Changes in infinitival constructions in English

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Changes in Infinitival Constructions in English: How to Explain?

1. Introduction

There are all kinds of linguistics and all kinds of linguists. There are synchronic linguists and diachronic ones. There are theoretical linguists, who are usually mainly synchronically interested, or perhaps it is more accurate to say they are interested in the theory of grammar, in how language is produced and interpreted in the mind of living speakers. In that sense they are synchronic. There are, however, also historical linguists who could only be called synchronic. These are scholars who work on the grammar of Old English for instance, such as Willem Koopman (1992) and Wim van der Wurff (1987), or to mention someone from a rather different school, Bruce Mitchell in his Old English Syntax. The first are synchronic theoretical (generative) linguists (at least in some of their work), while I would characterise Mitchell as a synchronic philologist. There are also typologists. Typology is a most fascinating branch of linguistics because comparing languages unearthes universal features of language and gives one insight into the structure of language. It is, however, also a hazardous branch of linguistics for diachronic linguists because they may be inclined to use these discovered trends or universalities as a means of explaining a change in one particular language (cf. the warning in Bybee 1988). Finally, there are what Fillmore (1992) has called 'armchair' linguists and 'corpus' linguists.1 To my mind, these terms really denote a different category altogether because all linguists should in fact be both (as Fillmore indeed argues). A good scientist makes use of both inductive and deductive reasoning, and he therefore needs both the armchair and the corpus, the theory and the data. Both give us ideas, but only in co-operation. Together they advance our knowledge.

The role of the diachronic linguist is to explain language change. He or she must show what factors play a role in change. His (her) work has two aspects. On the one hand, the historical linguist elucidates a particular change in question, on the other, the historical linguist serves as a kind of handmaiden to other disciplines. His work provides evidence for scholars working on the theory of grammar, for example by showing how 'deep' or superficial (or both) changes may be, and therefore how abstract or concrete rules of grammar may (have to) be. It could show how certain postulated principles of grammar have arisen, how they became conventionalised, part of the machinery of grammar (cf. again Bybee 1988 and Haiman 1993: 318).

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1 There are, of course, many other branches of linguistics, of great interest to the historical linguist, such as socio- and psycholinguistics, pragmatics etc., but I would like to leave those out of discussion here.
A good historical linguist, therefore, needs to be both a philologist and a theoretician, to mention just the two most important aspects, both a Bruce Mitchell and a David Lightfoot, who could serve as role-models here. And maybe this combination is not really possible. Can one linguist be good at both? It could almost be said that these two aspects of linguistics require two different characters, two different personalities. This may make it doubtful that they can be combined in one person. However, what we can do at least is co-operate and listen to each other rather than see the one as somehow less interesting or less valuable than the other. To come back to the two linguists I have selected as models. David Lightfoot has often been criticized for his negligence of the data (and I believe this criticism is fair). There is something overly schematic and abstract about his approach to language change. On the other hand, he has formulated a number of central problems in the logic of language change, and has done this within a well-articulated theory of grammar, always putting up his proposals in such a way that his hypothesis is falsifiable. This approach therefore helps us to advance our knowledge of how language change takes place. Bruce Mitchell, on the other hand, has a most excellent knowledge of the data. His work has been as seminal as that of Lightfoot but in an entirely different way. Mitchell, however, neglects theory, and is quite open about this. In a private letter in 1987 to a fellow linguist (I think I am allowed to quote from this because Mitchell wanted it to be public, and he has indeed gone public on this in his articles published in 1990 and 1992) he confesses:

As one not born to live in the twentieth century, I write to you in search of help from one who was. What I write is an expression of bewilderment by one who genuinely seeks enlightenment and who wants to know whether his warfare is just before he re-embarks on it. [...] [The object of my work] is to advance the study of Old English syntax. If modern linguistics has something to offer here, I do not want to spend the rest of my life believing and saying that it has nothing to offer. Which is my present position.

It is clear from his later articles (mentioned above) that he has indeed taken up arms again and that his idea that modern linguistic theory does not help is still his "present position". Although Mitchell's Old English Syntax provides a very full description of Old English syntactic structures, as a grammar it is not highly structured; it does not provide insight into how Old English syntax works, i.e. as a coherent learnable system. Koopman, for instance, shows in his review of the book (Koopman 1987) and in his own work (e.g. Koopman 1992) that many more regularities can be found in word order structures if one assumes that Old English possesses such things as a Verb second rule and that personal pronouns may act as clitics, that is, if one assumes certain rules that are extrapolations from the surface structure, not directly visible themselves. If one thinks in terms of the logic of language acquisition, one has to find such regularities, otherwise no child would have been able to learn this language. One can also look at the usefulness of theory from another perspective. The use of a hypothesis based on a particular theory of grammar may help one to discover structures (or the absence of structures) that had not been noted before, simply because one never had the need to actively look for them. Use of a theory
may create that need. Thus, quite recently (cf. Fischer forthcoming), while looking at the position of the adjective within the noun phrase in Old English and the meaning of the strong/weak distinction, I discovered through the theory I was using that a construction like *se swide eald mann*, 'the/that very old man', does not occur in Old English (there is not a single example in the Toronto corpus). This is, to say the least, very interesting, but Mitchell, as far as I can tell, has not noticed this, let alone given an explanation for it. Examples such as these show that co-operation is essential: a two-way approach is necessary for a fuller understanding of the facts.

