

Drift in Dutch: Fleshing out the factors of change

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1. Introduction

A well-known adage in linguistics has it that all languages change over time. The Dutch language is certainly no exception to this rule, whether over the full course of its documented history or even in the relatively short space of just a century. For instance, anyone who looks at texts from the late 19th century cannot help being struck by differences in the language of that day vis-à-vis its 21st century descendant. Let us take as an example a brief passage from the novel *Uit het Leven* by Arie Prins (1885: 4).¹

De **groot**e schorsteenen wierpen dikke rookwolken uit, waarin **ee**ne menigte vonken dwarrelden, en Spinoza hoorde de regelmatige, heldere slagen **der** hamers op het ijzer, het sissend aflaten van **den** stoom en het dof gekraak **der** machines, die in beweging waren. ...

Haastiglijk liep hij vervolgens **tusschen** **ee**nige verroeste, oude stoomketels door, de morsige werkplaats over en schoof de **groot**e draaijerij in. In deze werkplaats, – een groot vertrek, met gewitte muren en kleine boogramen, waar een grijs daglicht door viel, dat aan alles, niet tegenstaande de bedrijvigheid, een koud, dood**sch** aanzien gaf, – maakten de raderen van een tiental ijzeren draaibanken een **helsch** leven.

(‘The big chimneys threw thick smoke clouds out, in which a bunch of sparks swirled, and Spinoza heard the regular, clear blows of the hammers on the iron, the hissing release of the steam and the dull clank of the machines that were in action. ...

Hastily he then ran between some rusty, old steam kettles, over the dirty workplace and pushed on into the large turning mill. In this work area – a large room, with whitewashed walls and small arched windows, through which a gray light fell that gave everything, despite the activity, a cold, dead appearance – the wheels of ten iron lathes created a hellish life.’)

¹ Forms to pay attention to in this passage and below are highlighted in **bold**.

In this short excerpt several points jump out at us where this text differs linguistically from its modern counterparts.² For instance, changes in spelling make such earlier texts appear unusual to 21st century readers. Thus, in modern Dutch words like the following are now spelled with a single rather than double vowel in open syllable to indicate vowel length:

- (1) a. *groot* ‘big’, *rood* ‘red’, *boomen* ‘trees’, *zoo* ‘so’, *oogen* ‘eyes’, *loopen* ‘run’
 b. *eene* ‘a’, *eenige* ‘some’, *beenen* ‘legs’, *meening* ‘opinion’, *bleeke* ‘pale’

Moreover, modern Dutch has replaced the cluster *sch* by *s* in non-initial position (except in proper names like the Dutch beer *Grolsch*):

- (2) *tusschen* ‘between’, *doodsch* ‘dead’, *helsch* ‘hellish’, *asch* ‘ash’, *flesch* ‘bottle’

Furthermore, the elision of intervocalic *d* in many words is regularly represented in modern Dutch orthography, whereas a century ago the full, unelided form was still found very frequently in texts (though not in the passage cited above):

- (3) *neder* ‘down’, *weder* ‘again’, *medenemen* ‘take along’ > *neer*, *weer*, *meenemen*

However, the differences noted so far are for the most part rather superficial and arguably largely effect the external appearance of the written language. But a corollary to the adage about continual change in language alluded to above has it that languages change in all aspects, particularly in all facets of their grammar. Accordingly, other changes that we can also note in this work are more substantial in apparently affecting the very grammar of the language. For example, written texts from the late 19th century seem to preserve more inflectional morphology, particularly in noun phrases, than those from the 21st century. Thus,

² In the following, the examples are taken from the first ten pages of *Uit het Leven*, which include the passage cited above. Here and later, “modern” designates the 20th and 21st centuries.

in instances such as (4) the indefinite article and possessive adjectives regularly showed the agreement suffix *-e* in feminine and plural forms of determiners, which is no longer found in modern Dutch.

- (4) *eene menigte* ‘a bunch’, *zijne zware stem* ‘his heavy voice’, *hare oogen* ‘her eyes’; *hunne lippen* ‘their lips’, *hunne hoofden* ‘their heads’, *zijne smerige handen* ‘his dirty hands’

Furthermore, nominal case marking appears to have been better preserved over a century ago, at least in writing. Thus we find oblique marking on noun objects of prepositions in (5), and genitive marking on (feminine singular or plural) possessive nouns in (6). Moreover we also find oblique (accusative/dative) marking on masculine singular nouns as verbal direct (7a–b) and indirect (7c) objects. Finally, the example in (8) even shows a subjunctive form of the verb *zijn* ‘to be’.

- (5) *aan den wand* ‘at the wall’, *in den mist* ‘in the mist’, *in vollen gang* ‘in full gear’, *van den stoom* ‘of the steam’, *door den baas* ‘by the boss’, *op den grond* ‘on the ground’
- (6) *het dof gekraak der machines* ‘the dull clank of the machines’, *de ... slagen der hamers* ‘the ... blows of the hammers’, *op den hoek der straat* ‘on the corner of the street’
- (7) a. *Moet ik den meester gaan halen?*
‘Must I go get the master?’
b. ... *maar hij voltooide den zin niet.*
‘... but he didn’t finish the sentence.’
c. ... *hoeveel fooi hij den debiteur gegeven had ...*
‘... how much tip he had given to the bookie ...’
- (8) ... *indien het ruchtbaar ware geworden, dat hij dronk.*
‘... if it had become known that he drank.’

Now these examples demonstrate for the most part commonplace instances of morphological simplification. But is it also possible to observe similarly striking differences in the syntax of the language of such late 19th century Dutch texts, for example in word order? Indeed, it is often felt that since such syntactic change takes place over very long

stretches of time it is much less easily observed in the space of a mere century. However, in reviewing a number of possible changes in Dutch over the past hundred years, Joop van der Horst (1995: 70) briefly remarks:

Wie nu teksten van rond de eeuwwisseling leest, kan bijna van zin tot zin de verschillen aanwijzen met het hedendaagse Nederlands. Een opvallend verschil is de positie van voornaamwoorden: die stonden omstreeks 1900 nog dikwijls vóór het onderwerp van de zin: *Als hem de rector van school stuurt*. Destijds was heel gewoon: *Hoe maken het je zootjes?* Misschien is deze volgorde nog steeds mogelijk, maar zulke zinnen klinken nu wel ouderwets.

(‘Whoever now reads texts from around the turn of the century can almost from sentence to sentence point out the differences from contemporary Dutch. One striking difference is the position of pronouns: around 1900 they still often stood before the subject of the clause: *Als hem de rector van school stuurt*. [‘If the rector sends him from school’]. At that time [the following] was very common: *Hoe maken het je zootjes?* [‘How do it your sons’, i.e. ‘How are your sons doing?’] Perhaps this word order is still possible, but such sentences now sound very old-fashioned.’)

It is not apparent what specific types of examples Van der Horst had in mind here. Surely it is not being claimed that pronoun objects can never be found before a medial subject noun in modern Dutch, but Van der Horst does not indicate what it is about these sentences that makes them exceptional. Nevertheless, his general claim is quite patent. He is apparently suggesting that there has been a shift in Dutch away from placing medial noun subjects after pronoun objects in the course of the last century, although he does not give much evidence to support this claim. In the present study I would like to do just that: I will examine empirically the question whether there has been such a change in Dutch medial word order over the past hundred years. Furthermore, we wish to place these developments within a larger historical context, for it will be seen that this question has a longer history and in fact must be viewed against the background of other developments in the language, at least some of which were alluded to above. Below we will offer evidence that there has indeed been such a change in Dutch, one which has been going on for centuries and apparently is approaching its culmination only now, in the 21st century.

2. The order of Dutch subjects and objects over the centuries

This paper examines the linear ordering of (pro-)nominal constituents in the so-called “middle field” (i.e. within the sentence brace) in the Dutch language, specifically the order of pronominal objects and nominal subjects there.³ In previous work (Shannon 1997) I briefly examined a claim made by van Gestel et al. (1992) that while in Middle Dutch, pronoun objects were regularly placed before noun subjects, in modern Dutch that is no longer possible. To check this, I studied the order of these elements in the 16th century *Ulenspieghel* and its modern Dutch translation. This comparison furnished very good prima facie evidence that the order pronominal object before nominal subject – which I refer to for convenience as “(pronoun) object preposing,” without attaching any theoretical significance to the movement metaphor invoked by the term – was indeed the dominant order in the Middle Dutch text, whereas the modern Dutch translation overwhelmingly evinced the opposite order (dubbed “object postposing”, again for convenience).⁴ Subsequently, these orderings in modern Dutch and German were studied in Shannon (2000), where it was found that in modern Dutch prose fiction texts pronoun object postposing clearly dominates, whereas in such modern German texts pronoun object preposing is the rule.

However, this previous work was somewhat limited in scope and coverage and the present study attempts to address this shortcoming. For this investigation, I collected and compared Dutch corpora covering the 16th, 19th, and 20th centuries. These corpora were comprised of the following works (sources and abbreviated reference forms are given at the end of this study):

³ On the positional fields model adopted here, see Haeseryn et al. (1997: 1225–34). Briefly, the middle field (*het middenstuk*) is the sentence area between the first prong or pole (“complementizer” or C in generative terms), which is formed in main clauses by the finite verb in first or second position, in subordinate clauses by the subordinating element, and the second prong, formed by the nonfinite verbal elements at the end of the clause. Most clausal elements are usually contained within the middle field.

⁴ Similarly, when speaking of the position of the noun I will refer to subject pre- vs. postposing.

- 16th century: Geeraedts (1986, orig. ca. 1535), Lecoutere & de Vreese (1904, orig. 1554), Schellaert (1952, orig. 1516), de Vreese & de Vries (1941, orig. 1501).
- 19th century: Buysse (1893), Daum (1889), Heijermans (1893), Prins (1885).
- 20th century: Claus (1989), Gijsen (1980; first 150 pages), Van der Heijden (1992), De Moor (1993), Mulisch (1987), Nooteboom (1991).

