On Multiple Constructions and Multiple Factors in Language Change

The origin of auxiliary *do*

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Contents

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List of Figures

List of Tables

9

List of Abbreviations

ADVP	adverbial phrase
AMB	ambiguous
AUX	auxiliary
CAUS	causative
IMP	imperative
IND	indicative
INF	infinitive
LOW	lower
MAT	matrix
MDL	modal
NP	noun phrase
OBJ	object
PP	prepositional phrase
PPF	perfect participle
PRS	present
PST	past
RSMP	resumptive
SBJ	subject
SEM	semantics
SUBJ	subjunctive
SYN	syntax
V	verb
VP	verb phrase

Abstract

This dissertation focuses on the emergence of auxiliary *do* in Middle English (1150-1500). The development of auxiliary *do* has been the topic of a large body of studies, but no agreement is found among scholars on the circumstances that led to its rise. The present work combines a qualitative analysis of Old English data with a quantitative investigation of early Middle English poems, and offers a novel account that rests on the principles of Cognitive Linguistics.

The development of auxiliary *do* differs from other instances of grammaticalisation in that it lacks the characteristics that are typically associated with grammaticalisation processes. The findings of my investigation indicate that auxiliary *do* is the product of the interaction of multiple construction sources with a series of system-internal and system-internal factors. The analysis of the Old English data suggests that some of the different uses of *(ge)don* (the Old English ancestor of *do*) anticipate several of the features displayed by auxiliary *do* in Middle English. I argue that the emergence of auxiliary *do* was influenced by causative *do* on the syntactic level, while pro-verb *do* contributed to its semantic development. The emergence of the auxiliary construction was supported by a number of synchronic factors that characterised the English language in early Middle English, as for instance the changes within the causative verb system and the presence of V - INF constructions in which V had auxiliary-like features. Furthermore, the quantitative investigation of the factors that underlie the use of auxiliary *do* in early Middle English poems shows that poetry played a role in the establishment and in the spread of the construction. The diachronic account proposed in this study challenges the assumption that auxiliary *do* developed from a single construction source and provides further evidence on the importance of multiplicity in accounting for certain cases of change.

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Dedication

Per mamma, papà e Francesca

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Chapter 1

Introduction

1.1 Why auxiliary *do* again?

This thesis investigates the series of changes that led to the development of auxiliary *do* in Middle English (1150-1500).[1] In Present-day English, auxiliary *do* shares with the other auxiliaries the so-called NICE properties: negation, inversion, code and emphasis (for a summary see Huddleston and Pullum 2002: 92-112). The situation in Middle English, however, was different. When auxiliary *do* first appeared, a fully-fledged auxiliary verb class did not exist and lexical verbs possessed some of the properties now associated exclusively with auxiliaries. For instance, lexical verbs could be directly negated by inserting the particle *ne* 'not' and could invert with the subject in questions. The auxiliary category as we know it today developed only during the Modern English period, when a series of changes in the English language caused the modal verbs and the primary auxiliaries *be*, *have* and *do* to acquire the NICE properties (see Warner 1993).

The construction under investigation, therefore, presents some differences with the modern notion of auxiliary *do*. In the present study, with auxiliary *do* I refer to a finite form of *do* found in combination with an infinitive verb that appeared at the beginning of the Middle English period in non-emphatic declarative sentences. In this construction, of which an example is provided in (1), *do* has no semantic content and the construction can be considered equivalent

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[1]Other terms frequently used in the literature are periphrastic *do*, *do*-support or dummy *do*. For reasons of consistency, I will only use the term auxiliary *do*.

to one in which there is a finite verb, as illustrated in (2).[2]

(1)   The kyng onon   **dude crye**   / that non   mysdone
          The king immediately do.PST shout.INF / that nobody transgressed
          hem ne sholde
          they not should
          'The king immediately shouted that nobody of them should transgress'

          (Alisaunder: 221.5335.3159)

(2)   And Sir Andrew aȝein **criede** oppon Sir Thomas company
          And Sir Andrew again call.PST upon Sir Thomas company
          'And again Sir Andrew called upon Sir Thomas' company' (CMBRUT3:
          219.3938)

Starting from the beginning of the 19th century, auxiliary *do* has sparked a considerable amount of interest among scholars. Every aspect of its development has been investigated, from the first appearance at the beginning of the Middle English period to the spread in negative sentences and questions in Modern English, with the acquisition of the NICE properties. Among these contributions, a fundamental work that laid the foundations for later studies on auxiliary *do* is the one of Ellegård (1953). On the basis of a data set of unprecedented size, Ellegård attempted to reconstruct the history of the construction focusing on two key issues, namely the origin of auxiliary *do* and its regulation across different sentence types in Modern English. In the diachronic account he put forward, Ellegård hypothesised that auxiliary *do* developed from *do* used as a causative verb in early Middle English. In particular, Ellegård identified the construction formed by causative *do* with an implicit agent NP, exemplified in (3), as the source of auxiliary *do* (see section 3.2.2.2).

(3)   And wulleth that if the seid Thomas paie or do   paie   to the seid
          And wills   that if the said Thomas pay or do.PRS pay.INF to the said
          Margaret yerly xviij li.   as is aboveseid,
          Margaret yearly 18   pounds as is said-above,
          'And wills that if the said Thomas pays or makes [someone] pay 18 pounds yearly to the said Margaret as is said above,' (Paston Letters: 229.39, from

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[2]Throughout this dissertation, auxiliary *do* is rendered in the idiomatic translation with the finite form of the verb (see *dude crye-shouted* in example (1)) and not with the periphrastic form *did shout*. In this way the Middle English construction will not be confused with the emphatic use of the modern auxiliary *do*.