In this light, I would like to look at infinitivals. Since I am by nature more of a philologist than a theoretician, I will look at it from primarily a data point of view, but with ideas provided by theoretical approaches guiding my search (notably the importance of word order). On the one hand, ideas arising from the theory prove fruitful, on the other I will also show how some of the more abstract schemes put forward by generative linguists may not work. I will indicate that language change may be more heavily influenced by factors that cannot be immediately accounted for by the principles or abstract rules of a synchronic generative theory of grammar: by parameter shifts, changes in constraints, in the strength of features etc. It may be that change is more local, less abstract (cf. Joseph 1992), and that also the theory of grammar has less depth than generative linguists seem to assume. Kiparsky (1968: 174) once suggested that historical linguistics may provide "a window on the form of linguistic competence." This was taken up by Lightfoot in his *Principles of Diachronic Syntax* (1979). Lightfoot has almost reversed Kiparsky's dictum: in his work, historical linguistics became subservient to the theory of grammar. It was now the theory of grammar that became the window-frame, "imposing severe constraints on possible historical changes", and consequently Lightfoot's sketch of a "theory of change" is a highly "impoverished" (1979: 49) one. Both Kiparsky and Lightfoot are of course correct, in that one throws light on the other and vice versa, but my point here is that at this stage we should not be misled by any preconceptions. The notion that a group of more or less simultaneous changes may reflect a parametric change should not mislead us into providing a limited, distorted or inaccurate account. This is the problem I would like to address in connection with the infinitivals. My position is that I think we need a serious

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2 In his 1990 article, Mitchell mentions that "modern linguists [...] are ready to do six other things which I try not to do" (284), one of which is that "they are ready to assume." It seems almost to be the case that Mitchell objects to any kind of assumption, any abstraction made concerning a dead language. I believe that it is necessary, especially in syntax, to make assumptions, to formulate abstract rules in order to understand how the system of grammar worked and how and why it has changed. Hypotheses about language may further our understanding of language, as they do in any scientific enterprise. Of course, I agree that these assumptions must be based on something; on the Old English data in the first place, but assumptions may gain strength from typological studies, comparison with Modern English and other Germanic languages, universal features of language, discovered tendencies and principles in diachronic change etc.

3 Yngve (1996) has written very interestingly on the "depth"-problem. He compares the access humans have to the grammar system in language use to the computer's short-term memory: both have only restricted space.
surface-based investigation before postulating a parametric change. I agree therefore with Harris and Campbell (1995) when they write:

[While in principle the study of syntactic change should both inform and be informed by general linguistic theory, too often rigid devotion to a particular theory of syntax has limited rather than magnified insight into diachronic processes. Our findings clearly have relevance for general theories of syntax; however, we take as our starting point the actual changes themselves, rather than the predictions and constraints of any existing theory of syntax. (2)]

... In this sense, our approach is not theory-driven, but data-driven (5).

2. The development of new infinitival constructions

The proposals offered by generative linguists such as, for instance, Lightfoot (1991) and Kageyama (1992) for an explanation of the developments taking place in infinitival constructions in English, are essentially theory-driven, as we will see below. But let us first look at what has happened in the area of infinitivals itself.

Quantitatively and qualitatively a great deal changed in infinitival constructions in the Middle and early Modern periods. Manabe (1989) has indicated, on the basis of a large collection of data, that infinitival clauses replaced finite ones at a fast rate in Middle English. Also we find that compared to modern Germanic languages like German and Dutch, the frequency of infinitival structures is much higher in English. Thus, in Old English (as in present-day German and Dutch), the usual construction after directive verbs, or verbs expressing a purpose or intention was a preter-clause:

(1) ..and bebed Þam cwellerum þæt hi hine mid wiðum, handum and fotum on þære rode gebundon (ÆCHom I, 38 594.29)
...and ordered the torturers that they him with cords, to-hands and feet on the cross bound 'and [he] ordered the torturers to fasten his hands and feet with cords to the cross'

In Middle English the to-infinitive became more and more usual after these verbs, and in some cases it even replaced the that-clause altogether so that with a number of these verbs that-clauses sound distinctly odd in Present-Day English:

(2) a *? He commanded them that they should tie him up
   b *? We warned them that they should not go skating

– whereas in German and Dutch the equivalent dass/dat-clause would be more usual here or even the only possibility.

In this same period, we do not only see an enormous increase in the number of infinitives, but the infinitival constructions also undergo many qualitative changes. Thus, the Middle English period witnesses the rise of the following new structure types:

(3) i INFINITIVALS WITH A LEXICAL SUBJECT:
   (a) for NP to V constructions
      It is ridiculous for you to imagine that he would give you that amount

4 The reference system used here is the one found in the Toronto Concordance, unless otherwise indicated. For more precise information about the editions used see Healey and Venezky (1980).
CHANGES IN INFINITIVAL CONSTRUCTIONS

(b) Accusative and infinitive (Acl) or ECM constructions

I expect you to be bright and cheerful

ii PASSIVE INFINITIVES, OTHER THAN AFTER MODALS:
(a) after adjectives and nouns
She is likely to be chosen as our next president
(b) after semi-modal 'to be'
This is to be understood as follows
(c) after causatives and perception verbs
If my son dies, let him be buried beside me
(d) after object-control verbs
He ordered the book to be printed

iii SUBJECT-RAISING CONSTRUCTIONS
Daniel seems to have full control of the matter

iv INFINITIVES AS NOMINAL RELATIVES
Tell me what to do next

There is also a clear increase of the to-infinitive at the cost of the bare or zero infinitive (i.e. an infinitive without the marker to) at this time. Most linguists have seen this as a qualitative change: they believe that the bare infinitive was replaced by the to-infinitive when, due to the loss of verbal inflections, it became difficult to distinguish the infinitival form from other verbal forms. To, thus, began to function as a mere marker of the in-

Figure 1 Ratios of to-infinitives to that-clauses in OE and eME

5 Acl constructions are new in English after the so-called verba declarandi et cogitandi. Infinitival constructions with a lexical subject do occur in Old English after causatives and perception verbs, but these are considered to have a different structure, see also below and Fischer (1989).
finitive, losing its original 'purposive' sense (cf. Mustanoja 1960: 514; 522; more recently, Jack 1991). Fischer (1995, 1996b, 1997) and Los (1998), however, suggest that this change is quantitative rather than qualitative, that the to- and the bare infinitive remained more or less distinct in function and meaning (this is my opinion at least for Middle English, that to did not become meaningless), and that the increase of the to-infinitive is the result of the form being used to replace pet- clauses. The following diagram from Los (1998, 27) shows how fast the pet-clause was replaced by the to-infinitive after directive verbs (e.g. order) and verbs expressing purpose or intention (seek, desire) in the early Middle English period (see Figure 1).