These texts were selected because they came from three representative and rather well-documented centuries in the historical development of the Dutch language and were prose fiction works, in which considerations of rhyme or meter, scholarly style, etc. would presumably exert little or no influence.⁵ The 16th century texts are popular prose works from the first half of the century and were selected primarily for reasons of availability. The 19th and 20th century texts were written approximately 100 years apart (between 1880–1895 and 1980–1995, respectively) by recognized authors who presumably reflect the syntactic norms of their time.

Although other data for the 16th and 20th centuries have been reported previously (Shannon 1997, 2000), the corpora for this study are all different and/or expanded. For the 16th century this was particularly necessary because the earlier work cited only limited data from a single text, the *Ulenspieghel*, which is quite likely a translation of a lost Low German text. For the present study, three other chapbooks (*volksboeken*) were added. Moreover, although the 20th century Dutch results reported in Shannon (2000) were quite extensive, all new texts were consulted for the current study. Finally, since we wanted to empirically test Van der Horst's claim about the difference between 19th and 20th century Dutch word order, we added a corpus of works from the 19th century; these data are reported here for the first time. It should be noted that there is a size

⁵ While every effort has been made to obtain sufficient data to warrant generalizations, our corpora still represent only a small sample of the range of texts produced at any time. Consequently, the results reported here can only claim limited reliability – for certain (kinds of) written texts. However, given the clear quantitative data reported here, it is quite likely that our observations do in fact represent actual developments in the Dutch language as a whole.

difference here: the 16th and 19th century corpora each contain four works, the modern Dutch corpus six. This is because the modern Dutch works tended to be shorter, and so to obtain more data additional modern Dutch novels were examined (from the one longer text – Gijzen 1980 – only the first 150 pages were excerpted). Nonetheless, the 19th century and 20th century corpora are roughly of equal length in terms of total words, while the 16th century corpus is somewhat shorter: 16c = 146,500, 19c = 189,200, 20c = 194,000.⁶ In comparisons below the size difference should be kept in mind. Overall, the results presented here offer a much broader view of the evolution of pronoun object preposing in Dutch than the earlier studies.

In each work all examples with a nominal subject (i.e. one containing a full noun head) and pronominal object (one with a pronoun head) in the middle field were collected.⁷ Only examples containing a full finite clause with at least the first prong present were included. Thus, elliptical clauses such as (9) and nonfinite constructions with participles

⁶ In figures and examples the century is abbreviated, e.g. 16c = 16th century. To estimate word lengths, the average number of words was calculated for five random pages from each work and multiplied by the number of pages. The approximated word counts were as follows. 16c: *Ulenspieghel* 23,000; *Margarietha van Lymborch* 94,500; *Turias ende Floreta* 20,800; *Salomon ende Marcolphus* 8,200. 19c: Buysse 48,300; Daum 71,200; Heijermans 39,500; Prins 30,200. 20c: Claus 22,000; Gijzen 56,500; van der Heijden 21,200; de Moor 46,100; Mulisch 20,100; Nooteboom 28,100.

⁷ It must be stressed that we are discussing the distribution of phrasal, not lexical categories, i.e. the subjects and objects in question consist of noun phrases headed by nouns and pronouns, respectively. For convenience we will talk loosely of “noun/nominal subjects” and “pronoun/pronominal objects”, which is perhaps misleading in that it seems to suggest that these elements comprise just a single word. Though pronouns do tend to be one word long, they can be longer, as when they are modified; moreover, writing conventions as to what constitutes a single word can change. Some examples from our corpora are: *hem lieden* ‘them folks’, *haer selven* ‘her self’; *zich zelf* ‘one self’, *hen beiden* ‘them both’, *zelfhaar* ‘even her’. Similarly, although proper nouns often consist of one word, this is not always the case; cf. the following examples from our database: *den Ekster*, *oom Robert* ‘Uncle Robert’, *prof. Felice* ‘Professor Felice’, *Mevrouw Sorgeloos die gescheiden is* ‘Mrs. Sorgeloos, who is divorced’. So, despite the labels “noun/pronoun object”, it must be kept in mind throughout that we are actually referring to phrases, not just words.

such as (10), as well as verb-late main clauses like (11) and clauses where one element was in the middle field but the other was exbraciated to the postfield (12) were excluded.⁸ All such examples were found only in the 16th century corpus, and even there they were rare.

- (9) 16c Etsijtes die gheraecte aen den coninc van tartarijen die hi ooc dapperlic aen ghinck. Ende *die coninc* **hem** weder dier gelike. [S 118]
 ‘Etsijtes, he came upon the king of Tartaria, whom he bravely attacked. And the king [did] the same to him again.’
- (10) 16c *Turias* **dat** hoorende sprack totten schiltknecht ... [L 19]
 ‘Turias hearing that spoke to the squire ...’
- (11) 16c Noyt *scheyden* **mi** so *deerde* alst dede dat sceiden vander schoonder maecht. [S 16]
 ‘Never parting so hurt me than (it) did the parting from the beautiful maiden.’
- (12) 16c so comt ... te constantinobele daer wert **u** *gheclaecht alle mijnen noot*... [S 52]
 ‘So come ... to Constantinople where to you will be complained all my need ...’

All examples found were entered into a Macintosh PowerBook, using the database program Panorama, and tagged for factors which were hypothesized to be correlated with word order.⁹ Where appropriate, chi-square tests were run using Microsoft Excel.¹⁰ The following sections present the results of that analysis, first giving the overall findings (§2.1),

⁸ For ease of reference, noun subjects are in *italics*, pronoun objects in **bold**. At times **bold italics** are also used in order to distinguish other items (e.g. 1st or 2nd prong, indirect vs. direct object).

⁹ One potentially important factor, theme-rheme (cf. also Behaghel’s second law) or information structure, was not considered here because it proved too difficult to evaluate it reliably.

¹⁰ Robert Kirsner (p.c.) has pointed out that the traditional use of chi-square in corpus-based, empirical linguistic studies has recently been questioned. We continue to use it here with caution, however.

then examining more specific correlations between properties of the elements and the word order found (§2.2).

2.1. Overall results

First we report the aggregate results for all examples found, including all types of pronominal objects in our three corpora.¹¹ The figures are given in table 1 below.

	16 th century	19 th century	20 th century
NSubj + ProObj	27% (158)	74.4% (300)	87.5% (265)
ProObj + Nsubj	73% (428)	25.6% (103)	12.5% (38)
Total	100% (586)	100% (403)	100% (303)

Table 1: *Order of Dutch noun subject and pronoun object for three centuries, all examples*

These data clearly document a continuing and ultimately drastic syntactic shift in linearization over the past 500 years in Dutch, as well as providing prima facie evidence supporting Van der Horst's contention that there has been a change in medial word order in the course of the last century. Pronoun object preposing has dropped from around 75% in the 16th century¹² to 25% in the late 19th century – the figures for these two centuries are thus almost exactly reversed! – and then to 12% in the late 20th century texts. These differences are highly significant, according to the chi-square test ($p < .001$). We seem to be following a continuing transformation of Dutch word order from the Middle Ages through the 20th century and beyond. This change appears to be still underway, but the general direction is evident: a clear shift from pronoun object preposing to postposing. In fact, the older preferred order is at present

¹¹ Compound pronouns like *hem/hen lieden* 'them folks', which were found in the 16th century, were included here, although they were quite infrequent. Similarly, compound reflexives like *zich zelf* (now written as one word) were also counted.

¹² Moreover, the 16th century corpus contains a high percentage of postposed demonstrative pronouns. If we discount demonstratives, the frequency of object preposing data is even greater: cf. table 3 below. Percentages cited in the text are rounded off, those in tables are given to one or two decimal places.

rarely found and may soon vanish – as has long since been the case in English.

2.2. Apparent relevant factors

From more detailed analysis of the data, we can establish that certain factors are related to the linearization of these elements. Below we examine such properties, first for the pronoun object (2.2.1), and then for the nominal subject (2.2.2).

2.2.1. Linear order and pronoun object properties

Let us first consider possible correlations between pronoun object properties and linearization. A number of pronoun properties were tracked, which will be reviewed here: pronoun type, case, animacy, and clitic (reduced) status.

2.2.1.1. Pronoun type. Several types of pronouns were distinguished: personal, reflexive, demonstrative, reciprocal (as far as it was distinct from the reflexive), and indefinite. Table 2 gives the breakdown of object preposing by pronoun object type in our three corpora.¹³

	16 th century	19 th century	20 th century
Personal			
NSubj + ProObj	12.8% (43)	76.5% (192)	89.8% (141)
ProObj + NSubj	88.2% (294)	23.5% (59)	10.2% (16)
Subtotal	100% (337)	100% (251)	100% (157)
Reflexive			
NSubj + ProObj	30.0% (18)	63.6% (77)	81.0% (94)
ProObj + NSubj	70.0% (42)	36.4% (44)	19.0% (22)
Subtotal	100% (60)	100% (121)	100% (116)

¹³ In our 16th century corpus the true reflexive pronoun *zich*, a borrowing from German, does not yet occur and forms of the anaphoric (personal) pronouns are instead used in reflexive function. The instances of reflexives in the 16th century texts were therefore determined solely by meaning and not by form. The later centuries show exclusive use of the reflexive *zich* (or *zichzelf*) in this function.