Denison 1993: 258)

The processes of regulation and spread of auxiliary *do* are well-known. While it became mandatory in questions, imperative and negative sentences by the beginning of the 18th century, the use of auxiliary *do* never accounted for more than 10% of all affirmative declaratives and the construction gradually fell out of use between the 17th century and the 18th century, as shown by Ellegård's (1953) graph, reproduced here in figure 1.1.
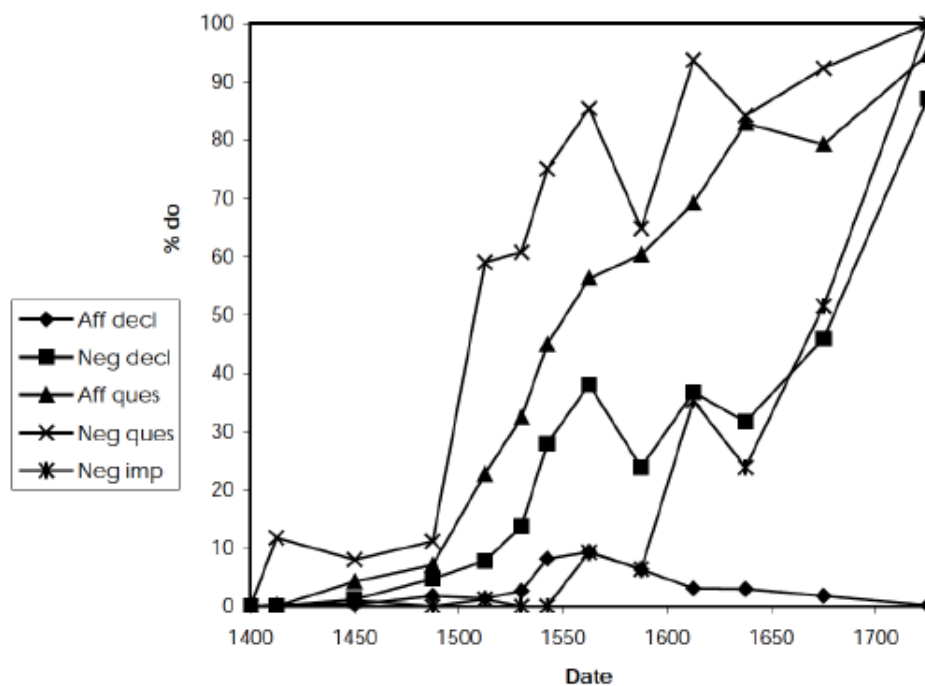
Figure 1.1: Relative frequency of auxiliary *do* by sentence type between 1400-1750 (from Ellegård 1953: 162).

The interest around auxiliary *do* is certainly due to its exceptionality; besides some German dialects where *tun* 'do' is used in declarative sentences (Erb 2001), the presence of a semantically empty form of the verb 'do' is unparalleled among the other Germanic languages.[3] In addition, English is one of the best documented languages, with a rich literary tradition that began in the 9th century and that has allowed scholars to investigate the development of auxiliary *do* in great detail.

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[3]Cross-linguistically, the presence of an empty form of the verb 'do' has been observed in other languages (see van der Auwera 1999; Jäger 2006).

Why, then, should one still be concerned about auxiliary *do*? Upon closer look, it appears that there are some issues that have not been solved yet. Let us consider how auxiliary *do* originated. Since the publication of Ellegård's seminal study in 1953, the prevalent hypothesis has been that auxiliary *do* developed from the use of *do* as a causative verb in early Middle English, as mentioned above. However, how causative *do* lost its causative meaning and developed into a verb which has no semantic content and has only grammatical functions is still rather obscure. The development whereby a lexical item comes to serve grammatical functions is known as 'grammaticalisation' (Hopper and Traugott 2003). It has been shown in several studies that items that undergo grammaticalisation generally lose their semantic content in a gradual fashion as a consequence of other processes, such as context expansion and increase in productivity (see chapter 2). However, in the account proposed by Ellegård the emergence of auxiliary *do* is not preceded by a period in which such processes are at work. It appears, on the other hand, that the loss of semantic content of causative *do* is rather unexpected, as also argued by Hopper and Traugott (2003: 95). In other words, the causative verb > auxiliary verb development put forward by Ellegård lacks the hallmarks characteristic of several grammaticalisation processes and, crucially, it is not sufficient to account for the generalisation of meaning that causative *do* went through. Other accounts that have revised the causative hypothesis, or have proposed other construction sources have been put forward over the years, but no agreement is found among scholars on what construction is the actual source of auxiliary *do* (see chapter 3).

Another issue that characterises several accounts regards the role of poetry in the development of auxiliary *do*. It is an interesting fact that the first attestations of auxiliary *do* occur in poetical compositions, while it appeared in prose texts only two centuries later. It is true that the appearance of auxiliary *do* in poems corresponds with a substantial gap in the transmission of prose texts between the end of the 13th and the beginning of the 14th century. However, auxiliary *do* is not attested in early Middle English prose texts of the first half of the 13th nor is it in those of the early 14th century. The auxiliary construction began to appear sporadically towards the end of the 14th century, but it is only at the beginning of the following century that auxiliary *do* came to be frequently used in

prose. Thus, the question arises as to why auxiliary *do* was extensively employed in poetry but not in prose. This topic has been addressed in some studies and the position taken by Ellegård (1953) has become widely accepted. However, what is the exact role played by poetry in the development of auxiliary *do* in Ellegård's account is not very clear. Initially, Ellegård stated that the origins of auxiliary *do* lie in poetry, arguing that it was 'a peculiarity of the poetic diction, belonging to the paraphernalia of the verse-maker's craft' (1953: 146). Then, he adopted a different stance by claiming that '[i]t is not necessary to assume that the periphrasis was in fact a product of the language of poetry', adding that the frequent use of auxiliary *do* had 'the purpose of making the rhyme easier' (1953: 208). Since then, the use of *do* in poetry has not been investigated any further, and it has become widely accepted that auxiliary *do* was used as a device to facilitate the rhyme at the end of the verse. While this may well be the case, it may not tell the full story; was auxiliary *do* really used to facilitate rhyme, or were there other factors involved? Why did poets adopt *do* when another, apparently empty auxiliary like *gan*, which originally meant 'begin' but then lost most of its semantic content (see section 5.7.3), was already used as a metrical device? Did poetry play any role in the development of auxiliary *do?* The fact that these questions are still unanswered is the reason why taking another look at auxiliary *do* is in order and may help to shed new light on the mechanisms and factors that led to its emergence.

1.2   Research questions

The aim of this thesis is to provide a plausible explanation for the development of auxiliary *do* in early Middle English. There are three research questions related to the issues discussed in the previous section which, if answered, may help us to comprehend how auxiliary *do* developed. The first research question deals with the role played by causative *(ge)don* in the emergence of auxiliary *do*. The syntactic resemblance that some causative *do* patterns (see example (3)) bear with the later auxiliary use led several scholars to consider causative *do* as the possible source for auxiliary *do*. However, if causative *do* is the only source of auxiliary *do*, it is not clear how the former lost its causative meaning and developed into a semantically

empty verb. In order to investigate the role of causative *do*, the approach chosen in this dissertation is the following. Firstly, I will critically evaluate the results of accounts put forward in the literature. This implies that I will not focus on the causative hypothesis only, but I will discuss all the explanations proposed so far, which, for convenience, have been divided in five categories: causative hypothesis, anticipative hypothesis, Celtic hypothesis, spoken language hypothesis and aspectual marker hypothesis. Secondly, I will analyse all the uses of *(ge)don* in Old English. While in studies on the origin of auxiliary *do* scholars tended to concentrate on one possible construction source and ruled out other possible sources (see chapter 3), I will extend the investigation to the entire range of uses that *(ge)don* had in Old English. Besides examining the role of causative *do*, a comprehensive study of the verb *(ge)don* will serve to evaluate whether another use of *(ge)don* triggered the emergence of auxiliary *do* or, perhaps, whether several uses contributed to the development of the auxiliary construction.