Within the generative school, the new structures given in (3iii) or (iv) are also often connected to the changes seen in (3i-ii). Lightfoot (1991: 82-94), for instance, links (iii) with (i-ii). Both are said to be due to a parameter change that to is alleged to have undergone, which involves the coalescence of to with the governing verb enabling to to transmit certain properties of government. Similarly, Kageyama (1992: 92, 125) explains the link between (iv) and (i-ii) with reference to a change in the status of to. He proposes that to in Old English was positioned in AGR, and that in Middle English to "lost the ability to absorb the external Θ-role of an infinitive verb and instead began to serve as a transmitter of the Θ-role and phi-features to the subject NP, enabling the SPEC of AGRP to function as the syntactic subject of the infinitive" (1992: 125). I do not wish to go into the technicalities of Kageyama's proposal here because I have dealt with that in detail in Fischer (1996a). Kageyama's proposal is almost totally theory-driven, based on marginal Old English examples, and to my mind the argumentation is rather circular. It is also not clear from his study what it was that caused the re-analysis of to in the first place. In Lightfoot's proposal, which is also the more interesting one, an explanation is given for the parameter shift that involves to (I will come back to this below). Here I want to emphasise what the aim and importance of such proposals are. If it can be shown that such parameter shifts in the machinery of grammar create a number of new, more or less simultaneous surface structures that do not at first sight seem related, then it constitutes strong evidence that the abstract principles and categories of grammar, which are involved in such a shift, are indeed "real". In other words, it gives flesh to the theory of grammar. It goes without saying that in order to make such large claims, it becomes of the utmost importance to check whether the actual data support and validate such claims. What I hope to show in this contribution to the debate is that, in the infinitival case, there is a variety of causes that underlie the changes, and I believe it can be shown that it is more likely that the change in the status of to is not so much the instigator of the change, as both Kageyama and Lightfoot propose, but rather that to itself became re-analysed as a result of the new developments.
In this paper, I will concentrate only on the construction illustrated under (ib) in (3), and to some extent (ia), and on the passive infinitives in (iic and d), and show how these new constructions may have arisen. First some facts about Old English. Old English did not have infinitivals with a lexical subject in the form/meaning of (ia) and (ib). Instead, it had the following structures (as still present in Present-Day English and other Germanic languages, like German and Dutch):

(4) Genoh bið munecce twa tunecan habban (Ben. Rule, Visser 1963: 951)
    Enough is for-monk two tunics have
    'It is enough for a monk to possess two habits'

(5) ic geseah hwilon ðe tæcan ðam cildum (ÆGram 150.13)
    I saw once you teach the children
    'I once saw you teach(ing) the children'

is different from so-called (Latin) Acl constructions such as:

(6) She believed the event to be of minor importance

in that the NP event has no direct syntactic or semantic relation with the finite verb. Whereas ic geseah ðe (in 5) is structurally a complete utterance with a meaning similar to the whole of (5), but with the infinitive adding extra information about the direct object, she believed the event is clearly defective in that it represents a different meaning compared to the complete utterance of (6). Thus, Ælfric in his Grammar translates the Latin Acl in (5) by an Acl in Old English, but he does not do so in (6), as (7) shows:

(7) uideo te docturum esse [INF]
    ic geseo þæt ðu wilt tæcæn (ÆGram 150.16)
    'I see that you will/are going to teach'

- because in (7) ic geseo þe would not be an equivalent utterance: the speaker cannot actually see the addressee in the activity of teaching because that activity will only take place in the future. In perception verb Acl's like (5), the infinitive conveys a concrete activity that can be directly perceived and located. The infinitive does not have a separate tense domain (the event is simultaneous with the event expressed by the matrix verb); this is expressed by the absence of to. I think it is important to realise the role of to. It expresses a semantic distinction, a shift in tense. This semantic role of to is preserved, I believe, in Middle English (cf. Fischer 1995, 1996) and therefore makes the analysis of Lightfoot and Kageyama, referred to earlier, where to plays a purely grammatical role (as we will see), difficult.

Old English also did not have (3ia). It only had a construction like (4), where the for-NP (or rather the dative) would function as a benefactive phrase. It could not function as an infinitival subject (Old English was similar in this respect to Dutch and German). I will
not devote too much attention to this construction but instead focus on the Acl. Having established that Old English did not possess the Latin type (i.e. (6)), we should now turn to the question why Old English did not have this, and why the Latin Acl did develop later in the Middle English period, as the examples in (8) show:

(8) a Which that he knew in heigh sentence habounde (Chaucer, Mo.T. 2748, Benson 1988: 251)
   'whom he knew to abound in high moral sense'

b ... the weche xx\textsuperscript{a} marke she hath delyuered to me in golde for you to haue at your comyng home, for she dare not aventure her money to be brought vp to London for feere of robbyng it is seide heere that there gooth many thefys be-twyx this and London,... (Pasfon Letters 156: 7-10; Davis 1971)
   '... which 20 marks she has delivered to me in gold for you to have at your home-coming, for she dare not venture her money to be brought up to London for fear of robbing, it is said here that many thieves go around between this place and London ...

In the literature, various causal factors have been proposed and discussed, the main ones being analogy (analogical processes of various kinds) and borrowing from Latin (for details see Fischer 1989). It seems certain that both these factors were influential, but I think it can be shown that the rigidification of word order, i.e. the increasingly stricter use of SVO (Subject Verb Object) in all clause types was more crucial. I will rely on two types of evidence to show that the rise of the Latin-type Acl in English finds its origin in the word order changes, but was strengthened by borrowing and analogy. The first type of evidence is comparative in nature, the second involves a detailed and thorough investigation of all the constructions that could be said to be near equivalents (both semantically and/or syntactically) of the Acl construction.