Demonstrative			
NSubj + ProObj	51.1% (96)	100% (6)	100% (11)
ProObj + NSubj	48.9% (92)	0% (0)	0% (0)
Subtotal	100% (188)	100% (6)	100% (11)
Reciprocal			
NSubj + ProObj	100% (1)	100% (2)	100% (6)
ProObj + NSubj	0.0% (0)	0.0% (0)	0.0% (0)
Subtotal	100% (1)	100% (2)	100% (6)
Indefinite			
NSubj + ProObj		100% (23)	100% (13)
ProObj + NSubj		0% (0)	0% (0)
Subtotal		100% (23)	100% (13)
Total	100% (586)	100% (403)	100% (303)

Table 2: *Order of Dutch noun subject and pronoun object for three centuries as a function of pronoun type*

As these figures clearly show, various types of pronoun objects are differentially prone to preposing. Personal and reflexive pronouns most heavily favor pronoun object preposing, whereas demonstratives even in Middle Dutch only preposed about half the time, and neither indefinites nor reciprocals appear to have had any proclivity for preposing (admittedly, the data for reciprocals is scant, but their penchant nonetheless appears quite certain). While the reason for this discrepancy is not completely clear, undoubtedly it is not due to differences in length, as pronouns tend overwhelmingly to consist of a single word (cf. §2.2.3). Presumably this varying behavior is due to other factors such as the differing semantics and/or pragmatics of these pronoun types, or, as we will suggest (§4.3), their morphological distinctness. Whereas personal and reflexive pronouns tend to refer to previously established, often more backgrounded discourse referents, demonstratives – and perhaps reciprocals – tend to be less backgrounded and possibly stressed, and indefinites normally do not designate already known discourse entities. The former were also in the 16th century more morphologically distinct. Furthermore, indefinite subjects also evince a propensity to appear late in the middle field in our data (§2.2.2.2).

These results largely agree with those reported in Shannon (1997, 2000). In particular, for those pronouns which early on show a tendency to prepose (especially personal and reflexive pronouns, but also – at least

initially – demonstratives) there is a constant, significant trend toward less frequent preposing over time. Interestingly, although in the 16th century personal pronoun objects are preposed more often than reflexives (almost 90% for personal pronouns, as opposed to 70% for reflexives), by the 19th and 20th centuries pronoun object preposing had declined more rapidly with personal pronouns, so that reflexives now prepose more frequently than personal pronouns (approximately 36% vs. 24% in the 19th century, and 19% vs. 10% in the 20th). Chi-square indicates that these differences between personal and reflexive pronouns are significant ($p < .0001$, $.01$, $.04$, respectively). While it is not certain why reflexive pronouns have been so much more resistant to the drift away from pronoun object postposing, it may have to do with the type of predicate that reflexives are often associated with (cf. §2.2.2.4 on the semantic role of the subject). In addition, their unambiguous marking as objects has also helped reflexives resist the drift toward postposing (cf. §4.3).

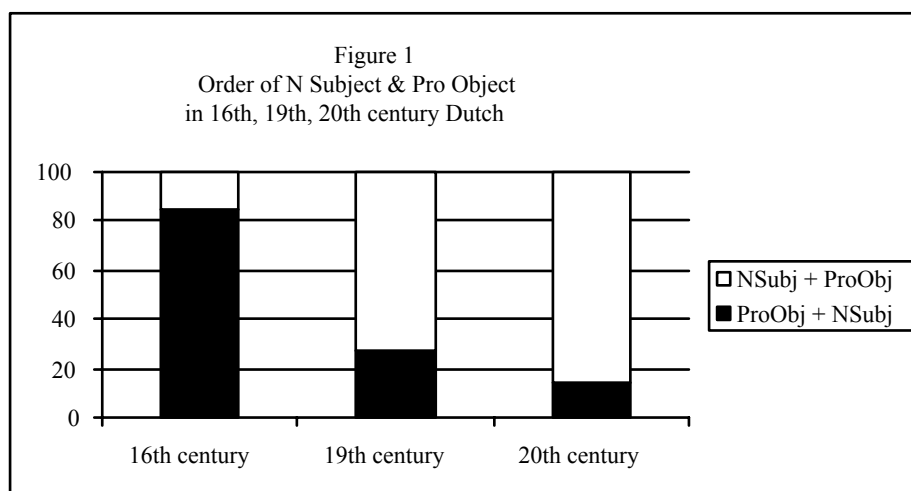
Recall that our previous figures for pronoun object preposing in table 1 included all pronoun types. Since only personal and reflexive pronouns have ever showed any real disposition to prepose, it is instructive to exclude other types in studying pronoun object preposing. The following table gives the figures on object preposing for personal and reflexive pronouns only.

	16 th c.	19 th c.	20 th c.
NSubj + ProObj	15.4% (61)	72.3% (269)	86.1% (235)
ProObj + NSubj	84.6% (336)	27.7% (103)	13.9% (38)
Total	100% (397)	100% (372)	100% (273)

Table 3: *Order of Dutch noun subject and pronoun object for three centuries, only personal and reflexive pronoun objects*

It appears that the frequency of cooccurrence of nominal subjects and pronominal objects in the middle field has decreased over time in Dutch. The frequency of examples shows a decline, from 2.7 occurrences per 1,000 words in the 16th century data (397 occurrences, ca. 146,500 words), to 2.1 occurrences in the 19th century corpus (372 occurrences, ca. 189,200 words), and 1.4 in the 20th century (273 occurrences, ca. 194,000 words). More importantly for our immediate concerns, we find here that the shift in frequencies of object preposing is even more dramatic than table 1 had indicated, going now from 85% in the 16th century to 28% in the 19th century and falling finally to a low of 14% in

our 20th century corpus. Even without statistical analysis, these differences are clearly substantial, but chi-square confirms that they are highly significant. Figure 1 below gives the same data for these three periods in the form of a bar chart which graphically displays the change over time.



Since only personal and reflexive pronoun objects have favored preposing before medial subjects in the periods covered, we will cite figures on these two pronoun types alone in the rest of this study. Below we give a few representative examples with demonstratives and indefinites.

- (13) a. 16c Als **dat** *die grave* hoorde soe vraechde hi wat die bede was. [S 34]
‘When the count heard that he asked what the request was.’
b. 16c Als *die coninc* **dat** hoorde, doen was hy seer blijde ... [S 16]
‘When the king heard that he was very glad ...’
- (14) a. 19c Weet *je moeder* **dat**? [Hm 32]
‘Does your mother know that?’

- b. 19c Zij voerde een stillen oorlog, waarvan *haar man niets* merkte, ... [P 93]
 ‘She waged a quiet war, of which her husband noticed nothing.’

- (15) a. 20c Wist *mijn Mama dat*? [C 59]

‘Did my mother know that?’

- b. 20c Richard, ... moeten *de buren alles* horen? [C 92]

‘Richard, ... must the neighbors hear everything?’

2.2.1.2. Pronoun case. Next we examine the possible correlation of pronoun case with (personal and reflexive) pronoun preposing; only dative and accusative case are considered.¹⁴ The overall results are presented in the following table.

	16 th c.	19 th c.	20 th c.
Dative Pronoun			
NSubj + ProObj	13.6% (21)	73.7% (73)	86.9% (53)
ProObj + NSubj	86.4% (133)	26.3% (26)	13.1% (8)
Subtotal	100% (154)	100% (99)	100% (61)
Accusative Pronoun			
NSubj + ProObj	15.9% (38)	71.8% (196)	85.8% (182)
ProObj + NSubj	84.1% (201)	28.2% (77)	14.2% (30)
Subtotal	100% (239)	100% (273)	100% (212)
Total	100% (393)	100% (372)	100% (273)

Table 4a: *Order of Dutch noun subject and pronoun object for three centuries based on pronoun case (personal and reflexive pronoun objects)*

¹⁴ In addition, the 16th century corpus contained four genitive pronouns, two preposed, two postposed, which are not tallied in the table. Since Dutch does not display a clear morphological distinction between oblique forms, case was assigned based on what it would presumably have been if there were clear morphological distinctions (e.g. as would be found in German). In order to determine whether there is a correlation between case and linearization it was of course crucial to make this distinction. While it is arguably risky to assign case in the absence of clear morphological markers, it does not appear that many of the assignments would be controversial. Most of the datives correspond to traditional types of “indirect object” such as second object of a verb of transfer, dative of possession, certain experiencers, etc.

Viewed in this global fashion, no difference is found with respect to preposing as a function of case: in each century, datives and accusatives are preposed with about the same frequency. The gap is only about one or two percentage points, with the accusative enjoying the slightly higher frequency in all instances; chi-square reveals no significant differences. However, if we consider the type of pronoun involved, things look slightly different, as we see in the next table.

	16 th c.	19 th c.	20 th c.
Personal Pro. Dat.			
NSubj + ProObj	13.6% (21)	73.1% (68)	85.5% (47)
ProObj + NSubj	86.4% (133)	26.9% (25)	14.5% (8)
Subtotal	100% (154)	100% (93)	100% (55)
Personal Pro. Acc.			
NSubj + ProObj	11.2% (20)	78.5% (124)	92.2% (94)
ProObj + NSubj	88.8% (159)	21.5% (34)	7.8% (8)
Subtotal	100% (179)	100% (158)	100% (102)
Subtotal Personal Pro.	100% (333)	100% (251)	100% (157)
Reflexive Pro. Dat.			
NSubj + ProObj	(0)	83.3% (5)	100% (6)
ProObj + NSubj	(0)	16.7% (1)	(0)
Subtotal		100% (6)	100% (6)
Reflexive Pro. Acc.			
NSubj + ProObj	30.0% (18)	62.6% (72)	80.0% (88)
ProObj + NSubj	70.0% (42)	37.4% (43)	20.0% (22)
Subtotal	100% (60)	100% (115)	100% (110)
Subtotal Reflexive Pro.	100% (60)	100% (121)	100% (116)
Total Both Types	100% (393)	100% (372)	100% (273)

Table 4b: *Order of Dutch noun subject and pronoun object for three centuries based on pronoun case and type (personal and reflexive pronoun objects)*

These results are quite comparable with those reported in Shannon (2000: 156ff.). Looking first at personal pronouns, we find that although preposing has declined for both cases, the decline has been less rapid with datives than with accusatives. While in the 16th century corpus both cases evince preposing with almost equal frequency (dative 86%, accusative 89%), in the 19th century preposing drops somewhat lower for accusatives (89% > 22%) than for datives (86% > 27%), and in the 20th century only dative forms prepose with a frequency greater than 10%

(dative 15%, accusative 8%). It appears that there has been a somewhat greater resistance to the shift toward postposing among datives than among accusatives. According to chi-square these differences are not statistically significant, however, even for the 20th century (16c $p < .6$, 19c $p < .4$, 20c $p < .2$), although the correlation is obviously becoming stronger.