The objective of the second research question is to explain why only *do* and not another causative verb developed into an auxiliary. For this reason, I will discuss in chapter 4 the syntactic and semantic features of another Old English causative verb, namely *hatan* 'order, command'. The inclusion of causative *hatan* serves two purposes. For one, comparing causative *(ge)don* with causative *hatan* will help us to gain a better understanding of the characteristics of causative *(ge)don*. Secondly, the addition of causative *hatan* is meant to offer a more comprehensive picture of the Old English causative verb category. The choice of causative *hatan* is justified by two reason. Firstly, it was the most frequent Old English causative verb, as argued by several scholars (see chapter 2). Secondly, its decline overlaps with the one of causative *do* and the emergence of auxiliary *do*. If causative *do* developed into an auxiliary verb, the question arises as to why causative *hatan* did not follow the same diachronic path. Thus, describing the development of causative *hatan* and the reasons why it was not reanalysed as an auxiliary verb will contribute to determine the factors that led to the emergence of auxiliary *do*.

The third research question concerns the role that poetry had in the development of auxiliary *do*. While it is generally assumed that auxiliary *do* was used as a metrical filler, there are few studies that have considered the implications

23

of this use on the development of auxiliary *do*. The only study in which there has been an attempt to account for the presence of auxiliary *do* in poetry was Ellegård (1953), but to what extent poetry influenced the development of auxiliary *do* remains unclear, as mentioned above. The way chosen to address this research question is to investigate the factors that underlie the use of auxiliary *do* in poetic compositions from a quantitative perspective. In chapter 5, I will propose a number of potential explanatory factors and calculate their statistical significance using two relatively new statistical techniques, namely conditional inference trees and random forests (Levshina 2015). Moreover, other constructions with the pattern V - INF will be included in the investigation, such as the modals *can* 'can', *may/mouen* 'may', *shulen* 'shall' , *willen* 'will' and the auxiliary verb *gan*. The reason behind their addition is that these constructions share the same syntactic pattern with auxiliary *do* and, therefore, the comparison with auxiliary *do* will show whether their use in poetry was influenced by metrical conventions. Particular attention will be paid to *gan*, since it has been argued in the scientific literature that, similarly to auxiliary *do*, its occurrence in poetry was driven by metrical needs. The findings of these analyses will allow us to uncover the functions of auxiliary *do* in poetry and whether such functions played a role in its development.

On a wider scope, the ambition of this thesis is to enhance our understanding of syntactic change. In particular, my aim is to contribute to understanding *how* and *why* constructions change. In previous research, all the different hypotheses that have been put forward concerning the origin of auxiliary *do* have been treated as if they were mutually exclusive (see chapter 3). The approach taken in this study differs from previous accounts in that it is not excluded *a priori* that multiple factors and sources may have contributed to the emergence of the construction under study. Furthermore, by adopting this approach the present dissertation aims to provide a clearer understanding of the role and the impact of mechanisms like analogy, competition and the interactions between different constructions on the outcome of a specific development. Accepting that a plurality of factors and construction sources can be involved in language change is fruitful not only in this particular case study, but might be useful in the investigation of the development of other constructions as well.

1.3 Structure of the thesis

The core of this thesis consists of five chapters. Chapter 2 lays out the theoretical foundations of this study and illustrates the terminology adopted throughout. It also describes how language change is conceived, paving the way for the actual analysis carried out in the rest of the thesis. Specifically, I adopt an approach that relies on the principles of Cognitive Linguistics whereby language change is addressed from a usage-based perspective.

As already mentioned in section 1.1, auxiliary *do* has been the topic of a large body of works. In chapter 3, I review the relevant studies that address the issue of the origin of auxiliary *do*; given the focus of this study, papers tackling the regulation and the spread of *do* have not been taken into account. The discussion carried out in this chapter will bring to light that, if taken in isolation, each hypothesis put forward so far fails to fully account for the data available. Nevertheless, such a rich literature represents a solid starting point for the analysis carried out in later chapters.

Chapter 4 investigates the uses of *(ge)don* in Old English. I first describe the corpora used before providing a qualitative analysis of each use of *(ge)don*, i.e. lexical verb, causative verb and pro-verb. In this chapter, I show that the semantic and syntactic features that anticipate the emergence of auxiliary *do* were already present in different uses of *(ge)don* in Old English.

Chapter 5 discusses the use of *do* in poetry. Using two recent poetic corpora, I build a robust data set that focuses on the period ranging between the 12th and the 13th century, which is when auxiliary *do* was first attested. Then, the data will be analysed using modern statistical techniques.

Finally, in chapter 6 I formulate my hypothesis concerning the rise of auxiliary *do*. Here, I suggest that the development of auxiliary *do* can be fully accounted for only if (i) a multiplicity of construction sources and (ii) a number of factors are considered. With respect to what factors influenced the development of auxiliary *do*, it will be argued that they not only pertain to the language system (system-internal factors), but they occur outside the language system as well (system-external factors). In the conclusion, I will summarise my findings and discuss the contribution of the account put forward for a better understanding of

syntactic change.

Chapter 2

Background notions

2.1 Introduction

This chapter provides the terminological and theoretical foundations of the present study. Section 2.2 introduces the framework in which the analysis is conducted. Section 2.3 discusses the notions that are essential for the analysis carried out in this dissertation, which are the following: constructions and structural patterns (section 2.3.1); ambiguity and ambiguous contexts (section 2.3.2); the role of reanalysis and analogy as primary mechanisms of change (section 2.3.3); the gradual nature of semantic bleaching (section 2.3.4) and the effects of frequency (section 2.3.5). Section 2.4 focuses on auxiliary *do*; firstly, it will be described how the notions of 'auxiliary verb' and 'auxiliary construction' are understood in this dissertation. Secondly, it will be discussed which features allow for the identification of auxiliary *do*, the differences between auxiliary *do* and causative *do*, and, lastly, the cases in which the interpretation of *do* is uncertain. In section 2.5 I discuss the syntactic and semantic features of causative constructions in Old English (section 2.5.1) and Present-day English (section 2.5.2). Section 2.6 summarises the chapter.