Let us first look at the comparative evidence. If analogy and borrowing were the forces that turned the scale for the Latin-type Acl in English, it becomes difficult to explain why the Acl did not catch on in sister languages like Dutch and German, which in structure were very similar to Old English. The influence of Latin was as important in those cultures as it was for the English. In addition, borrowing does not explain why the Acl was not already used more frequently in the Old English period, where Latin had enormous influence and prestige via Christian writings. The same reasoning would apply to analogy or analogical extension. If indeed the Acl spread by a type of lexical diffusion from verbs of physical perception to verbs of mental perception, as Zeitlin (1909) among others suggested, why did this not happen already in Old English, and why did it not also happen in Dutch and German? It looks as if, on the level of syntax at least, both analogy and borrowing need to be supported by (changes in) internal structure, to give them direction. There are two studies that consider the rise of the Latin Acl in Germanic languages other than English. Krickau (1877) looks at its occurrence in German, and Fischer (1994) looks at Dutch. Both confirm that the Acl did make some inroads in these two languages in the Renaissance period when the influence of Latin was at its peak, so to speak. But they show that the influence remained confined to works that consciously tried to imitate a Latin style, and that the Acl did not catch on outside such works and was dropped again altogether later. In English too, the frequency of Latin-type Acl's is higher in works closely modelled on Latin, as Warner (1982: 134 ff.) has clearly shown in his comparison of the Early (more literal) and the Late (more idiomatic) Version of the Wycliffite Bible.
Warner (1982) and Fischer (1994) also show that in both Middle English and Renaissance Dutch the Acl, when it was first used, was more regular in contexts where it would be less noticeable, e.g. in clauses involving topisation, wh-movement or heavy NP movement, where the 'accusative' NP (i.e. the syntactic object of the matrix verb that serves also as subject of the infinitive) was moved out of its pre-infinitival position. Some examples will illustrate what I mean:

(9) a  
Heavy NP movement
In dus een zee van zorgen, vernam zij, onder 't volk gezaaid te zijn zeker boek, getiteld ...
(Hoof Historien, a 1581; Nijhoff 1978: 311)
In thus a sea of worries, perceived she, under the people sown to be certain book, entitled ...
'Thus surrounded by worries, she learned that a certain book, entitled ... had been dispersed among the people'

b  
NP movement (passive)
Al hunne goederen werden verklaard, aan den koning, vervallen te zijn
(Hoof Historien; Nijhoff 1978: 79)
All their goods were declared to the king forfeited to be
'All their goods were declared to be the property of the king'

c  
Wh movement
T geen ghy in andren meynt bestraffelijck te wesen (van Helten 1883: 53)
Which you in others think punishable to be
'Which you consider to deserve punishment in others'

What makes a comparison with German and Dutch so interesting in this case is the fact that German and Dutch did not share the increasing fixation of one type of surface word order for all clauses; unlike English, these languages still have surface SOV in subordinate clauses. They also still have a V₂-rule in main clauses. This gives us a clue as to the importance of word order in the change under discussion. It is time therefore to look more closely at the data, at how exactly the Latin-type Acl came to be introduced into English.

Old English used the following types of infinitival complements:

(10) i  
after verbs of physical perception
(a) pa geseah heo þet cild licgan on binne (ÆChHom I 2 42.24)
then saw she the child lie in manger
'then she saw the child lying in the manger'
(b) Ic seah turftredan (Rid 14.1)
I saw grass tread
'I saw grass being trodden'

ii  
after causatives
(a) ...yfele hyrdsas ðe lætað godes scep losin ðurh gymeleaste
(ÆChHom I 17: App. 177-78)
'... evil shepherds who let God's sheep perish through negligence'
(b) he sette scole, 7 on þære he let cnihtas læran (Bede, Miller 1898: 226)
he set up school, and in it he let boys teach
'he set up a school in which he had boys taught'

iii  
after object-control verbs
(a) and his bebod tobrec þe he him bebead to healdenne (ÆChHom 11 103)
and his command broke which he them commanded to hold
'and broke the command which he had ordered them to observe'

(b) Moyses forbade swyn to etenne (ELS (Maccabees) 85)
Moses forbade pigs to eat
'Moses forbade pigs to be eaten/the eating of pigs'

iv after ECM verbs
no infinitival complements are found here except in direct translation from Latin
... forpon ic wat me to beonne unscadwis on swa deowurðra spræca
(LS 29 [Nicholas] 7)
... because I know me to be unskilful in such worthy languages
'... because I know that I am not skilful in such worthy languages'

Next to infinitival complements, we also find finite complements, usually a ëœet-clause. ëœet-clauses are very frequent after (i), perception verbs. They are highly infrequent, almost non-existent after the core causatives lǣtan and don, but occur regularly after hathan, which is a verb that belongs in its syntactic behaviour both in (ii) and (iii) (cf. Fischer 1989). After object-control verbs, the ëœet-clause is in fact far more regular than the infinitival complement. Infinitives, as noted at the beginning, only become frequent here in Middle English. A finite complement is the only possibility in native Old English after verbs of group (iv). Other differences between these four groups of verbs may also be noted. Groups (i) and (ii) always take a bare infinitive, while (iii) always has a to-infinitive, and the Latin-influenced Acl examples show both bare and to (for more examples see Fischer 1989). Groups (i), (ii) and (iv) govern a direct object in the accusative, which may be animate as well as inanimate; group (iii) has both a direct (usually animate) and an indirect object (always animate), the former has accusative case, the latter is usually in the dative, but the accusative occurs too with some verbs (usually verbs that are semantically close to causatives).

What is remarkable about the infinitival constructions that we find in Old English is that they are of two kinds, indicated in (10) by (a) and (b). The (a) examples all have an NP object that functions at the same time as the subject of the infinitive. We will refer to this type as the 'subject infinitival'. In the (b) examples, the object of the matrix verb (which is at the same time the subject of the infinitive) is left unexpressed. The object NP that is present, functions instead as object of the infinitive. The difference is shown in the following structural descriptions:

(11) (a) NPs V_{finite} NPOi [PRO1 V_{infinitive}]
(b) NPs V_{finite} [PROarb NPO V_{infinitive}]

The infinitive in (b) has an implicit subject with generic interpretation (in generative literature often termed 'arbitrary PRO'. Note that the object in (b) regularly precedes the infinitive as one would expect in non-main clauses in Old English (we will later call this type of construction an 'object-infinitival').