However, despite the fact that chi-square turned up no significant correlation with case, several Dutch colleagues have said they find preposing a pronoun more acceptable when it is an indirect object, so it may be true that the difference in case is related (sometimes) to linearization.¹⁵ It is not clear why these differences based on case, small as they are, exist.¹⁶ One possibility is that the dative personal pronouns often represent human experiencers, whereas the preposed accusative pronouns may represent (inanimate) patients. Presumably the human experiencers are more often topical elements, as human experiencers appear to be inherently more contextually given (cf. the next section). If so, then the

¹⁵ I am indebted to Arie Verhagen (p.c.) for reminding me that there is in fact something of a tradition to the claim that in Dutch (virtually) only indirect objects (called “datives” here), in fact only of verbs which select *zijn* ‘be’ as their perfect auxiliary such as *bevallen* ‘to please’, allow pronoun object preposing. Cf. e.g. Koster (1978), Balk-Smit Duyzendkunst (1979), Verhagen (1986: ch. 6). As Balk, Verhagen, and the present study demonstrate, however, this claim is not factually correct: although such verbs do seem to favor object preposing, they are not the only ones which do.

¹⁶ Verhagen (1986: ch. 6) proposes an interesting functional account of Dutch word order which potentially accounts for these differences. Verhagen argues that indirect objects (datives) are always independent participants (not fully affected), whereas direct objects (accusatives) are only sometimes independent. He ties this into his more general claim that the “order of two NPs implies that at least the first of them is perceivable independently of the evoked state of affairs” (p. 225). In this account, the greater proclivity of indirect objects as opposed to direct objects to prepose would then follow from the former’s status as more often independently perceivable.

While Verhagen’s arguments for this analysis of modern Dutch are on the whole convincing, as it stands the analysis cannot be fully correct, since it does not explain how it is that pronoun object preposing has shifted in Dutch over time. In its absolute form, Verhagen’s account would lead us to expect that instead of changing these patterns should have remained constant.

disparity may be attributable to the difference in topicality and/or animacy and less to case itself. However, it may also be that the effect is due to the semantic role of the accompanying subject (cf. §2.2.2.4), as dative experiencers are often found with nonagentive (usually inanimate) subjects (cf. 25b later). And with such asymmetrical semantics, ambiguity as to subject and object would not arise (cf. §4.3).

For reflexives, the data on datives is rather scant, but what we do find suggests that here the situation is reversed, namely dative reflexives prepose less frequently than accusatives (though there are not enough cases to warrant applying chi-square). Of the twelve cases of dative reflexives in our data, only one is preposed (19th century), whereas with accusative reflexives preposing continues to decline less rapidly than it does with personal pronouns in either case: 16c 70% (42/60); 19c 37% (43/115); 20c 20% (22/110).

Note finally that the overall frequency of object pronoun forms actually declines over time, but differentially. While the frequency of reflexive forms per 1,000 words has remained relatively constant (accusative: 16c = .41, 19c = .61, 20c = .57; we disregard dative reflexives as too rare), the frequency of personal pronouns has declined substantially, especially for the datives (dative: 16c = 1.05, 19c = .49, 20c = .28; accusative: 16c = 1.22, 19c = .83, 20c = .53). Given that personal pronoun objects initially displayed the highest proclivity to prepose and that the dative personal pronoun shows a slightly greater frequency of preposing in the 19th and 20th centuries, it would seem likely that the marked decrease in the frequency of personal pronouns, especially datives, is related to the overall decrease in the frequency of object preposing.

2.2.1.3. Pronoun animacy. Next we examine the correlation between preposing and the animacy of the pronoun object. Here we use a simple dichotomy of animate (human and animate in the strict sense) versus inanimate (concrete and abstract are conflated under this rubric). Since true reflexive pronouns do not have inherent animacy but inherit it from their subject, reflexives are not counted in the tally, but rather only personal pronouns. Moreover, even though in the 16th century personal pronouns were used in reflexive function, for the sake of comparison we also eliminate those cases here and consider only personal pronouns used anaphorically. The results are listed in table 5. All examples involving a

personal pronoun are considered, including the four instances of genitive objects (two preposed, two postposed).

	16 th c.	19 th c.	20 th c.
Personal Pro. Animate			
NSubj + ProObj	14.2% (43)	72.3% (149)	87.8% (115)
ProObj + NSubj	85.8% (260)	27.7% (57)	12.2% (16)
Subtotal	100% (303)	100% (206)	100% (131)
Personal Pro. Inanimate			
NSubj + ProObj	(0)	95.6% (43)	100% (26)
ProObj + NSubj	100% (34)	4.4% (2)	(0)
Subtotal	100% (34)	100% (45)	100% (26)
Total	100% (337)	100% (251)	100% (157)

Table 5: *Order of Dutch noun subject and pronoun object for three centuries based on pronoun animacy (personal pronoun objects only)*

Except for the somewhat anomalous data for the 16th century, the general trend is clearly for animate pronoun objects to prepose more often than inanimates. Actually, the data for the 16th century are too scant to offer a fruitful comparison – and preposing was the rule anyway; a chi-square test does not reveal a statistically significant distinction here. However, for the 19th century results chi-square does show significance, $p \leq 0.001$; and the 20th century data just miss significance at the 0.05 level. Once again, these results agree well with those of Shannon (2000: 153ff.), where it was noted that with personal pronouns animates tend to prepose more than inanimates do. Presumably this skewing is due to an anthropocentric bias, such that animate entities (particularly humans) are inherently of more interest and hence tend to be mentioned earlier than inanimates. But compare also our later remarks on subject semantic role (2.2.2.4).

2.2.1.4. Pronoun cliticization. Finally, let us examine the possible relation between clitic status of the pronoun (cf. Booij 1995: ch. 8 on modern Dutch) and linear order. Clitic status is of potential relevance here because according to Wackernagel's law (cf. e.g. Lehmann 1992: 285) such weak forms are held to attract – in the older languages at least – to clause-second position, viz. the first prong in the positional fields model (C in generative analyses), and hence should precede nonclitic

elements such as nominal subjects. Below we crosstabulate the findings for our three corpora based on the clitic status of the pronoun object; for comparison, the relevant data are added from the database on 20th century Dutch gathered for Shannon (2000). In these results we follow the traditional definition of clitics: all pronoun objects whose written shape clearly indicated a phonologically reduced form were considered to be clitics.¹⁷

	16 th c.	19 th c.	20 th c.	Shannon (2000)
Clitic forms:				
NSubj + ProObj	(0)	85.3% (29)	100% (28)	88.9% (40)
ProObj + NSubj	100% (63)	14.7% (5)	(0)	11.1% (5)
Subtotal	100% (63)	100% (34)	100% (28)	100% (45)
Non-clitic forms:				
NSubj + ProObj	15.7% (43)	75.1% (163)	87.6% (113)	91.0% (181)
ProObj + NSubj	84.3% (231)	24.9% (54)	12.4% (16)	9.0% (18)
Subtotal	100% (274)	100% (217)	100% (129)	100% (199)
Total	100% (337)	100% (251)	100% (157)	100% (244)

Table 6: *Order of Dutch noun subject and personal pronoun object in three centuries based on clitic (reduced) status, with additional 20th century data from Shannon (2000)*

Clearly there is no simple, across-the-board correlation between clitic form and preposing which would hold for all periods examined. In

¹⁷ It cannot be ruled out that some of the written full forms actually concealed reduced clitics. This may mean that a few clandestine clitics were included in the nonclitic count (especially in the later centuries), but their numbers do not appear to be large. Incidentally, Gestel et al. (1992: ch. 4) adopt a nontraditional definition of cliticization, according to which it is a syntactic notion, embracing elements which have been repositioned by a movement rule. In their view reduction is a separate phenomenon.

the 16th century clitic object pronouns such as *-(e)t* ‘it’, *-en* ‘him’, *-se* ‘her/them’ do appear to obey Wackernagel’s law completely: they are all reduced, appear right after and – with a single exception where enclitic *-er* ‘there’ intervenes – are in fact written together with their host, which is the first prong. However, even among the nonclitic forms, almost 85% are preposed and also appear right after the first prong, though none are found written together with it. Nonetheless, according to chi-square, the difference between clitic (reduced) and nonclitic forms is significant ($< .01$). Later, however, the situation is quite different. By the 19th century, weak forms are not written together with their potential host and no longer obligatorily appear right after the first prong. In fact, they are rarely preposed in our data, only (15%), which is somewhat less often than nonclitic forms (25%), though the difference is not significant, according to chi-square. Our 20th century corpus does not contain a single example of a preposed clitic, but this is clearly a fluke, as there were five examples of clitic preposing out of forty-five in the corpus gathered for Shannon (2000). Combining the 20th century data, chi-square again reveals no significant difference in preposing between clitic and nonclitic forms. Below we give a few representative examples.

- (16) a. 16c Doen namse *Turias* in sijn armen, ... [L 7]
 ‘Then Turias took her in his arms, ...’
 b. 16c In Gabaa vertoochde **hem mij** *God* ende vervolde mij
 met wijsheden. [V 18]
 ‘In Gabaa God presented himself to me and filled me with
 wisdoms.’
- (17) a. 19c Zó vond **haar** *den Ekster* tot zijn grote vreugde. [D 25]
 ‘Thus den Ekster found her to his great joy.’
 b. 19c Stom ... zagen *de beide mannen ze* in de duisternis ver-
 dwijnen [B 17]
 ‘Silently ... both men saw them disappear in the dark-
 ness.’
- (18) a. 20c “Er staan **je grootse belevnissen** te wachten,” onthulde
 Ongering, ... [Hm 349]
 ““There are great experiences awaiting you.” Ongering
 revealed, ...’

- b. 20c “Ja, die gaf *oom Robert me*,” legde ze uit. [He 48]
 “‘Yes, those Uncle Robert gave me,’ she explained.’”