2.2 Basic assumptions

The foundations of the present thesis do not lie in a specific linguistic approach, but I adopt a number of notions that fall within the tradition known as Cognitive

Linguistics (Geeraerts and Cuyckens 2007a). A cognitive approach to language began to develop during the 1970s in opposition to the generative approach introduced by Chomsky (1965), of which the Minimalist Program (Chomsky 1995) is the latest development. Though this approach has developed over the years, it still relies on the existence of the so-called Universal Grammar, by which it is argued that the knowledge of language is rooted in an autonomous, innate faculty of mind that is assumed to be specific to language.

Knowledge of language, which in earlier Chomskyan work was referred to as 'language competence' and in the modern Minimalist Program as 'I-language', is generally separated from the actual use of language, or 'language performance' or 'E-language' (see Chomsky 2005 for more details). Linguistic performance, of course, involves knowledge of language, but is heavily conditioned by psychological processes like distractions, sensory perception, memory limitations and errors that do not strictly pertain to the competence that speakers have of language. Thus, in the Chomskyan tradition language performance is generally excluded from syntactic studies, which in turn focus on language competence only.

Cognitive Linguistics, on the contrary, is based on the foundational principle that the ability to produce language is not different from other cognitive abilities and that language is an integral part of the human cognition. Based on this assumption, an array of related approaches has developed during the years. Geeraerts (2007a: 4) has described the nature of Cognitive Linguistics as being 'a flexible framework rather than a single theory of language' which contains 'a cluster of many partially overlapping approaches rather than a single well-defined theory'. Some of the overlapping approaches that Geeraerts refers to are Construction Grammar (Goldberg 1995), Radical Construction Grammar (Croft 2001), Cognitive Semantics (Talmy 2000), Frame Semantics (Fillmore 1982) and Cognitive Grammar (Langacker 1991). Although each approach analyses language from a different perspective, they all share two basic assumptions that are also adopted in this thesis. The first of these assumptions is that, as mentioned above, language is conceived as an integral part of human cognition. The crucial difference with generative approaches is that cognitive linguists do not assume the autonomy of such a mental capacity; conversely, they argue that 'the organization and retrieval of linguistic knowledge is not significantly different from the

organization and retrieval of other knowledge in the mind' and, importantly, all the skills that are used by language users in every linguistic exchange to understand and produce language are similar to 'those applied to other cognitive tasks, such as visual perception, reasoning or motor activity' (Croft and Cruse 2004: 2). The second assumption concerns the fact that there is no distinction between language competence and language performance. The language system is seen as a dynamic system in which the knowledge of language is derived from experience and language use. Thus, a central notion is that language users continuously reshape and modify language through use. In this respect, the term 'usage-based' has been introduced to stress the importance of use in the changing nature of language (see Langacker 1987; Barlow and Kemmer 2000; Croft and Cruse 2004).

A final remark concerns the nature of language change. A common trait of the cognitive approaches listed above is that language change is by no means 'deterministic' (Hopper and Traugott 2003: 130-131). Or, in the words of Traugott and Trousdale, 'change never needs to occur' (2013: 21). This follows from a usage-based view of language, since language change is not an independent phenomenon that stands on its own, but rather is a consequence of how speakers use language; it is intertwined with the way language users communicate and interact with each other.

2.3   Notions for analysis

In this section I address a series of notions that are central for understanding the development of auxiliary *do*. Each section is structured as follows. Firstly, I present how the notion is used in this thesis. Then, I situate it with respect to previous literature. Lastly, I explain why the notion discussed applies to the study of auxiliary *do*.

2.3.1   Constructions and structural patterns

A notion common to many of the approaches listed in section 2.2 is that language can be analysed in terms of constructions, which are understood to be pairings of form and meaning (Goldberg 1995; Traugott and Trousdale 2013; Hilpert 2014). Constructions are generally conceived as 'conventional symbolic units' (Langacker

1987; Croft 2005; Traugott and Trousdale 2013), where conventional refers to the fact that a construction is shared by a community of speakers, while symbolic entails that the association between form and meaning is arbitrary. This definition of constructions is the heart of every Construction Grammar approach. Moreover, in Construction Grammar it is assumed that 'all levels of grammatical analysis involve constructions' (Goldberg 2006: 5), which means that from the smallest grammatical unit to the most abstract patterns, they all fall under the label 'construction'. Thus, morphemes like *un-*, idioms like *out of the blue* and more abstract schemas as SBJ - V - OBJ1 - OBJ2 used to describe ditransitive constructions (e.g. *he gave her a piece of cake*) are all identified as constructions. Similarly to Construction Grammar accounts, constructions are understood in this thesis as pairings of form and meaning; the form of each construction is referred to as 'structural pattern', which does not define a specific word order, but is an abstraction over different syntactic structures. In the course of this thesis, I use graphic representations such as the one presented below to illustrate the syntactic and the semantic dimension of the different constructions. These illustrations represent two dimensions separately: the first layer, labelled SYN, describes the structural pattern of the construction in the form of a string, ignoring potential hierarchical organisation. The second layer marked with SEM serves to define the semantic role of each argument involved in the construction. This layer is characterised by a separate semantic layer for each verb and its arguments, where SEM$_{\text{MAT}}$ indicates the matrix clause and SEM$_{\text{LOW}}$ the lower clause. An example will serve to explain this terminology. The sentence in example (1) is described by the structural pattern (2), while the semantic representation is provided below in figure 2.1.

(1)   Michael kicks the ball.

(2)   NP1 - V - NP2

SYN	NP1	V	NP2
SEM$_{\text{MAT}}$	Agent	Predicate	Non-agent
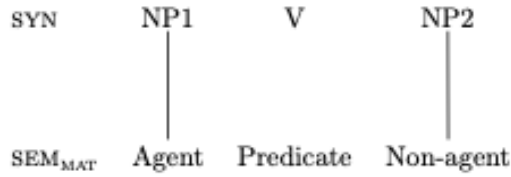
Figure 2.1: Graphic representation of 'Michael kicks the ball'.

As said above, I provide a semantic representation for each clause in the structural pattern. This representation allows for the description of the arguments that have a role in both the matrix and the lower clause. Consider the example in (3). The verb *persuade* is generally assumed to take three arguments: NP1 (*Michael*), NP2 (*Nick*) and a clausal argument that describes a situation (*Nick to go*) (cf. Palmer 1988; Denison 1993). The NP2 *Nick* is an agent who is the recipient of the persuasive act instantiated by Michael and is also the performer of the action of going. From a semantic point of view, this means that *Nick* belongs to the argument structure of both *persuaded* and *go*. This analysis is shown in figure 2.2, in which the full lines illustrate the semantic role in the matrix clause, i.e. *Michael persuaded Nick*, while the dashed lines specify the role in the lower clause, i.e. *Nick to go*.