We will now consider in detail a corpus of Middle English texts in order to see what changes occur with respect to these four groups of verbs. The corpus investigated consists of circa 850,000 words and contains a selection of early and late Middle English texts, poetry as well as prose: the Caligula Ms. of Laȝamon's Brut (verse; 75,500 words) from the second half of the thirteenth century, John Gower's Confessio Amantis from the late fourteenth century (verse; 207,300 words), the Paston Letters from the last three quarters of the fifteenth century (prose; 235,300 words) and Malory's Morte Darthur from the
third quarter of the fifteenth century (prose; 336,700 words). When we consider the three groups of verbs that take infinitival constructions in Old English (10i-iii), we note the following changes in Middle English. See Table 1:

<table>
<thead>
<tr>
<th>Verb Group</th>
<th>Subject infinitival</th>
<th>Object infinitival</th>
<th>How/that-clause</th>
<th>Passive infinitive</th>
</tr>
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<tbody>
<tr>
<td>Lay. Brut</td>
<td>11</td>
<td>2</td>
<td>31</td>
<td>-</td>
</tr>
<tr>
<td>Conf. Amantis</td>
<td>107</td>
<td>3</td>
<td>105</td>
<td>5</td>
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<tr>
<td>Paston Letters</td>
<td>8</td>
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<td>2</td>
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<tr>
<td>Morte Darthur</td>
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<td>-</td>
<td>207</td>
<td>4</td>
</tr>
<tr>
<td>Causative verbs</td>
<td>Lay. Brut</td>
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<td>1</td>
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<td></td>
<td>Conf. Amantis</td>
<td>228</td>
<td>13</td>
<td>7 + ??</td>
</tr>
<tr>
<td></td>
<td>Paston Letters</td>
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<td>9</td>
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<tr>
<td></td>
<td>Morte Darthur</td>
<td>261</td>
<td>-</td>
<td>6 + 1?</td>
</tr>
<tr>
<td>Causative let</td>
<td>Lay. Brut</td>
<td>48</td>
<td>23</td>
<td>-</td>
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<td>Obj. control verbs</td>
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Table 1: complement types occurring after perception verbs, causatives and object-control verbs in four Middle English texts

The 'subject-infinitivals' (the (a) examples in (10)) occur with all three groups of verbs and throughout the whole period. With some verbs one can note an increase in infinitivals, which, as I indicated above, was a general phenomenon in the Middle English period. The 'object-infinitivals' are generally of less frequent occurrence than the 'subject' ones (except after the verbs let and hear), but we can notice an overall, steady decrease in their use in Middle English. While the object-infinitival decreases, we can see that this is accompanied by an increase in passive infinitives, a type that we have not discussed yet. Before we can continue this investigation, we must therefore consider the use of the passive infinitive in both Old and Middle English.

Although the passive infinitive is found in Old English, it is found almost exclusively after modal verbs in constructions of the type:

(12) and he ne mot na beon eft gefiillod ('ELS (AshWed) 141)
    'and he may never be baptised later'

In all other cases (after perception verbs, causatives etc.) an active infinitive is employed as in:

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7 This is based on the investigation carried out in Fischer (1992). I will only be able to give summaries of the main points established there. For more details concerning the data and the choice of texts, the reader is referred to the article itself.
he het hine mid straelum of scotican (Mart 5 (Herzfeld-Binz) 211)

he ordered him with arrows off-shoot

'he ordered him to be shot to death with arrows'

The form of the infinitive depends heavily on the position of the NP that has an object relation with the infinitive, as in the case of *hine* in (13). (Note that in (12) there is no object NP and that this is the reason that a passive infinitive must be used; (12) with an active infinitive, *He may never baptise later*, would convey a completely different meaning.) The cause of the change from Old English active to Modern English passive infinitive (see (13)) must again be looked for in the word order changes, the overall change to SVO, which caused a change in the position of the object NP from preverbal to postverbal. From Middle English onwards, as the SVO order became fixed in every clause type, a NP V sequence became automatically interpreted as Subject Verb; it could no longer be Object Verb, as was possible in Old English. This, as it were, forced the use of a passive infinitive in these clauses. I will now return to our earlier concern, the Acl construction.

What is clear is that the so-called object-infinitivals must have become increasingly opaque to learners who were increasingly confronted in the surrounding data with SVO surface structures. This is corroborated by the data emerging from the corpus, which was investigated with a view to discovering the spread of the Acl in English. Table 1 shows that object-infinitivals decreased fast – in the corpus sixty-two examples are found, and they are mainly from the early texts – in contrast to subject-infinitivals, which are and remain highly frequent (2056 examples were found). The investigation of the data also shows that there were various ways of avoiding the 'awkward' object-infinitival.

Possible replacements for 'object-infinitivals':

(i) *Use of that-clause*

Instead of an infinitival construction, a *that*-clause could be used. This was a possible option with all verbs except with some of the causatives, notably *let*. There are, however, some problems with this option. First of all, *let* was one of the most frequent verbs in the object-infinitival. Secondly, if the *that*-clause contained an active verb, the agent of the activity would have to be made explicit with some verbs (see iii below). Thirdly, *that*-clauses and infinitives are not always semantically equivalent (cf. van der Leek 1992). Fourthly, there was a general trend in English towards more infinitival constructions.

(ii) *Use of infinitive-NP-object order*

In order to make clear that the NP object in question was an object of the infinitive and not of the matrix verb, a speaker used to SVO structures might place this object after the infinitive. This indeed occurs most frequently with *let* (for more detailed information on this, see Fischer 1992) and much less with the other verbs. Some examples are:

(14) a  He lette blauwen bemen; and nam al þa burhwes ...