We conclude that while clitics were obligatorily preposed (and presumably hosted by the first prong, or C) up through at least the 16th century in Dutch, by the 19th century this situation was dramatically changed. In the 19th and 20th centuries, both clitic and nonclitic forms were much more frequently postposed than preposed. Interestingly, even though clitics originally occurred only preposed, they have not shown greater resistance to postposing than nonclitics. In fact, in some cases clitics may have even been less resistant to postposing than nonclitics (cf. 17b; §4.3).

2.2.2. Linear order and subject noun properties

Next we consider correlations between subject properties and the order of noun subject and pronoun object. The properties considered here are: subject type (common vs. proper), definiteness, animacy, and semantic role. Again only examples which contain personal and reflexive pronouns are considered.

2.2.2.1. Subject type. First we look at the correlation between subject noun postposing and the type of the noun subject, common vs. proper. Table 7 below gives the breakdown.

	16 th c.	19 th c.	20 th c.
Common Noun			
NSubj + ProObj	11.8% (34)	82.5% (156)	82.5% (174)
ProObj + NSubj	88.2% (255)	17.5% (96)	17.5% (37)
Subtotal	100% (289)	100% (252)	100% (211)
Proper Noun			
NSubj + ProObj	25.0% (27)	94.2% (113)	98.4% (61)
ProObj + NSubj	75.0% (81)	5.8% (7)	1.6% (1)
Subtotal	100% (108)	100% (120)	100% (62)
Total	100% (397)	100% (372)	100% (273)

Table 7: *Order of Dutch noun subject and pronoun object in three centuries as a function of subject noun type (only personal and reflexive pronoun objects)*

We see here that there is a decidedly weaker proclivity for proper nouns to occur after a pronominal object – as opposed to common nouns, which in all three centuries display a much stronger tendency to postpose. Chi-square indicates significant differences: for all three centuries $p < .01$, at least. Presumably this difference is due to the fact that proper nouns are quite short (usually one word long), human, and contextually given (in fact, often a major protagonist in the narrative), whereas common nouns may not be. Furthermore, although with proper noun subjects postposing was quite common in the 16th century, by the 19th few cases of such postposing were left, and in modern Dutch proper noun subjects are almost never postposed. In Shannon (2000) not a single example out of 164 had a postposed proper noun subject, and only one was found in the current study. Thus, out of a total of 226 cases in the two studies combined, only a single example of a postposed proper noun subject was found – clearly this is an all but extinct pattern (0.4%). The one case we found (21b) is included with a few other examples below; note that the subject is quite long (compound) and actually contains a common noun as the last conjunct.

- (19) a. 16c Ende die coninc van vrancrije en mach niet eten voort
hem zelyadona heet. [S 100]
 ‘And the King of France may not eat before Zelyadona allows him [it].’
 b. 16c Als *Turias* **hem dat** hoorde seggen, was hi seer verwonderd ... [L 71]
 ‘When Turias heard him say that he was very amazed ...’
- (20) a. 19c “Waar gaat ge?” riepen **haar Witte Manse en de andere vrouwen** achterna. [B 35]
 “‘Where are you going?’ Witte Manse and the other woman called after her.’
 b. 19c “Hoe maakt *Louis* ‘**t**, Margo?” vraagt Victorine. [Hm 133]
 “‘How is Louis doing [it], Margo?’ Victorine asks.’
- (21) a. 20c De volgende dag had *d’India* **me** een gedicht gegeven, ... [N 60]
 ‘The next day d’India had given me a poem, ...’

- b. 20c Onder de Farizeeërs en andere lafaards van Joden bevinden **zich** *Achiel de postbode, Rik de bakker en verschillende jongens uit zijn klas*. [C 22]
 ‘Among the Pharisees and other Jewish cowards were Achiel the mailman, Rik the baker, and various boys from his class.’

2.2.2.2. Subject definiteness. Next we examine linear order as a function of the (in)definiteness of the subject noun. Those data are given in table 8.

	16 th c.	19 th c.	20 th c.
Definite Subject			
NSubj + ProObj	15.5% (58)	79.0% (249)	91.5% (204)
ProObj + NSubj	84.5% (316)	21.0% (66)	8.5% (19)
Subtotal	100% (374)	100% (315)	100% (223)
Indefinite Subject			
NSubj + ProObj	13.0% (3)	35.0% (20)	62.0% (31)
ProObj + NSubj	87.0% (20)	65.0% (37)	38.0% (19)
Subtotal	100% (23)	100% (57)	100% (50)
Total	100% (397)	100% (372)	100% (273)

Table 8. *Order of Dutch noun subject and pronoun object in three centuries as a function of subject definiteness (only personal and reflexive pronoun objects)*

In keeping with a widely cited tendency for subjects to refer to topical entities, definite subjects are at all times much more frequent than indefinites, but the percentage of indefinite subjects increases over time here, from 6% (23/397) in the 16th century to 15% (57/372) in the 19th century to 18% (50/273) in the 20th. The reason for this increase is not clear, but may well have more to do with differing narrative styles and conventions than with any purely structural factors.

More importantly for our present concerns, while in the 16th century there is hardly any difference in noun subject postposing as a function of subject definiteness (chi-square shows no significance; both types of subject very frequently display the predominant postposed order), indefinite subjects later are clearly more prone to postposing than definites (confirmed by chi-square: for both centuries $p < .0001$), and this

tendency is even more pronounced in the 20th century than in the 19th. In the latter century subject noun postposing is in fact almost reversed in frequency for indefinite subject nouns (65%) as opposed to definites (21%), whereas in the 20th century although subject postposing is under 10% with definite subjects, it is still comparatively alive with indefinites, where it is found in almost 40% of the relevant cases. If we adjust for the effect of proper noun subjects by removing them from our count, the difference is absent in the 16th century data, but still present for the 19th and 20th centuries, although it is somewhat less pronounced for the 19th, where postposing of definite subjects rises some when only common noun subjects are considered. The relevant adjusted figures for postposed definite common noun subjects are: 16c 88% (235/266), 19c 35% (59/195), 20c 11% (18/162). Note finally that when the construction clearly marks the subject as rhematic, such as with “presentative *er*” sentences (cf. Kirsner 1979, Klooster 2000), the subject is (almost) always indefinite and postposed, thereby confirming that clearly rhematic subjects favor postposing after a pronoun object (cf. 18a above, 29b below). In fact, presentative subjects typically occur very late in the middle field.

2.2.2.3. Subject animacy. In addition, the animacy of the subject was examined; cf. table 9.

	16 th century	19 th century	20 th century
+anim subject			
NSubj + ProObj	15.7% (55)	88.5% (201)	95.5% (168)
ProObj + NSubj	84.3% (296)	11.5% (26)	4.5% (8)
Subtotal	100% (351)	100% (227)	100% (176)
-anim subject			
NSubj + ProObj	13.0% (6)	46.9% (68)	69.1% (67)
ProObj + NSubj	87.0% (40)	53.1% (77)	30.9% (30)
Subtotal	100% (46)	100% (145)	100% (97)
Total	100% (397)	100% (372)	100% (273)

Table 9: *Order of Dutch noun subject and pronoun object for three centuries as a function of subject animacy (only personal and reflexive pronoun objects)*

First of all, in keeping with an often noted tendency, subjects strongly tend to be animate: 16c 88% (351/397), 19c 61% (227/382), 20c

64% (176/273). Furthermore, for all periods considered, animate subject nouns are less often postposed than inanimates. While the difference in our 16th century data is minimal (3%) – and not significant, according to chi-square – for the 19th century it is huge (over 40%!), and even in the 20th century it is still considerable (ca. 25%) – in modern Dutch only inanimate subject nouns postpose often (31%), while animates almost never do (> 5%). The differences in the latter two centuries are statistically significant, according to chi-square (in both cases *p* is well below .0001). When we compare these data with those reported above on pronouns (§2.2.1.3), we find that both subject nouns and object pronouns manifest the same basic tendency for animates to appear earlier in the middle field, inanimates later.

Moreover, when both noun subject and pronoun object are human, the noun subject is even less frequently preposed: 16c 79% (204/257), 19c 11% (12/108), 20c 0% (0/76!). However, even in the 20th century subject noun postposing is not impossible here: there were a few such cases of subject postposing (3/128) in Shannon (2000). Nevertheless it is clear that subject noun postposing is almost never found when both the subject and object are human: the combined corpora display postposing under these circumstances only about 1.5% of the time (3/204). Incidentally, the three cases of subject postposing from Shannon (2000) all involved nonagentive subjects (see the next section on the semantic role of the subject). Cf. the following example.

- (22) 20c En toen kwam **hem** ineens *die meid* weer voor de geest, ...
 [Hs 331]
 ‘And then suddenly that girl appeared before his mind, ...’

2.2.2.4. Subject semantic role. Finally we consider the possible correlation of linear order with the semantic role of the subject – agentive vs. nonagentive.¹⁸ The results are given below.

¹⁸ In general such determinations were rather easy to make, but there were a small number of cases where judgments were not as firm. When in doubt I tended to assign agentive. Moreover, in a few cases the semantic role was left open. In general, however, semantic role assignments were relatively unproblematic.

	16 th c.	19 th c.	20 th c.
+agent subject			
NSubj + ProObj	16.9% (58)	79.5% (240)	91.2% (217)
ProObj + NSubj	83.1% (285)	20.5% (62)	8.8% (21)
Subtotal	100% (343)	100% (302)	100% (238)
–agent subject			
NSubj + ProObj	6.0% (3)	39.7% (27)	48.5% (16)
ProObj + NSubj	94% (47)	60.3% (41)	51.5% (17)
Subtotal	100% (50)	100% (68)	100% (33)
Total	100% (393)	100% (370)	100% (271)

Table 10: *Order of Dutch noun subject and pronoun object for three centuries as a function of subject agentivity (only personal and reflexive pronoun objects)*

We observe first that subjects overwhelmingly tend to be agentive (the prototypical subject; cf. Shannon 1987 and references there). Furthermore, while agentive subjects are almost exclusively animate, nonagentive ones are very often inanimate. Most importantly for our present interests, there appears to be a pervasive correlation between the semantic role of the subject and linear order. Non-agentive subjects clearly tend more toward postposing than agentive subjects, in all three centuries. While agentive subject noun postposing drops very rapidly from 84% to 21% to 9%, with nonagentive subject nouns the decrease is not nearly as severe: 94% > 60% > 52%. According to chi-square the 16th century data just miss the $p < .05$ level, while for the other two centuries the differences are highly significant ($p < .00001$). Clearly, postposing for (human) agentive subjects has been decreasing over time and when the object is also human, it is apparently out in modern Dutch (cf. §2.2.2.3). Neither the corpus for 20th century Dutch assembled for this study nor the one for Shannon (2000) contains a single example of this type. Texts from the 19th century still had this now highly marked word order from time to time, as in (17a above; cf. §3), but nowadays this order is apparently unknown.