(3)   Michael persuaded Nick to go.

SYN	NP1	V	NP2	VP
SEM$_{\text{MAT}}$	Agent	Predicate	Agent	Situation
SEM$_{\text{LOW}}$			Agent	Predicate
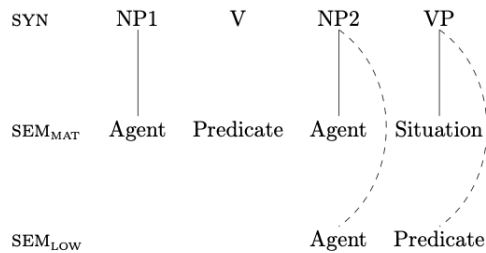
Figure 2.2: Graphic representation of 'Michael persuaded Nick to go'.

In Construction Grammar, constructions are conceptualised as nodes that are stored in a network in which they are connected with each other. The basic assumption behind the idea of node is that every time a language user uses a

construction, it activates a node; the more a node is activated, the stronger it is in the network. The nodes are connected by means of links, which are generally divided in two types. Early researchers (cf. Goldberg 1995) have focused on the taxonomic or inheritance relations between more specific constructions and more abstract schemas. Inheritance is a crucial notion in that it implies that characteristic features of form and/or meaning are passed on from top to bottom. In other words, nodes inherit the properties of the dominating nodes. Therefore, inheritance links are generally illustrated in terms of a taxonomic hierarchy that is characterised by a certain level of abstraction. For instance, every ditransitive construction, as *He gave him a book*, inherits the syntactic structure from the more abstract schema SBJ - V - OBJ1 - OBJ2 along with the semantic features *X cause Y to receive Z*. In Construction Grammar literature, however, constructions do not typically inherit properties from a single node, but from more nodes present in the network; this is called 'multiple inheritance' (Goldberg 1995). An example is the development of gerunds in English, which inherit features of both nouns and verbs (Hudson 2007; Traugott and Trousdale 2013). More recent research (cf. Perek 2015; Sommerer 2018; Diessel 2019; Sommerer and Smirnova 2020), on the other hand, has highlighted the relationships on the horizontal axis of the network, focusing in particular on similar constructions which have the same level of abstraction.

Some of the notions discussed above are used in the diachronic account presented in Chapter 6. Firstly, I adopt the idea that the language system is organised as a network in which constructions interact and influence each other. Thus, it is argued that when a construction changes, its development is influenced by other constructions and changes that occur in other parts of the language system. Secondly, the notion of multiplicity will also be used, but in a broader sense than in traditional Construction Grammar accounts. In this thesis, multiplicity indicates all the factors that come into play in the development of a construction; importantly, these factors may be both internal and external to the language system, as argued by Joseph (2015). System-internal factors concern developments that are part of the language system, while system-external factors may involve, among others, language contact, borrowings or sociolinguistic factors (see section 6.2).

A further difference concerns the distinction between 'constructionalization'

and 'constructional change', which will not be followed in this study. This terminology, which is the most frequently used in recent construction and diachronic constructional approaches, was first introduced by Noël (2007) and then refined by Traugott and Trousdale (2013). In the work of Traugott and Trousdale, constructionalization involves the creation of a new construction, with *both* a new meaning and a new form. When, on the contrary, *only* the form or the meaning change, this is considered a constructional change. Thus, it follows that only constructionalization is actually change, while constructional changes do not mark the emergence of a new construction. Importantly, Traugott and Trousdale argue that the latter are only the necessary steps that lead to constructionalization, i.e. to the development of a new construction.

While this proposal is intriguing, there are some theoretical issues that have been raised not only by non-constructionist linguists (e.g. Börjars et al. 2015), but by several construction grammarians as well (Hartmann 2018; Hilpert 2018; Sommerer 2018). The key objection is that the distinction between constructionalization and constructional change is in conflict with the very nature of Construction Grammar, which describes constructions as a whole formed by form and meaning that are not separable one from the other. Therefore, *any* change affecting a construction should be considered a new construction, be it a change in form, meaning or both. This theoretical inconsistency has been nicely summarised by Hilpert (2018: 27), as cited in Sommerer and Smirnova (2020: 17):

> [...] the term constructionalization ultimately invites the notion of a discrete threshold between an existing construction that has changed and a new construction that has come into being. This threshold may turn out to be a line in the sand that is impossible to draw with certainty.

In view of these issues, no distinction between constructionalization and constructional change will be made in this study.

2.3.2 The role of context and ambiguity in language change

As is widely acknowledged in the literature, linguistic items change in context. That is, new constructions do not develop in isolation, but in relation to the syntagmatic context in which they appear. In diachronic studies, the notion of context occupies a central role in several approaches, particularly those focusing on grammaticalisation (e.g. Bybee et al. 1994; Diewald 2002; Heine 2002; Himmelmann 2004; Garrett 2012). However, while the importance of context has been widely recognised, it is interesting to note that less attention has been paid to clearly define what the term 'context' refers to (see Bergs and Diewald 2009b).[1] In this study, by context I refer to the surrounding text in which a construction occurs.

In the diachronic account presented in this thesis, I hypothesise that at the initial stage of change a language user A uses a construction in a context where a language user B interprets it differently from how A intended it. This may occur because the construction is ambiguous. The ambiguity may be semantic, i.e. when a construction has two or more meanings, or may be structural, i.e. when a sentence has more than one syntactic interpretation. In some cases, the ambiguity is already sanctioned in the language, as in Present-day English 'The murderer killed the student with a pen'. In others, when the ambiguity is not sanctioned, a new reading may arise as a conversational implicature, in the spirit of Grice (1989) (as suggested by Diewald 2002: 107). This, however, does not hold for every instance of language change, since there are well-documented instances of change in the literature that are not triggered by ambiguity. Examples are the development of *like* in the now obsolete construction *be like to* described by Kytö and Romaine (2005) or the development of the *way*-construction as sketched by Traugott and Trousdale (2013). In a broader account on language change, therefore, ambiguity cannot be considered as a necessary precondition in order for change to occur. Nevertheless, the development of auxiliary *do* is characterised

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[1]An early definition of context, based on the difference between context and co-text, was provided by Catford (1965); by context, Catford indicates the 'situation – participants, type of interaction, e.g. face to face interaction, bystander status, culture', while co-text refers to 'linguistic context, relevant textual environment' (1965: 31).

by an initial stage where, in a specific context, causative *do* was semantically and structurally ambiguous, as will be shown in section 4.3.1.