(Lay. Brut (Clg) 2227, Brook & Lesley 1963)

He let blow trumpets, and took all the strongholds ...

'The cause the trumpets to be blown and took all the strongholds ...'

b  the two kynges lette departe the seven hondred knyghtes

(Malory 23,9, Vinaver 1967)

'the two kings let split up the seven hundred knights'
The relative scarcity of such constructions is presumably situated in the fact that such a move would result in an infinitival complement introduced by PRO_arp, which is a construction that is losing ground in the history of English (cf. Fischer 1991: 165-171) not least because of the loss of these very same object infinitivals (which also have PRO_arp). Indeed, the new structure $V_{\text{fin}} V_{\text{inf}} (\text{NP})$ resembles that of auxiliary verbs followed by infinitives, which are all cases of subject control. Since auxiliaries were also becoming much more common in the Middle English period, this may have helped to oust the PRO_arp construction, which was similar on the surface. It is therefore perhaps not surprising that this 'solution' is most frequently encountered with the verb *let*, which of all the verbs considered in the corpus comes closest to an auxiliary (for more information on the 'auxiliarisation' of *let*, see Fischer 1992: 39-41).

(iii) **Use of lexical subject instead of PRO_arp**

Another way to avoid the object-infinitival was by putting in an extra pre-infinitival subject NP. It is of course impossible to tell how often the insertion of an agent was done on purpose, but an interesting example is found in the *Brut*, where the object-infinitival found in the more archaic Caligula Ms. is replaced by an infinitival with subject added in the more modern Otho Ms.:

(15) a  And hæhte heo wite wel faste (Clg. 4801, Brook & Lesley 1963)
   And commanded her guard well firmly

b  and hehte 3am hine witie faste (Otho 4801)
   and commanded them him to guard firmly

'And commanded it [=the castle] to be guarded securely'

This, however, cannot always have been a suitable option, because it forces one to make the agent explicit, which can be awkward when the agent plays no further role in the discourse, as is, for instance, the case in (16):

(16) He [Sir Cadore] alyght of his horse and toke hym in his armys and there com-
    maunded knyghtes to kepe well the corse. (Malory 215, 6-7, Vinaver 1967)

'He dismounted from his horse and took him in his arms and commanded knights to guard his corpse well there.'

The possibility of leaving out the agent may have been indeed one of the reasons why the object-infinitival was used in the first place.

(iv) **Infinitive reinterpreted as intransitive**

The next option was a lexical one, and was restricted to only a small number of verbs that could be reinterpreted as intransitives, so that the pre-infinitival object became reinterpreted as a subject. An example of this is (14a). In Old English *blawan* was only intransitive if the subject was animate. This changes in Middle English, a development which may well have been helped along by the frequent occurrence of original object-infinitivals such as *He heard the horns blow*. Another example comes from Gower's *Confessio Amantis*:

(17) And now to loke on every side,/ A man may se the world divide, The werres ben so general ... (Gower CA Prol. 895-97, Macauley 1900-1)
'And now a man only has to look around him and he will see the world divide/be divided, wars being so general...'

According to the *OED* the intransitive (reflexive) meaning of *divide* only became available from 1526 onwards, so this may either be an example, still, of the old object-infinitival or a very early instance of the intransitive use of this verb. In the glossary of the editor *divide* is listed as intransitive in this line.

(v) *Use of passive infinitive*

The last option was the use of a passive infinitive. This had some advantages over the others in that the possibility was not restricted to a small number of verbs, as in (iv); an agent subject did not need to be added, as in (iii); it avoided the Vfin Vinf order of (ii) because the original object, now a subject, intervened between the two verbal forms; and finally it could be used with all verbs and was semantically closer to the active infinitive than the *that*-clause, cf. (i). Stylistically, it may have been somewhat more formal, but it has to be noted that the passive infinitive occurs in all the texts of the corpus. Some examples:

(18) a fa lette he his enihtes; daeies & nihtes. æuere beon iweepned

(1) Use of passive infinitive

Table 1 shows that indeed the use of the passive infinitive (in the last column) rises steeply in this period, whereas after these verbs they were extremely uncommon if not non-existent in native Old English (see above). In the earliest text, Laȝamon's *Brut*, only two instances were found, in late Middle English rising to fifteen (*Confessio Amantis*), seventy-five (*Paston Letters*) and fifty-four (Malory). It is also clear that the passive infinitives (a total of 146) have become more frequent than the object-infinitivals (only sixty in this period). The use of the passive in these constructions was in turn of course aided by the fact that the passive had also begun to be used in other positions, from the twelfth century onwards, i.e. after nouns, adjectives, and the semi-modal *to be to* (cf. (3iib) above, and Fischer 1991). Although the Middle English data strongly suggest that the development of the passive infinitive in these verbal complements was necessitated by the changes in word order, I do not wish to suggest that this fixation of word order is also sufficient reason for this development to take place. The Scandinavian situation makes this quite clear. Scandinavian languages show surface SVO both in main and subordinate clauses, but they still allow the so-called passival infinitives, i.e. of the type represented by the Old English examples given in (10b). As always, other causal factors must have played a role too, such as the general spread of the passive infinitive appearing in other positions which coincides with this new development. What may be of importance too is the rigidity of SVO order in English. In this respect it differs from Scandinavian languages.
where the V₂ rule still operates in main clauses. It is quite clear that a more detailed study of Scandinavian is necessary in order to understand why the passive infinitive was not replaced there.

