlandse Teksten ter Grammatical Interpretatie*. Groningen: H.D. Tjeenk Willink bv.
- VAN DE WEIJER, JEROEN, & BETTELOU LOS (eds.) 2006. *Linguistics in the Netherlands 2006*. Amsterdam: John Benjamins Publishing Company.
- VAN DEN BERG, B. 1971. *Inleiding tot de Middelnederlandse Syntaxis*. Groningen: Wolters-Noordhoff.
- VAN DEN BERG, EVERT. 1980. Het Middelnederlands als SOV-taal. *De Nieuwe Taalgids* 73.53–60.
- . 1991. Over de syntax van Middelnederlandse rijmteksten. *Tabu* 21.67–75.
- VAN DER HORST, J.M. 1994. *Kleine Middelnederlandse Syntaxis*. Netherlands: Huis aan de Drie Grachten, 4th improved edition.
- VAN DER HORST, JOOP, & FRED MARSCHALL. 2000. *Korte Geschiedenis van de Nederlandse Taal*. The Hague: Sdu Uitgevers.
- VAN DER WURFF, W., 1990. *Diffusion and Reanalysis in Syntax*. Universiteit van Amsterdam dissertation.

BIBLIOGRAPHY

- VAN HAERINGEN, C.B. 1956. *Nederlands tussen Duits en Engels*. The Hague: Servire.
- VAN KEMENADE, ANS. 1987. *Syntactic Case and Morphological Case in the History of English*. Dordrecht: Foris.
- . 1997. V2 and embedded topicalization in Old and Middle English. In (Van Kemenade & Vincent 1997), 326–352.
- , & BETTELOU LOS. 2006a. Discourse adverbs and clausal syntax in Old and Middle English. In (Van Kemenade & Los 2006b), 224–248.
- , & BETTLOU LOS (eds.) 2006b. *The Handbook of the History of English*. Malden, MA: Blackwell.
- , & NIGEL VINCENT (eds.) 1997. *Parameters of Morphosyntactic Change*. Cambridge: Cambridge University Press.
- VAN KERCKVOORDE, COLETTE M. 1993. *An Introduction to Middle Dutch*. Berlin: Mouton de Gruyter.
- VAN OOSTROM, FRITS PIETER. 1998. *CD-ROM Middelnederlands*. The Hague: SDU Uitgevers. Deze cd-rom bestaat uit twee bestanden: het Middelnederlandsch Woordenboek dat in de periode tussen 1885 en 1929 werd samengesteld door Verwijs en Verdam, en een grote collectie Middelnederlandse teksten, waaronder oorkondes, ridderverhalen, liederen en kronieken.
- VAN REENEN, PIETER. 2001. Het 14de-eeuwse Middelnederlandse oorkondecopus als dynamisch-systematisch referentiekader voor taalkundig onderzoek. *Verslagen en Mededelingen van de Koninklijke Academie voor Nederlandse Taal- en Letterkunde* 111:3.399–412.
- , & MAAIKE MULDER. 1993. Een gegevensbank van 14de-eeuwse Middelnederlandse dialecten op computer. *Lexikos* 3.259–281.
- VAN RIEMSDIJK, HENK. 1974. De relatie tussen postposities en partikels. *Spektator: Tijdschrift voor Neerlandistiek* 3.447–462.
- . 1978. *A Case Study in Syntactic Markedness: The Binding Nature of Prepositional Phrases*. Peter de Ridder.
- . 1996. The extension of projections.
- . 2002. The unbearable lightness of GOing. *Journal of Comparative Germanic Linguistics* 5.143–196.

- VELD, JOOP, 1993. *Postverbal Constituents in Dutch and Turkish*. Universiteit van Amsterdam dissertation.
- VICENTE, LUIS. 2004. Derived vs. base generated OV. *Leiden Papers in Linguistics* 1.83–96.
- WARD, GREGORY, & BETTY J. BIRNER. 2001. Discourse and information structure. In (Schiffrin *et al.* 2001), 119–137.
- WEERMAN, FRED. 1987. Moet kunnen: Middelnederlandse zinnen zonder subject. *De Nieuwe Taalgids* 81.289–310.
- . 1989. *The V2 Conspiracy: A Synchronic and a Diachronic Analysis of Verbal Positions in Germanic Languages*. Dordrecht: Foris Publications.
- . 1993. The diachronic consequences of first and second language acquisition: The change from OV to VO. *Linguistics* 31.903–931.
- . 1997. On the relation between morphological and syntactic case. In (Van Kemenade & Vincent 1997), 427–459.
- WEIJNEN, A.A. 1971. *Schets van de Geschiedenis van de Nederlandse Syntaxis*. Assen: Koninklijke Drukkerij Van Gorcum & Comp.
- WRIGHT, JOSEPH. 1966. *Grammar of the Gothic Language (with a supplement to the grammar by O. L. Sayce)*. Oxford: Clarendon Press, 2nd edition.
- ZWART, JAN-WOUTER, 1993. *Dutch Syntax: A Minimalist Approach*. Rijksuniversiteit Groningen dissertation.
- . 1997. *Morphosyntax of Verb Movement: A Minimal Approach to the Syntax of Dutch*, volume 39 of *Studies in Natural Language and Linguistic Theory*. Dordrecht: Kluwer Academic Publishers.
- . 2005. A comparative approach to syntactic change in the history of English. *English Language and Linguistics* 9.157–179.