Next let us consider briefly the semantics of typical predicates displaying nonagentive subjects. Space precludes the longer discussion that this topic deserves here, but we should at least highlight some of the main types. The subjects of such predicates are predominantly inanimate, and the predicate typically represents a situation outside the (volitional)

control of the subject (or object). With personal pronoun objects, the situation in question is often an emotional (24b, 25b), mental (23a, 24a, 25c), or other experience beyond the object's control (23b; 18a), including the approaching or passing of something/someone, physically or mentally (24c, 25c; 22 above). Typically, in these cases, the object is some sort of human experiencer, the subject an inanimate stimulus. Passives of transitive verbs with an indirect object also fit in here (23c, 25a), as they often show preposing of the object pronoun. Given that the human experiencers in such examples are often datives, this may in fact be the source of some speakers' intuition that object preposing is favored with "indirect objects" (cf. §2.2.1.2).

- (23) a. 16c ... daer om bevallen **u** *der vrouwen seden* ... [V 28]
 '... for that reason women's manners please you ...'
 b. 16c ... so dat **hem** noyt *druppel bloets* wt den live en liep. [L 41]
 '... so that never [a] drop of blood ran (to him) from his body.'
 c. 16c ... so was **hem** *groote ere* ghedaen ende groote weerde. [S 95]
 '... so was done (bestowed) to him great honor and great esteem.'
- (24) a. 19c ... lijkt **me** *de therapeutische of verlossende werking hiervan*, zeer gering. [Hm 59]
 '... its therapeutic or freeing effect seems to me very small.'
 b. 19c ... becroop **haar** opnieuw 'n *weelderig gevoel van onrustig jong leven*. [He 39]
 '... a rampant feeling of restless young life overcame her again.'
 c. 19c Onwillekeurig ontsnapte **haar** *een zucht* bij zijn lof. [D 152]
 'Involuntarily a sigh escaped her [she let out a sigh] at [on hearing] his praise.'

- (25) a. 20c ... dat vader een kunstenaar is, ook al is **hem** *Kaste Vier* toegewezen. [G 21]
 ‘... that father is an artist, even if he has been assigned to Caste Four.’
- b. 20c Even liepen **hem** net als vroeger *de rillingen* over de rug. [Gi 124]
 ‘Just then shivers ran (to him) up his back just as earlier.’
- c. 20c ... dat **ons** wel, vanaf een pleintje, *een verraderlijk schijnsel* naderde, ... [Mo 28]
 ‘... that from a little square a treacherous figure approached us ...’

With reflexive pronouns – particularly in modern Dutch – the subject is again regularly inanimate and the predicate often denotes the location of an entity, or its coming into existence, onto the scene, occurring or unfolding (26a, 27a, 27b, 28a; 21b above). Furthermore, involuntary experiences are still to a certain extent still found with preposed object pronouns (28b; cf. above on personal pronoun objects). Formerly, internal (emotional) reactions (26b) or controlled behavior (16b) with animate subjects were also found with preposed reflexives, but such examples appear to be less common nowadays. Observe that long subjects – e.g. ones modified by a(n) extraposed) relative clause – are not uncommon here.

- (26) a. 16c Als **hem** *den dach* verbaerde so was heyndric van lymborch in die were. ... [S 108]
 ‘When day came [lit. ‘revealed itself’] Hendrik van Limburg was busy ...’
- b. 16c Doen verblijde **hem** *die bisscop* boven maten. [S 37]
 ‘Then the bishop was extremely happy.’
- (27) a. 19c Tegen de witte gordijnen teekende **zich** *het donkere silhouette van iemand* af. [P 21]
 ‘Against the white curtains the dark silhouette of someone stood out.’
- b. 19c Daar waar **zich** nu *de hoofddeur* bevond, had het bestaan. [P 104]
 ‘There where the main entrance was located it [his house] had stood.’

- (28) a. 20c Maar er heeft **zich** gisteravond *een incident* voorgedaan
dat ... [Gi 81]
 ‘But there occurred an incident last night that ...’
 b. 20c Plotseling wrong **zich** *een diepe zucht* uit het doodstille
 lichaam omhoog. [Gi 155]
 ‘Suddenly a deep sigh wrestled up from the deathly still
 body.’

Again, in modern Dutch, clauses with such predicates are the ones in which the subject is most often postposed (52%). Their subject is nonagentive, typically an uncontrolled inanimate entity or situation. One other characteristic feature of all the predicates in these groups is that very often the subject is unpredictable, unexpected, unforeseen. That is, often it is the subject that is the rhematic, focused new element in the clause, which is being introduced into the discourse at this point (though it does not have to continue to be the topic of the following discourse, it may). This is presumably the reason why subjects in such cases are often quite lengthy (5+ words: 24a, 24b, 27a, 28a; cf. 30a–c below). Both of these factors are linked to subject postposing. Moreover, with personal pronouns the asymmetry of the semantics (animate object, inanimate subject) makes subject assignment relatively unambiguous (cf. §4.3)

2.2.3. Order and length difference

Finally, we consider word length. This factor is of particular interest because it is often claimed that length plays a role in linearization – to wit, longer elements tend to follow shorter ones. Cf. Behaghel’s “Gesetz der wachsenden Glieder” (1932), as well as the late Simon Dik’s “language-independent preferred order of constituents.” Jack Hawkins’ (1994) principle of Early Immediate Constituents also predicts for languages such as ours that short should precede long, since that order provides clear advantages for on-line parsing. Here are first of all the average word lengths of nominal subjects and pronominal objects, as related to the definiteness of the subject noun.

	16 th c.	19 th c.	20 th c.
Definite Noun	NSubj/ ProObj	NSubj/ ProObj	NSubj/ ProObj
NSubj + ProObj	2.36/1.07	2.47/1.04	2.55/1.00
ProObj + NSubj	2.33/1.00	5.42/1.00	7.42/1.00
Subtotal			
Indefinite Noun	NSubj/ ProObj	NSubj/ ProObj	NSubj/ ProObj
NSubj + ProObj	4.67/1.67	4.80/1.00	2.94/1.00
ProObj + NSubj	2.45/1.00	4.38/1.00	6.74/1.00
Subtotal			
Total	NSubj/ ProObj	NSubj/ ProObj	NSubj/ ProObj
NSubj + ProObj	2.40/1.10	2.65/1.03	2.60/1.00
ProObj + NSubj	2.33/1.00	5.05/1.00	7.08/1.00

Table 11: *Average word length of Dutch noun subject and pronoun object in three centuries as a function of word order and subject noun definiteness (only personal and reflexive pronoun objects)*

Several interesting – though for the most part not surprising – correlations can be noted here. First of all, nominal subjects are on average longer than pronominal objects, which overwhelmingly tend to be just one word long; the difference in average length is always at least by a factor of two. Moreover, indefinite subjects tend to be longer than definites – with the sole exception of the 16th century, where the data are too scant to permit reliable conclusions (the average length of 4.67 with preposed indefinite subject nouns is based on three examples, and there were only 23 cases of indefinite subjects).

More importantly in our context, postposed nominal subjects tend to be longer than preposed ones (again with the exception of the 16th century), and the length difference increases steadily (overall: $0 > 4 > 6$). However, the difference in average length of post- vs. preposed subject nouns is much more profound with definite subjects than with indefinites. With definite subject nouns, the length differences of postposed over preposed subjects were: 16c -0.03, 19c 2.95. 20c 4.87; with indefinite subjects they were: 16c -2.22, 19c -0.42. 20c 3.8. In fact, with indefinites, it is not until the 20th century that postposed subject nouns are on average longer than preposed ones, whereas with definite subject nouns the length difference between post- and preposed subjects is clear

already in the 19th century and in each century it is always greater than the corresponding length difference with indefinites. What this seems to indicate is that over time subjects need inter alia to be ever longer in order to be postposed, especially if they are definite. This is particularly clear in the 20th century corpus, where both definite and indefinite postposed subjects are on average more than twice as long as preposed subjects of the same type.

We can also approach this issue by considering the frequency of pre- vs. postposing depending on the word length difference between subject and object. Again, Hawkins' (1994) principle of Early Immediate Constituents predicts for languages such as ours that short elements like pronoun objects should precede long ones like noun subjects, and furthermore that this effect should become more pronounced the greater the length difference. Table 12 gives the breakdown for this comparison. We only consider those examples where the subject was longer than or equal to the object in word length; there were only a handful of instances where that was not the case.

difference →	0	1	2	3	4	5	6	7	8	9	10+	Total
16th century												
NSubj + ProObj	16	25	5	6	1	4	0	0	0	0	1	58
ProObj + NSubj	83	184	38	8	13	2	2	1	2	0	3	336
Total	99	209	43	14	14	6	2	1	2	0	3	394
19th century												
NSubj + ProObj	89	97	32	12	19	1	6	2	1	1	7	267
ProObj + NSubj	5	36	14	11	8	6	6	1	3	0	13	103
Total	94	133	46	23	27	7	12	3	4	1	20	370
20th century												
NSubj + ProObj	48	120	27	10	11	7	3	5	2	0	2	235
ProObj + NSubj	0	12	4	0	1	0	3	5	3	3	7	38
Total	48	132	31	10	12	7	6	10	5	3	9	273

Table 12. *Order of Dutch noun subject and pronoun object in three centuries as a function of word length difference (noun subject length ≥ pronoun object length; only personal and reflexive pronoun objects)*

Again we see a correlation between word length and linearization, in fact the same tendency for longer subjects to appear postposed. Except for the 16th century – where the norm was postposing of the nominal subject, and length does not seem to correlate strongly with subject

postposing – the clear trend is that the longer the subject the greater the frequency of postposing. When we group these data together with an interval of four, the frequency of subject postposing increases for the 19th and 20th centuries monotonically and quite drastically as a function of increased difference in length between the subject and object: 16c: 0–3 86% (313/365), 4–7 78% (18/23), 8+ 83% (5/6); 19c: 0–3 22% (66/296), 4–7 43% (21/49), 8+ 64% (16/25); 20c: 0–3 7% (16/221), 4–7 26% (9/35), 8+ 76% (13/17). Clearly, then, the frequency of subject postposing correlates with the length difference between subject and object, as one would expect from the functional principles cited above, especially from Hawkins’ EIC predictions. However, it appears that when length is a factor in subject noun postposing, the length difference must be ever greater when postposing occurs, so that in the 20th century, only really long subject nouns frequently get postposed, especially if they are definite and/or human. Cf. the following.