So far, we have considered what happened to two types of infinitival constructions, i.e. the ones occurring after perception verbs and those after causatives, i.e. types (i) and (ii) mentioned in (10) above. Old English had yet another infinitival type, i.e. object control constructions (10(iii) above). What happened with these in the Middle English period? We have seen that object control verbs normally have an animate indirect object, while the infinitive functions, so to speak, as its direct object. In this respect it is different from the causative and perception verb complements which could be said to have just one object: i.e. the accusative NP and the infinitive together form the object. Since with object control verbs the animate indirect object also functions as the subject of the infinitive, no opacity problem presented itself to the language learner when SVO surface order became generalised. Whereas before, the indirect object could also precede the matrix verb, it would now always follow it, but that would make no difference to the interpretation of infinitival PRO. In both cases, the infinitive was provided with a subject. However, I already noted in connection with the examples of (10) that there were a number of verbs that were ambiguous with regard to type (ii), the causatives and type (iii) the object control verbs. In Old English, such a verb was *hatan*, which could mean 'to command, to order', as well as be more purely a causative verb, used in the sense of 'let'. For object control verbs with the meaning of 'order' to develop into causatives is not unusual. We see it in other languages too, e.g. classical Latin *iubere* became a pure causative in later times. With a causative the emphasis is on the completion of an order, it has a perfective or resultative aspect, whereas with an object control verb the emphasis is on the process of ordering itself, and it is the person who is ordered to do something that stands central. It is not surprising therefore that these categories are not clear-cut, and indeed that 'order' verbs may begin to occur in causative constructions with the emphasis on the activity rather than the person ordered. Thus, we find in Old English *hatan* and *biddan* constructions both with and without the 'orderee', and similarly in Middle English we find object control verbs like *command* also without an indirect object:

(19) ... therefore the lorde commaunded to sle hym, and for thys cause ys he slayne
(Malory 811, 20-21, Vinaver 1967)
'*... therefore the lord commanded to kill him, and for this reason he is killed'

Since we find constructions like (19), it must also not come as a surprise to begin to find the passive infinitive after object control verbs that have a causative element in them. Table 1 shows that here, too, the passive infinitive began to make inroads in Middle English.

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8 For the relation between causativity and perfective aspect see also Royster (1918) and Denison (1985).

9 An additional reason why the structures of 'order' verbs may have come to be confused with those of causatives is the loss of cases in the Middle English period. 'Order' verbs took a dative in Old English for the animate NP argument, whereas with causatives the animate NP would appear in the accusative. In Middle English this distinction would be lost. It is for this reason that e.g. Visser (1963-73) treats all these constructions together as if they were the same.
English. I have found nineteen such instances in the corpus, and all with causative types of control verbs (see the last row, last column of table 1):

(20) a And when he had used it he did off his crown and commanded the crown to be set on the altar  
(Malory 908, 11-12, Vinaver 1967)  
'And when he had used it he did off his crown and commanded the crown to be set on the altar'

b And as for all other errands that ye haue commandid for to be do, pey shall be do als sone as pei may be do  
(Past.Lett. 148, 17-18, Davis 1971)  
'And as for all the other errands that you have given orders to be done, they shall be done as soon as they can be done'

The appearance of passive infinitives after an object control verb is syntactically much more remarkable than their appearance after causatives and perception verbs, because after object control verbs, it involves a new construction. The structure of an active sentence is different from the structure of a passive one:

(21) i He commanded him to set the crown on the altar  
NPs Vfo, NPi [PROi to infinitive]

ii He commanded the crown to be set on the altar  
NPs Vfin [NP to infinitive]

In fact, the structure of (21ii) resembles the (Latin-type) Acl construction in that now the NP has become part of the clausal complement (in (21i), it was part of the matrix clause). But something else has happened too. This Acl is also clearly different from the Acl used after causatives and perception verbs. There is no bare infinitive but a to-infinitive, and the tense domains of infinitive and matrix verb are also no longer clearly simultaneous. This type, therefore, looks very much like the Latin type of Acl (the one after 'believe'-type verbs), which did not yet occur in Old English (as I remarked above in 10). How can we explain this development? It seems to me that the cause must be analogical extension (via lexical diffusion), the passive infinitive spreading from causatives to (causative) object control verbs.

At more or less the same time (second half of the fourteenth century) that we see the passive Acl's occurring after object control verbs, we witness the appearance of Latin-type Acl constructions after the so-called verba cogitandi et declarandi (verbs expressing a claim, expectation, belief etc). Borrowing from Latin indeed plays a large role in the introduction of these constructions, as Warner's (1982: 134-157) comparison of two versions of the Wycliffite Bible (the so-called Early Version being a very literal translation, the Late Version being much more free) has shown. Warner, in the same chapter (134), also notes that the Latin Acl was "at first adopted principally where surface (NP to VP) is avoided, or where it contains TO be and is potentially an extension of the previously available sequence NP PRED [as in I consider him beautiful > I consider him to be beautiful], so that the change appears first where 'least salient', or where only a "minimal alteration of previous structures is concerned." I would like to note that the use of to be as the infinitive in the Acl is indeed remarkable, but not only as an extension of a NP PRED. In the investigation of the corpus of Acl examples after verbs like believe, I found that it is again the passive infinitive that plays an important role. One fifth of the Latin-type Acl's found in the corpus (thirty in all) involve passive infinitives. When we discount the ambiguous Acl's (ambiguous because they may also be non-introduced that-clauses, see
Fischer 1992: 59-61), they even make up almost one third of the Acl’s. This must be more than just an accident, as the following examples will show:

(22) a ... the weche xx marke she hath deluyuerd to me in golde for you to haue at your comyng home, for she dare not aventure her money to be brought vp to London for feere of robbying it is seide heere that there goothe many thefys be-twyyx this and London, ... (Past.Lett. 156,7-10, Davis 1971)

'... the which 20 marks she has delivered to me in gold for you to have at your home-coming, for she dare not venture her money to be brought up to London for fear of robbing, it is said here that there go-about many thieves between this and London'

b ... and in lyke wyse may ye do, and ye lyst, and take the quene knyghtly away with you, if so be that the kynge wol wante her to be brente

(Malory 1173:3-6, Vinaver 1967)

'... and in like wise may you do, if you please, and take the queen knight-like away with you, if so be that the king will judge her to be burnt'

It is also interesting to note that quite a few of these matrix ‘believe’-verbs carry a causative connotation just like the object control verbs that acquired a passive infinitive, thus both jounge and aventure could be replaced by let or allow. So it looks, once again, that the Acl has spread here through analogical extension. I believe indeed that in the case of the Latin-type Acl various factors have been at work: the internal ones of word order and analogical extension, strengthened by the external one of borrowing, and no doubt prestige.