Samenvatting

In de literatuur wordt vaak aangenomen dat de West-Germaanse talen in de oudste stadia het best kunnen worden gekarakteriseerd als OV-talen. Maar ook in die oudste stadia komen VO-woordvolgordes, zogenoemde “leakages”, redelijk vaak voor. Dit onderzoek evalueert drie mogelijkheden om de vrije woordvolgordepatronen van de oudste (West-)Germaanse talen te verklaren, namelijk *construction-specific*, *construction-related*, en *competing grammars*. De eerste twee benaderingen gaan er vanuit dat er maar één onderliggende woordvolgorde is. Het onderscheid tussen de twee is de manier waarop ze afwijkende woordvolgordes uitleggen. Volgens *construction-specific* benaderingen spelen er in woordvolgordepatronen diverse factoren een rol, zoals bijvoorbeeld gewicht of de mate van ‘nieuwheid’. *Construction-related* benaderingen daarentegen schrijven de variatie aan één factor toe, bijvoorbeeld aan morfologie. De *competing grammars* benadering verschilt van deze twee door de aanname van twee onderliggende woordvolgordes. In deze studie wordt de historische ontwikkeling bekeken van drie specifieke constructies in de geschiedenis van het Nederlands en het Engels, namelijk voorzetselzinnen van richting (*directional phrases*), objecten die gemodificeerd worden door een betrekkelijke bijzin (*relative objects*) en objecten van werkwoorden voor ‘(be)noemen’ (*naming objects*). Deze constructies zijn gekozen op basis van de literatuur over woordvolgordeverschijnselen in het Nederlands en zijn een nieuwe manier om de Engelse data te bekijken. De positie van de constituent wordt samen met het gewicht en de ‘nieuwheid’ onderzocht, omdat voor de positie van zinslelementen vaak naar het belang van deze twee factoren wordt verwezen. De conclusie van dit onderzoek is dat een combinatie van *construction-specific* en *construction-related* benaderingen de beste manier is om de ontwikkelende syntaxis van het Nederlands te analyseren en een combinatie van alle drie de benaderingen levert het beste resultaat voor de syntaxis van het Engels.

Curriculum Vitae

Robert Allen Cloutier was born in Suwon, South Korea on August 24, 1979. He attended the University of Georgia in Athens, Georgia where he completed a Bachelor of Arts (2001) in General Linguistics with minors in French and Korean and a Master of Arts (2002) in Historical Linguistics (English and Indo-European studies). He spent the summer of 2000 abroad at Yonsei University in Seoul, South Korea as an exchange student. A year later, he was awarded a position as a teaching assistant in the English Department and in the Linguistics Program (2001-2002) at the University of Georgia. Desiring to broaden his horizons, he went to the University of Amsterdam to complete a Master of Philosophy in Linguistics (2003), focusing on a Functional Grammar analysis of negation in Modern Korean. He worked as an instructor at the University of Georgia and Gainesville State College during Fall 2003 before returning to the University of Amsterdam as an *Assistent in Opleiding* 'Junior Researcher' in 2004. This dissertation is the result of the research conducted during that time. In August 2008, he started a position as Assistant Professor of Linguistics at Tennessee Technological University.

Colophon

This manuscript was typeset with pdf ϵ -T_EX. The working platforms were Windows XP Pro and Mac OS X v10.3.9.

Text editing was done largely in *WinEdt* using the MiK_TE_X package. The linguistic examples and trees were formatted using the `gb4e` and `qtree` macros respectively.

The body type is 10 point Latin Modern. The Latin Modern fonts are derived from the famous Computer Modern fonts designed by Donald E. Knuth and first published by the American Mathematical Society (AMS) in 1997. One of the main extensions is the addition of an extensive set of diacritical characters, covering many scripts based on the Latin character set, mainly european, but not only, most notably Vietnamese. The Latin Modern project is authored by Bogusław “Jacko” Jackowski and Janusz M. Nowacki aka “Ulan”, supported in L^AT_EX matters by Marcin Woliński.