- (29) a. 20c Uit het groepje mannen maakte **zich** *dezelfde jongen* los
die al eerder had spoken. [Gi 142]
 ‘From the little group of men the same boy broke away
 who had spoken earlier.’
- b. 20c Natuurlijk wilden ze geloven dat er **zich** in dat lompe,
 bonkige omhulsel *een koninklijke, onzichtbare, onsterfe-
 lijke substantie* ophield, *die geen substantie was, iets dat*,
 ... [N 70]
 ‘Naturally they wanted to believe that in that bulky,
 scrawny shell a royal, invisible, immortal substance
 dwelled which was not a substance, something that ...’
- c. 20c ... staarde **haar** uit de bloemen opnieuw *die twee zwarte
 gaten aan, die maar niet gevuld schenen te willen raken*.
 [He 81]
 ‘...the two black holes, which didn’t seem to want to be
 filled, stared at her again from the flowers.’

3. Summary

The results reported above indicate substantial syntactic changes in Dutch over the past 500 years. It is quite certain that there has been a major shift over time in the favored linearization of noun subjects and

pronominal objects in the Dutch middle field. Whereas at least through the 16th century pronoun object preposing was clearly the most frequent order, in the 19th century the opposite was true, and by the 20th century the older preferred order had all but disappeared. We also found that a number of properties of subject noun and object pronoun correlated with the pre- vs. postposing, although in the 16th century object pronoun preposing was so much the rule that the effects of these factors were generally not noticeable. In general one can say that in modern Dutch only personal or reflexive pronoun objects prepose. Moreover, pronoun object preposing is mainly found when factors which favor it are present: in the (personal) pronoun object, human, perhaps experiencer (dative); in the subject noun, (long) indefinite, common noun, inanimate and non-agentive. Any of the opposite properties of subject and/or object appear to disfavor object preposing, and a greater number of the factors in one direction seems to have a cumulative effect on object preposing. Finally, it should be noted that these properties often tend to cluster.

On the whole, our results for 20th century Dutch are quite comparable to those reported in Shannon (1997) and (2000). In particular, all three studies agree on the whole both on the relative infrequency of object pronoun preposing in modern Dutch as well as on the factors which (dis)favor it. Moreover, in comparing Dutch with German Shannon (2000) points out that while in modern German object pronoun preposing is still the statistical rule, in general the same factors at work in Dutch (dis)favoring object preposing are operative in German as well. In addition, the 20th century findings in these studies compare quite well with those in Nieuwborg (1968, 1973), at least in terms of the factors which correlate with the competing orders. However, in Nieuwborg's studies the reported frequencies of object pronoun preposing are somewhat higher. In all likelihood these discrepancies reflect differences in text types, date, and provenance.

Finally, the evidence presented here gives strong empirical validation to Van der Horst's claim that in late 19th century Dutch pronoun object preposing was still quite possible in certain types of sentences but that it had fallen into disuse in such contexts 100 years later. Furthermore, we are now in a position to say what types of sentences have become anomalous with pronoun preposing. It is surely no accident that Van der Horst chose precisely the (kinds of) examples he did; we repeat them here for reference.

- (30) a. Als **hem** *de rector* van school stuurt.
 ‘If the rector sends him from school.’
 b. Hoe maken **het** *je zoontjes*?
 ‘How are your sons doing?’, lit. ‘How do it your sons’

Both example sentences have features which nowadays almost certainly preclude pronoun object preposing. For instance, each has a short, definite, human subject noun. At least the first subject can be classified as agentive, and while the argument status with the verb in (30b) is less clear, it does not appear to have a blatantly nonagentive subject. Note that these subject properties were found to be ones that heavily disfavored pronoun object preposing, more so in the 20th than in the 19th century. Furthermore, the object in the first example is human. Recall that in both this study and Shannon (2000) not a single 20th century example of pronoun object preposing was found with a (definite) human agentive subject and a human object pronoun, although some were in fact found in our 19th century material.

These are apparently the type of examples that Van der Horst had in mind when he made his claim. As he correctly observes, we do find in the 19th century examples of pronoun object preposing in such contexts (cf. 31a–c; cf. also 17a, with a proper noun subject!), but rarely, if at all, in the 20th century. Preposing appears to have been rather common after quotes in our 19th century data (cf. 31b). Observe that (31a) is quite parallel to Van der Horst’s first example (30a), as is (31c) to his second (30b). However, even in the 19th century object preposing certainly was not obligatory, nor even highly frequent, with such examples; we also find similar instances where the pronoun object is postposed (31d, e; 20b above). Of course, this is not surprising, given that already in the 19th century there are many cases of object postposing in contexts which favor object preposing, e.g. with inanimate, nonagentive – but definite! – subjects (31f–g).

- (31) a. 19c... zodat **hem** *de koetsier* met luider stem moest roepen
 ... [D 204]
 ‘... so that the coachman had to call him with a louder
 voice ...’

- b. 19c “Zou je niet ’n uurtje gaan slapen vanmiddag?” vroeg
haar *Bronkhorst* ... [D 129]
 “Shouldn’t you sleep for an hour or so this afternoon?”
 Bronkhorst asked her ...’
- c. 19c Hoe maakt ’t *het kind*? [D 21]
 ‘How is the child doing [it]?’
- d. 19c Hoe *de kinderen* ’t maken? [Hm 13]
 ‘How the children are doing [it]?’
- e. 19c “Een zeer geréussseerde,” had *Bronkhorst* **haar** genoemd.
 [D 133]
 “A very successful one,” Bronkhorst had called her.’
- f. 19c Of ‘t *leven van kelnerin* **haar** beviel? [Hm 117]
 ‘Whether the life of a waitress pleased her?’
- g. 19c ...toen *het denkbeeld van haar kind* **haar** eensklaps voor
 de geest kwam. [B 102]
 ‘... when the image of her child suddenly appeared before
 her mind.’

We interpret Van der Horst’s claim more specifically as follows. While in the late 19th century it was still possible to find object pronoun preposing in clauses containing a (short) definite, human, agent-like subject (and possibly also a human object), in the late 20th (or now early 21st) century such clauses practically never show object preposing (at least in the standard northern variety). Even though his claim was made in a somewhat offhand fashion, it turns out that it was right on the money, as the data in this study have empirically demonstrated. Pronoun object preposing in modern Dutch requires considerable priming from the factors which favor it, as outlined earlier, even more so than was the case in the late 19th century.

4. The difficult question: What caused this shift?

In the preceding we have presented considerable empirical evidence that there has been a continuing shift in word order in Dutch over the past 500 years or more. While as late as the 16th century (and presumably much earlier) Dutch (especially personal and reflexive) pronoun objects consistently preceded nominal subjects, by the 19th and 20th centuries the order had been reversed and such objects now regularly follow noun

subjects in the majority of cases. Shannon (2000) observes the same trend for German, albeit at a much slower pace, so that in modern German object pronoun preposing is still the statistical norm. The next logical question is how and why this shift came about. Given that pronoun object preposing presumably is in some sense “natural” (cf. earlier references to Wackernagel, Behaghel, Dik, and especially Hawkins), it is all the more curious that this order would be abandoned. In the following sections we offer a functional account of why and how this change occurred.

4.1. Towards a functional explanation: Typological drift

Following Shannon (1997, 2000), we maintain that the observed change in medial linearization in Dutch can be fruitfully viewed in the larger context of a more general syntactic drift (cf. Sapir 1921). Burridge (1993) has claimed that in Dutch (and West Germanic in general) there has been a long-term shift from pragmatically determined word order – where linearization is influenced largely by contextual factors – to grammatically determined word order – in which ordering is driven by grammatical relations like subject and object (Thompson 1978). Overall she discerns a change from topic prominence to subject prominence as part of the general drift: older stages of Dutch are claimed to be more topic-prominent than their later descendants. As proof of this she cites ostensible topic-prominent constructions, such as the frequent use of left dislocation (also common in our 16th century corpus), so-called double subjects or floating topics (not found in our corpus), accusative-marked subjects (again frequent in our data), and topic-controlled gapping of grammatically nonparallel constituents (also found in our corpus, though not often).

According to Burridge’s scenario, the stabilization of the position of the finite verb, in particular verb second in main clauses (which itself may have been brought about by Wackernagel’s Law), brought about the need to fill the clause-initial position. This in turn had a number of other consequences, among them the rise of obligatory subject pronouns and “dummy” subjects when the syntactic subject is displaced (extraposition, presentatives) or in impersonal (i.e. subjectless) constructions, and the loss of embracing (double) negation. Eventually a shift from topic prominence to subject prominence was the result; specific symptoms of

this shift included the tightening up of the sentence frame and reduction of exbraciation, and the loss of the above-mentioned topic-prominent constructions.