It is now time to consider again the generative explanations that have been given for these same developments. Lightfoot (1991) ascribes the new lexical subject constructions to a change taking place in the grammar in the status of to, involving the coalescence of to with the governing verb, in which to enables the governing verb to transmit its head-government and case properties (89; 91). As I see it, there are a number of problems with this proposal. First of all, the notion of coalescence itself is somewhat abstract, and in the more customary sense of coalescence somewhat unusual because the elements that coalesce (to and the governing verb) are not adjacent (the object NP intervenes), nor do they have a semantic relation with one another. Cases of coalescence in the literature are either motivated by adjacency or by a semantic relation between the two elements that become coalesced. If coalescence were to occur in this case, one would expect it to have involved to and the infinitive, which are adjacent and form a semantic unity. However,

10 The change in the status of to is important because it opens up the possibility of explaining a number of new infinitival constructions in Middle English together (so in Lightfoot’s case also the structure given in (3iii) and some others) as the result of one and the same parameter shift.

11 Cases of coalescence in the literature are for instance the rebracketing of want + to-infinitive and (to be) going + to-infinitive into want to + infinitive and going to + infinitive; that coalescence has occurred becomes evident from the later, alternative forms wanna and gonna. This coalescence was motivated by the fact that these verbs and the to-infinitives were adjacent, but also because ‘purposive’ to was semantically compatible with the future intention implied in verbs like want and go (cf. Hopper and Traugott 1993: 82-93). Another well-known example of coalescence is the re-analysis of verbs + particles into phrasal verbs, which was possible in English (not in Dutch) because the particle became fixed in position,
in Lightfoot's scenario, the coalescence of to with the governing verb is necessary so that to can be said to transmit case in constructions like (21ii). A more serious problem, however, is the way Lightfoot relates the word order change to the change in to. He first discusses how a construction like (10i b), Ic seah turf tredan, becomes, I saw turf being trod. This is triggered both by the data (the word order change that plays a role in my explanation too), and by the theory, in that in Lightfoot's account the use of the passive infinitive will automatically follow because the child has no access to anything beyond the embedded subject position (according to Lightfoot's (1991) degree-0-learnability hypothesis). Next, it is mentioned that the object control verbs (of the type given in (10iii)) are subject to the same re-analysis. This is also my argument here. I have shown that the object control verbs follow the causative verbs in taking a passive infinitive through analogical extension, the causative control verbs being affected first. Lightfoot's (94) own (made-up) example of such a control structure is,

(23) I order s[COMP s[PRO vp[grass cut]]]
which becomes through re-analysis,
(24) I order s[COMP s[grass, to [be cut e]]].

In Lightfoot, however, it is not analogy that makes the new passive construction possible after control verbs. Lightfoot (1991: 94) writes, "[s]ince order is not a causative or perceptual verb which may take a headless complement, case could be assigned to grass only indirectly; therefore, the coalescence option was invoked and the to marker became necessary." He suggests, in other words, that to came to be actively selected, in order to transmit government. The fact is, however, that when to is found in passive infinitive constructions like (20a) and the above example with order (24), this to was already there in the corresponding Old English active construction. The data in the corpus show very clearly that active bare infinitives acquire passive bare infinitives in Middle English, and active to-infinitives acquire passive to-infinitives. So one cannot really maintain that to is selected, only perhaps that to came to be re-analysed as a result of the use of passive infinitives after object control verbs. In other words, the parameter shift involving to cannot be the cause of the change. As I see it, it was the use of the passive infinitive, which in itself was caused by the word order changes, which caused further changes. In Lightfoot's degree-0-learnability theory, the passive infinitive itself cannot play a causal role because the child has no access to this embedded infinitive. Therefore he sees the use of the passive form of the infinitive as "an effect and not a cause of anything" (1991: 94), whereas in my view, it is the use of the passive infinitive itself that causes the NP in constructions like (20a) to be re-analysed or abducted as part of the embedded clause: from an NP governed and Θ-marked by the matrix verb, it becomes the lexical subject of the infinitive.

A second problematic factor in Lightfoot's analysis is the replacement of the bare infinitive by a to-infinitive. Lightfoot himself writes that his 'coalescence'-analysis of to "is likely to involve understanding the conditions under which the to form of the infinitive came to take over from the plain form of the infinitive without the to marker", adding that this is "a difficult matter and has never been properly understood, despite being subjected

and adjacent to the verb in Middle English.
to much energetic attention by generations of anglicists" (1991: 90). As I stated at the beginning it was indeed the traditional belief that the increase of the to-infinitive in the Middle English period was due to the fact that the marker to was added to the bare infinitive in order to characterise it clearly as an infinitive (the bare form having become opaque due to the general loss of inflections). However, evidence has been building up in the past few years, that the to- and the bare infinitive remained semantically and syntactically distinct (cf. Fischer 1995, 1996b, 1997), and that the sharp increase in the use of the to-infinitive must be linked with the decrease in the use of that-clauses rather than a decrease in bare infinitives (cf. Los 1998).

Some concluding remarks. I have oversimplified the development somewhat here because it is clear that there must have been further contributory factors such as the ambiguity arising through the fact that the bare infinitive cannot always be distinguished from finite forms, connected with the fact that the complementiser that could be left out (I have discussed these factors in earlier work, Fischer 1989, 1992; and see also the factor mentioned in note 9), but the point that I would want to make here is that the changes taking place in the area of infinitivals seem to have been steered by a word order change that is quite visible on the surface, and by the forces of analogical extension and borrowing, which again are surface factors. The evidence for a parameter shift as envisaged by Lightfoot and Kageyama is not really very strong. This may mean of course that also the way change takes place in general may be more superficial. This may say something about the structure of our grammars too, but quite clearly more detailed research of just such cases as this one is necessary to get a clearer picture and to advance our knowledge in this field.

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