As mentioned above, a different interpretation is assumed to arise in a specific context. The identification of different contexts where change can take place is characteristic of grammaticalisation studies. Diewald (2002) and Heine (2002), in particular, have proposed two accounts in which contexts represent different stages in a grammaticalisation process. Both authors have identified an initial stage in which the preconditions for grammaticalisation may develop. This stage, called 'untypical context' by Diewald and 'initial context' by Heine, is characterised by the expansion of the contexts in which the construction can appear and, in these contexts, the new meaning arises as a conversational implicature. The second stage marks the actual onset of the grammaticalisation process, in which the ambiguity that allows for more than one interpretation is concentrated in a specific context, which is referred to as 'critical context' by Diewald and 'bridging context' by Heine. The third and last stage in Diewald's account is characterised by the development of what she calls 'isolating contexts', in which the ambiguity of the previous context is resolved and only one interpretation is possible; this means that the two interpretations are perceived as independent from one another and the grammaticalisation process has come to an end. This last context is marked by semantic, syntactic and/or morphological features that exclude every other reading besides the grammaticalised one.[2] Heine calls this third stage 'switch context', and adds a fourth stage, which is characterised by the appearance of 'conventionalization contexts'. Conventionalization contexts indicate that the new grammaticalised form has expanded over new contexts, completely independent from the ones in which it came about. Throughout this study, the terminology that is adopted is the one proposed by Diewald.

2.3.3 Mechanisms of change: reanalysis and analogy

In this section, I discuss two crucial mechanisms of change that are generally recognised in grammaticalisation studies and are relevant for the development of

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[2]In a later paper, Diewald and Smirnova (2012) have expanded the three-stage scenario into a four-stage one, having added a 'paradigmatic integration' stage. This further stage is meant to refine the notion of grammaticalisation, particularly with respect to the distinction between grammaticalisation and lexicalisation.

auxiliary *do* too: reanalysis and analogy. Langacker (1977: 58) defined reanalysis as 'change in the structure of an expression or class of expressions that does not involve any immediate or intrinsic modification of its surface manifestation'. In other words, reanalysis is a process whereby language users change the underlying structure of a construction without affecting the surface structure. This notion of reanalysis has been the focal point of much discussion in the grammaticalisation literature (Heine and Reh 1984; Harris and Campbell 1995; Haspelmath 1998; Newmeyer 1998; Andersen 2001; Hopper and Traugott 2003; Eckardt 2006; Fischer 2007; De Smet 2009; Traugott and Trousdale 2013). A first point of discussion concerns the relationship between reanalysis and grammaticalisation. On the one hand, there are scholars like Hopper and Traugott (2003) and Lehmann (2004) that separate reanalysis from grammaticalisation, arguing that reanalysis may occur as part of the grammaticalisation process (see also Haspelmath 1998). On the other hand, Campbell (2001b) ties reanalysis and grammaticalisation together, claiming that 'grammaticalization is always the result of reanalysis' (Campbell 2001b: 144). A second issue is terminological, as the term 'reanalysis' implies the previous existence of both the 'old' and the 'new' interpretation; otherwise, it would be more accurate to speak of 'new' analysis. It is for this reason that Andersen (2001) and Traugott and Trousdale (2013) use the term 'neoanalysis'. A final issue regards the relation between ambiguity and reanalysis. It is generally assumed, as Harris and Campbell (1995: 51) claim, that reanalysis relies on surface ambiguity and on the possibility that a structure has more than one interpretation. However, De Smet (2009) has criticised this assumption, arguing that the ambiguity assumed to trigger reanalysis becomes apparent only after reanalysis has taken place. In different contributions, De Smet (2009; 2014) argues against the notion of reanalysis as a mechanism of change *per se*, claiming that it is a process formed by other, more basic mechanisms.

Turning now to analogy, the term indicates a cognitive process by which two elements in the language are linked together through similarities in form and/or meaning. As a mechanism of language change, it is the process whereby language users modify the use of a linguistic element on the basis of structural and semantic affinities with other elements of the language system. Analogy has a long history in historical linguistics. Starting from the Neogrammarians, who

acknowledged the importance of analogy as a mechanism of change, particularly morphological change, analogy has been the focus of a robust body of works (e.g. Sapir 1921; Bloomfield 1933; Kuryłowicz 1949; Kiparsky 1992; Harris and Campbell 1995; Anttila 2003; Itkonen 2005; Wanner 2006; Fischer 2007; Blevins and Blevins 2009; De Smet 2009; Traugott and Trousdale 2010; De Smet and Fischer 2017). In some recent studies, the importance of analogy in grammaticalisation accounts has been greatly emphasised, to the point that it is argued that analogy is the primary mechanism that triggers grammaticalisation (see Fischer 2007 and De Smet and Fischer 2017). However, there is also a long tradition of studies, especially, but not exclusively, within the Chomskyan tradition, in which analogy has not been recognised as a significant mechanism of change. The reason behind this argument lies in the fact that analogy is considered to be too elusive and unpredictable to be described in terms of principles and rules. In more recent years Lehmann (2004), for instance, has operated the distinction between 'pure grammaticalisation without analogy' and 'grammaticalisation with analogy', arguing that 'the proprium of grammaticalization comes out in pure grammaticalization' (2004: 162), demoting therefore the role of analogy as a mechanism of language change.

Reanalysis and analogy have a crucial role in the development of auxiliary *do*. The reanalysis of *do* from a causative verb into an auxiliary represents a classic example of rebracketing without change in the surface structure and has been widely studied in the literature (see chapter 3). Less studied is the function of analogy. In some studies, as in Ellegård (1953) and Denison (1985), there have been attempts to connect the development of auxiliary *do* with other constructions, particularly with the modal verbs; this is not surprising, given their similar syntactic configuration. It is unclear, however, if and what role they may have played in the development of auxiliary *do*. For instance, Denison argues that they 'have nothing to do with the origin of the DO + infinitive construction and only become relevant with the first phase of regulation' (1985: 56).[3] I will return on the impact of analogy in the account presented in chapter 6.

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[3]The phase of regulation which Denison refers to concerns the stage where *do* spread to negatives and questions (1985: 55).