Despite some uncertainty about the status of some of these constructions, we can accept Burridge's claim of a general shift in Dutch over time from topic to subject prominence.¹⁹ Adopting this perspective allows us to make sense of the shift in pronoun object preposing in Dutch observed earlier in this study by placing it in the overall context of this drift. Viewed against this background, the observed switch from pronoun object preposing to postposing is yet another example of this same general typological shift from more pragmatically to more grammatically determined word order. As a more topic-prominent language, Middle Dutch word order was still to a certain extent driven by contextual factors: short, atonic, contextually presupposed medial elements like pronoun objects were typically ordered before longer, less presupposed elements like noun subjects (perhaps originally in part due to rhythmical reasons – Wackernagel's Law). With the shift to subject prominence, linearization of medial arguments became increasingly dependent on the grammatical distinction between subject and object. Accordingly, the subject became more and more restricted in its placement to a position directly after (alternately, before) the first prong, and hence before medial pronoun objects. In the modern language, it is now only when the nongrammatical factors brought out earlier are strong enough to countermand the prominence of the subject that we find a pronoun object ordered before it in Dutch.

4.2. Drift and “invisible hand” explanations

The scenario we have just offered to account for the shift away from object pronoun preposing in Dutch appeals to the notion of drift: the shift

¹⁹ Note that the account we propose for the shift away from pronoun object preposing in Dutch does not hinge crucially on accepting the specific constructions Burridge gives as examples of the more topic-prominent nature of Middle Dutch. Incidentally, based on other data, Abraham (1982) independently came to a similar conclusion that modern Dutch is more a “subject prominent” language, whereas modern German is a more “topic prominent” language.

from pragmatically determined to grammatically determined word order is in some way responsible for the downfall of object preposing. Such a proposal seems to fit the fashionable term “invisible hand explanation” (Keller 1994): there seems to have been an invisible force, call it drift, pushing in the direction indicated over time. As it stands, however, this account unfortunately remains rather nebulous. Essentially it observes certain general tendencies in the language and says the phenomenon in question can be fit into the same overall direction of change, but it does not show how or why this could have taken place. As Keller observes (67–68) the term invisible hand “can mislead those unfamiliar with the term, seemingly referring to something mysterious and obscure.” But in fact this is not how an invisible-hand theory is supposed to work. Keller goes on to explain: “However, the opposite is true. An invisible-hand theory attempts to explain structures and reveal processes, namely those structures which are produced by human beings who do not intend or even notice them, as if they were ‘led by an invisible hand’.”

A key point in an invisible-hand explanation – here of language change – is that the invisible forces driving the phenomenon need to be explicated and a scenario offered which could have brought about the observed result, without speakers realizing it. For surely speakers of Dutch were not conscious “conspirators” in the drift toward subject prominence, in our case reordering medial subjects and objects. If speakers did not consciously follow this drift, what could have motivated them to gradually reduce the frequency of pronoun object preposing over the past five centuries? While the overall direction of the “drift” seems to be from topic to subject prominence, what might have been the specific factor(s) influencing this change directly? Or to stay with the metaphor: how can we make the invisible hand visible?

4.3. The invisible hand: Loss of inflectional marking and resultant ambiguity avoidance

Following Shannon (1997, 2000), I submit that in large part the shift away from medial pronoun object preposing has been driven by the loss of fairly consistent morphological marking of subject vs. object.²⁰ For

²⁰ In addition to the loss of clear inflectional cues to subject and object, there may well have been other related factors involved in the shift away from object

while Middle Dutch still preserved rather good inflectional indications of what was subject and object, later stages of the language do not. In particular, nominal case has been lost in Modern Dutch, case distinctions in the pronouns have been greatly reduced, and changes in the verbal system led to much reduced morphological cues about subject from verbal agreement. With the loss of more robust non-linear morphological cues of subject and object, the chance for grammatical ambiguity as to what was subject and object increased considerably (cf. Shannon 2000: 180–184 for details). Due to possible confusion as to what was subject, speakers often avoided the potential misinterpretation that preposed pronoun objects could give rise to.

A frequently invoked communicative strategy was to postpone the object in those cases where ambiguity could arise. Note that the placement of a noun subject before a pronoun object is not normally ambiguous with respect to grammatical relations, even in the absence of inflectional cues, but the opposite order is potentially ambiguous. If a morphologically ambiguous medial noun appears before a morphologically ambiguous pronoun, the noun will normally be interpreted as the subject, since nominal objects are (almost?) never placed before pronominal subjects. However, a morphologically ambiguous medial pronoun object appearing before a morphologically ambiguous noun could be mistaken for the subject, because subject pronouns are very frequent and medial subject pronouns are typically placed in front of an object noun. Eventually even unambiguous instances came to follow the same pattern as the ambiguous ones as object pronoun postposing became the statistical norm. In this way, the order “NP subject followed by pronominal object” has come to be almost obligatory in modern Dutch.

This scenario opens, so to speak, the invisible hand of this drift because it shows how and why Dutch speakers more and more came to rely on word order to differentiate subjects from objects without consciously realizing it. The invisible hand behind this drift was the desire to avoid the syntactic ambiguity regarding subject and object which resulted from the erosion of inflectional cues. Speakers did not know that they were

pronoun preposing. For example, as we noted earlier in several places, the frequency of medial objects cooccurring with medial subjects has gone down considerably, especially with datives. Cf. Shannon (2000) for more on this and other factors.

involved in a language drift, rather they were simply acting as good, cooperative interlocutors and tried to avoid misunderstanding of their communicative intent. Dutch speakers avoided syntactic ambiguity over the course of time, which led to the decline of the ambiguous order of pronominal object before nominal subject. In all probability the increasing frequency of preposed subject nouns in turn acted to further strengthen this effect. The change did not take place over night, but rather was the result of large numbers of such individual decisions to postpose a pronoun object when ambiguity could arise, just as the invisible-hand theory would have it.

Ambiguity and its avoidance can also help us to understand a number of the results reported earlier. It is no doubt not fortuitous, for instance, that those pronoun types which rarely or never distinguish case even in the 16th century – e.g. demonstratives like *dat* ‘that’ and *dit* ‘this’ – were not as often preposed. Interestingly, in our 19th century data ambiguous clitic forms like *se* ‘she/her’ – which in Middle Dutch were largely unambiguous and always preposed – were almost never preposed; instead, it was the unambiguous full forms like *haar* ‘her’ which occur preposed (cf. 17a, b). Finally (2.2.2.4), when the semantics of the predicate results in an asymmetry between subject (typically nonagentive inanimate) and object (typically human experiencer) and there is hence little or no possible ambiguity as to what is subject, object pronoun preposing is quite frequent in modern Dutch, even in the absence of morphological cues to subjecthood. But where grammatical ambiguity is most difficult to resolve without sole resort to contextual knowledge, e.g. with human agent subjects and human patient objects, object preposing is always avoided. This is certainly not to deny that in modern Dutch other factors such as length, indefiniteness, etc. may also be relevant, but it seems undeniable that ambiguity has been a major force in driving the linearization of medial noun subjects and pronoun objects.

Of course this is not the first time that avoidance of the ambiguity resulting from the loss of inflectional morphology has been appealed to in explaining a shift in word order, though mine is the first explicit attempt to explain the specific shift in question, to my knowledge. This type of account goes back at least to the pioneering work on drift of Eduard Sapir (1921) and has been explicitly proposed by others such as Hawkins (1986) as well. No doubt the most well-known case of this type of appeal is Theo Vennemann’s (1974) typological explanation for the

putative shift in Germanic from SOV to TVX/SVO. While Vennemann's account has been criticized because that shift would not have actually avoided ambiguity, the criticism does not hold for the gradual drift from pronoun object preposing to postposing outlined here, since the change in question does alleviate the ambiguity problem, as just explained.

But if the scenario we have laid out here for the demise of object pronoun preposing is correct, how is it that one finds preservation of apparent nominal case in late 19th century Dutch, as we observed at the outset (7a–c above)? Surely for increasing syntactic ambiguity to change the order of medial subjects and objects over time, as we have claimed, the noun case system must have been considerably eroded by then. In fact, we believe that nominal case was largely lost much earlier, and the apparent remnants as late as the 19th – and even into the early 20th – century were only archaic forms of the written language with little or no real existence in the speech of the time.²¹ This assertion is supported by Van der Wal (1992: 241ff., 290ff.), among others, who claims that in the 19th and even 18th centuries noun case was only preserved as an archaism of the written language under the influence of Latin grammarians. Weijnen (n.d.: 43) even claims that in the 17th century the case system was considerably eroded. Therefore, it is most likely that the nominal inflections displayed in the late 19th century were little more than a conservative archaism, perhaps as anachronistic as the verbal subjunctive form we also found there (cf. 8).

5. Conclusion

In the present study, we have provided detailed *prima facie* empirical evidence in support of Van der Horst's (1995) claim that in the last century Dutch has seen a decline in the ordering of pronominal objects before nominal subjects and were able to define quite exactly what types of examples have fallen into disuse. Moreover, it was shown that this is part of a shift which has a much longer history dating back to the Middle Ages. We then argued that this change fits into the larger typological "drift" from pragmatically determined word order to grammatically

²¹ Cf. *inter alia* Sapir (1921) for similar comments on the vestiges of case in modern English, a remnant of former times still maintained and defended by language purists.

determined word order discerned by Burridge. Finally, it was claimed that the “invisible hand” driving this shift was the desire to avoid syntactic ambiguity resulting from the loss of clear morphosyntactic distinctions between subject and object in Dutch.

One empirical strength of our historical explanation is that it also makes predictions as to what we should expect to find in related languages that have not been considered here. Where morphological cues to subject and object are better preserved, we should expect to find pronoun object preposing still maintained, while in languages where such distinctions have been largely lost, we should find a shift to pronoun object postposing. Shannon (2000, in prep.) documents the correctness of this prediction for German: since German has not lost nearly as much inflectional morphology as Dutch has, it still preserves more pragmatically determined word order. Preliminary analysis of Afrikaans (Shannon 2003a), Yiddish (2003b), and Low German (Shannon & Dewey in prep.) indicates that the predictions hold true for those languages as well. If so, then this further work will offer persuasive corroboration of our functional explanation for the decline of pronoun object preposing in Dutch, and indeed West Germanic in general.

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