West Germanic OV and VO : the status of exceptions

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Publication date
2009

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

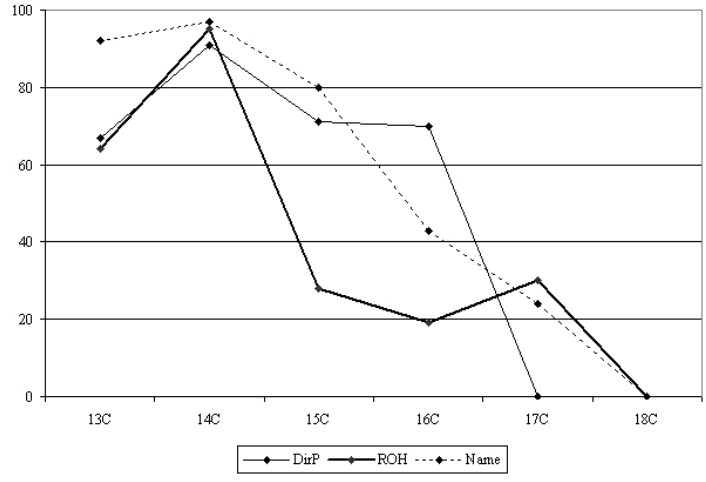

Figure 5.1.: Comparison of Distribution of Directional Phrases, Relative Object Heads, and Naming Objects in Dutch

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

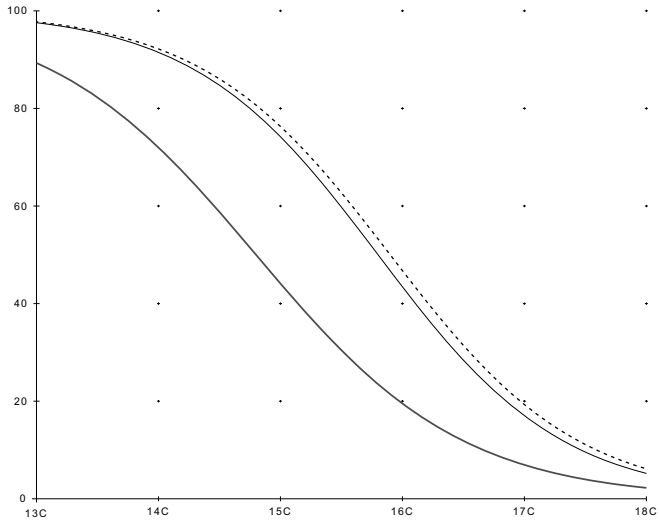

Figure 5.2.: Comparison of Logistic Function of Directional Phrases (grey), Relative Object Heads (solid black), and Naming Objects (dotted) in Dutch

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,

[1] After 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

[2]There were no data from naming objects, so we cannot make any claims about the word order patterns in that period.

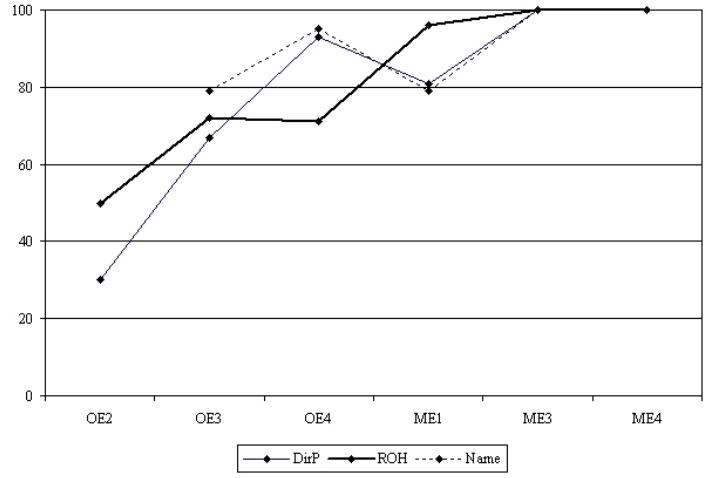

Figure 5.3.: Comparison of Distribution of Directional Phrases, Relative Object Heads, and Naming Objects in English

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;

	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.

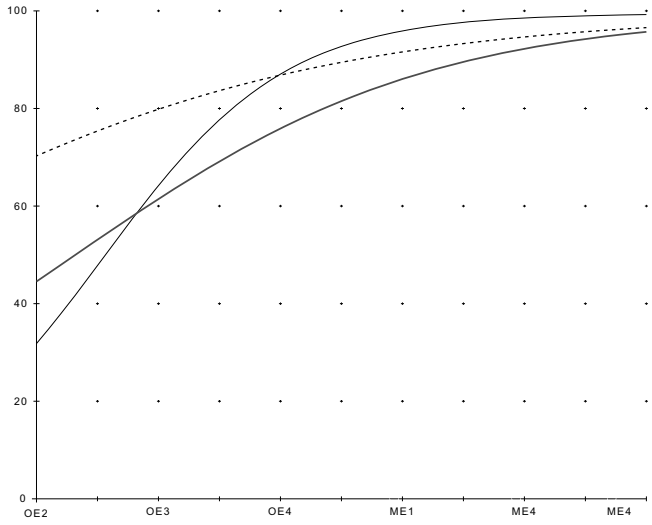

Figure 5.4.: Comparison of Logistic Function of Directional Phrases (grey), Relative Object Heads (solid black), and Naming Objects (dotted) in English

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 the 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

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.

		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 the 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.