2.3.4 Semantic bleaching

In addressing the origin of auxiliary *do*, a major issue concerns the fact that *do* went from expressing causation to suddenly being a semantically empty auxiliary. In grammaticalisation studies, the loss of lexical specificity is known as semantic bleaching or delexicalisation, which is generally described as a gradual process whereby a lexical item loses its semantic content (e.g. Sweetser 1988; Bybee et al. 1994; Lehmann 1995; Heine and Kuteva 2002; Hopper and Traugott 2003; Himmelmann 2004; Eckardt 2006; Bybee 2011). Typically, semantic bleaching goes together with the expansion of the range of contexts in which the lexical item can appear, as discussed above (see section 2.3.2). As part of this process, lexical items lose some of the collocational restrictions that tie them to a specific context and, being used in more contexts, their meaning becomes more general. Semantic bleaching, nevertheless, is not a one-way process that involves the loss of lexical content only, since the loss of specific semantic content is generally followed by the acquisition of grammatical properties (Traugott and Trousdale 2013).

As mentioned in section 1.1, the loss of semantic specificity that causative *do* underwent is one of the research questions that are addressed in this thesis. While in other instances of change the loss of semantic content proceeds gradually, see for instance the development of *be going to* (Bybee et al. 1994), in the case of *do* the semantic bleaching of causative *do* has been rather abrupt. In fact, the data available show that gradual loss of meaning is not a gradual process, as we would expect; rather, it appears that causative *do* suddenly lost its meaning and was reanalysed as an empty auxiliary. This development is discussed in greater detail in section 6.3.1, where it is argued that another construction, pro-verb *(ge)don* (see section 4.3.3), crucially contributed to the interpretation of *do* as a semantically empty verb.

2.3.5 Effects of frequency

Several usage-based studies have stressed that frequency has a crucial function in the development of new linguistic constructions and the development of auxiliary *do* is no exception (e.g. Bybee et al. 1994; Harris and Campbell 1995; Lehmann 1995; Hopper and Traugott 2003; Bybee and McClelland 2005; Diessel 2007).

Usage-based studies typically distinguish between type frequency and token frequency (e.g. Baayen 2001; Bybee 2006 and 2010; Traugott and Trousdale 2013). Token frequency refers to the number of times the same item occurs in a text or a corpus, while type frequency concerns the number of different expressions that a pattern has. In this study, any reference to frequency indicates token frequency. With respect to language change, it appears that frequency has a twofold influence. Firstly, it has a role when newly formed constructions expand the range of contexts in which they appear, enhance their productivity and 'spread by gradually increasing their frequency of use over time' (Bybee and McClelland 2005: 387). Secondly, frequency of use may determine whether a construction undergoes change. As mentioned above, an essential notion in a usage-based approach is that knowledge of language derives from language use. Thus, the degree of frequency by which language users come across a particular construction determines the level of entrenchment of the construction. As Bybee and McClelland (2005) argue, frequency of use is the driving force behind the mental organisation of linguistic knowledge (see also Croft and Cruse 2004; Langacker 2007; Diessel 2015). A number of studies have shown that highly frequent constructions are resistant to change because they are more routinised and entrenched, while less frequent constructions are more likely to change. An example of this effect, which Bybee and Thompson (1997) have called the 'Conserving Effect', is the preservation of highly frequent irregular verbal paradigms, as for the verbs *go* and *be* in English; low frequency constructions, on the other hand, are more subject to analogical levelling and have been regularised over time (Mańczak 1980; Bybee 2013).

The notion of frequency, however, does not come without questions. The main issue concerns the relevant degree of frequency of usage, i.e the exact values that are considered sufficient for a construction to be more or less entrenched. Clearly, this is an important topic in diachronic accounts as well, since it would determine which constructions may undergo change and which may not. In this respect, Bybee (2006) uses the terms low, high and extreme high frequency without determining exact numerical values, while Clark and Trousdale (2009: 38) argue that the frequency for determining the threshold of entrenchment is 'gradual and relative, not categorical or universal'.

The role of frequency in the development of auxiliary *do* has been discussed

by Ellegård (1953) and Denison (1985) (see section 3.2.2.2 and 3.2.3.1, respectively). The hypothesis put forward by Ellegård relies on the idea that ambiguous instances of *do* have to be sufficiently frequent, but without a high frequency of causative *do* for the causative > auxiliary change to be hindered. The role of frequency is further discussed in chapter 6, particularly in relation to causative *do*, whose low frequency is argued to have pushed the grammaticalisation of auxiliary *do*.

2.4   Auxiliary *do*

Before describing auxiliary *do* in Middle English, it is necessary to define how the terms 'auxiliary verb' and 'auxiliary construction' are understood in the present work. In line with the studies of Heine (1993), Kuteva (2001) and Anderson (2006), an auxiliary verb is considered to be an item which is semantically empty and performs some kind of grammatical functions, typically the expression of tense, aspect and mood (the so-called TAM functions, for an overview see Anderson 2006: 30-37).[4] Thus, the structure of auxiliary constructions consists of (i) an auxiliary verb element that contributes to the grammatical content of the construction, and (ii) a lexical verb that contributes to the lexical content, including the argument structure, of the construction. It follows then that constructions involving auxiliary *do* are understood as constructions formed by auxiliary *do*, which is the element that has grammatical functions only, specifically tense, and a lexical verb in the infinitive form, which provides the semantic content and determines the argument structure of the construction.

The first unambiguous example of auxiliary *do* is attested at the beginning of the 13th century in the poem *King Horn* (c. 1225), see example (4). As can be seen, the structure of this construction is formed by a finite form of the verb *do* and an infinitive verb.

(4)   His sclauyn he dude   dun   legge,   and tok   hit on his rigge,
         His cloak   he do.PST down lay.INF, and took it   on his back,

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[4]There are several issues concerning different aspects of auxiliary verbs that have been the centre of much debate, among which are the range of functions of auxiliaries, the relationship between the auxiliary verb and the lexical verb and the category that the auxiliaries belong to (a summary is given in Heine 1993: 4-16). Given the goal of this study, these questions will be not discussed.

'He laid down his cloak and put it on his back' (King Horn: 1067-1068)

The identification of auxiliary *do* is not always straightsforward, since the pattern *do* - infinitive could also express a causative event. There are no established criteria that allow us to distinguish between causative and auxiliary constructions and the interpretation of each example is inevitably subjective. In the present study, an auxiliary interpretation is assigned only when it is supported by the surrounding context. For instance, in the auxiliary example provided above in (4), the context suggests that *do* has no meaning and the subject of *do* is the same of the infinitive *dun legge* 'lay down'. There is no reason to assume the presence of an unexpressed agent that performs the action of 'laying down' expressed by the infinitive *dun legge*. Also, the fact that the action of 'putting the cloak on his back' is undoubtedly non-causative and is carried out by the same subject of *dun legge*, *he*, provides further evidence for a non-causative interpretation of *do*. Another instance where *do* is an auxiliary is provided in (5).

(5)   Hwan he hauede eten, and was fed, Grim dede   maken   a ful
        when he had   eaten and was fed, Grim do.PST make.INF a full
        fayr   bed; unclothede him and dede him therinne, and seyde, "Slep,
        beautiful bed; undressed him and put him therein, and said,   "Sleep,
        sone, with muchel winne! slep wel faste and dred thee nouth   - fro
        son, with much   joy!   sleep well fast and fear you nothing - from
        sorwe   to joie art thu brouth."
        sorrow to joy are you brought."
        'When he had eaten and was fed, Grim made a beautiful bed, undressed
        him, put him in the bed and said: "Sleep son, and with much joy! Fall
        asleep quickly and do not fear anything - you have been brought from
        sorrow to joy."' (Havelok: 21.658.318)

In (5), *he* refers to Havelok and Grim is his servant. These lines describe a situation in which Grim is taking care of Havelok, who had not eaten in three days. Once Havelok is fed, Grim prepares the bed for him, undresses him and puts him to bed. All these three actions are performed by Grim; in the text there is no other agent who could have plausibly done those actions. The construction *dede maken a ful fayr bed* 'made a very beautiful bed' is semantically equivalent to *unclothede him* 'undressed him' and *dede him therinne* 'put him in there' and, therefore, has been classified as an auxiliary example, with *dede* that does not contribute to the

meaning of the construction, besides expressing past tense. The interpretation of example (5) is not unanimous and varies among scholars. Ellegård, for instance, despite sharing this reading, interpreted this example as an ambiguous case: 'Thus *Grim dede maken a ful fayr bed* (*Havelok* /79/, 658) has not been accepted as periphrastic, even though it is altogether likely that Grim, the servant, made the bed himself' (Ellegård 1953: 37).

In other instances, however, the context does not help to unambiguously interpret the meaning of *do*, which is therefore labelled as ambiguous. An example is provided below in (6), where the idiomatic translation in (a) illustrates the causative interpretation and (b) the auxiliary one. Here, it is unclear who the performer of the action expressed by the infinitive *make* is and, therefore, I analysed the construction as ambiguous.

(6)   Gode paniers dede   he make,   on til him, and oþer þrinne til his
        Good baskets do.PST he make.INF, one for him, and other three   for his
        sones
        sons
        'He (a) made [someone] make - (b) made good baskets, one for himself and other three for his sons' (Havelok: 24.763.377)

2.5   Causative constructions

In descriptive studies that deal with analytic causative constructions, a key point of discussion is where to draw a line between verbs that can be considered causatives and those that cannot. In some studies, the label 'causative verbs' is used only to refer to what we may call 'pure causatives', i.e. verbs that are semantically neutral and express the notion of causation only. This strategy is adopted, among others, by Kemmer and Verhagen (1994) and Dixon (2000). An example of a pure causative verb is *make* in Present-day English, which has an abstract meaning without further lexical connotations. In other works, scholars included in their investigations also verbs that, alongside the notion of causation, have a more specific semantic content; for convenience, I refer to them as 'lexically specific causatives'. This approach is found, for instance, in Song (1996). Thus, in his account a verb like *order* in *Michael ordered John to go* may be considered causative even though it also implies an act of speaking. In this thesis, my position is in

line with Song and, therefore, I will include under the label 'causative verbs' both pure and lexically specific causatives.

In the present study, analytic causative constructions are understood to describe a situation formed by two events: a causing event expressed by the causative verb in the matrix clause, and a caused situation, which has to have occurred, represented by the complement of the causative verb in the lower clause (Shibatani 1976b; Cole 1983; Kemmer and Verhagen 1994; Song 1996; Talmy 2000; Gilquin 2010). The description of analytic causative constructions will be presented according to the graphic representations proposed in section 2.3.1. The syntactic level describes the constituents which form the structural pattern, in this case NP1, Vcau, NP2 and a VP or a *þæt*-clause. Though it is acknowledged that the order of the constituents may vary, relevant for the purposes of this investigation is the presence/absence of the causee; thus, I will only distinguish the following structural patterns: NP1 - Vcau - NP2 - VP and NP1 - Vcau - VP for infinitive complementation, NP1 - Vcau - NP2 - *þæt*-clause and NP1 - Vcau - *þæt*-clause when the complement is a *þæt*-clause.

The semantic dimension is represented separately for the entire causative action and the caused situation. In this thesis, I focus on the semantic features of the main slots, namely the CAUSER, the CAUSEE and the EFFECTED PREDICATE. The causer is the entity bringing about the caused situation, while the causee is the entity that carries out the action brought about by the causer. This implies that only agentive entities are considered causees; non-agentive entities will be referred to as non-agentive NP2s. Lastly, the effected predicate describes the caused situation. The semantic features that will be considered in this study are illustrated in the list below.

- CAUSER: animate vs. inanimate, agentive vs. non-agentive.

- CAUSEE: animate vs. inanimate, agentive vs. non-agentive.

- EFFECTED PREDICATE: transitive vs. unaccusative vs. unergative.

This classification requires a few words of explanation. The fundamental distinction between animate and inanimate refers to living and non-living entities. As Rosenbach (2002: 42) puts it, animacy is 'an inherent property of concept' which does not change regardless of the context in which such entities occur.

This means that noun phrases as *ball* and *table* are always analysed as inanimate, while *boy* and *girl* are always animate. The distinction between agentive and non-agentive entities is more complex. Unlike animacy, agentivity is not a property that can be identified out of context. Instead, it is the predicate that requires a noun phrase referent that can have agentivity. As far as this this study is concerned, the essential property in order to consider an entity 'agentive' is the ability to initiate an action and to perform an activity.[5] A further remark concerns the relation between animacy and agentivity. In some cases, the two overlap, as in (7), where *boy* is both animate and agentive. In others, however, animate entities are not agents, see (8).

(7)   The boy ate the chocolate.

(8)   The boy suffers a serious disease.

The same holds for inanimate entities. In example (9), *tree* is an inanimate entity which is also non-agentive. In (10), the *tree* is an agent, since it is responsible for the occurrence of the action of 'destroying'.

(9)   The tree fell during the storm.

(10)   A tree destroyed the equipment.

Thus, there are four possible combinations: animate/agentive, animate/non-agentive, inanimate/agentive, inanimate/non-agentive. Each constituent of the syntactic structure is linked with a semantic role in the matrix and in the lower clause. As mentioned in section 2.3.1, links to the semantic layer of the matrix clause are represented by a full line, while a dashed line connects the elements of the structural pattern to their role in the lower clause.

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[5]Whether the causee exercises independent judgement or volition on the realisation of the action expressed by the caused event is not a parameter in the distinction between agentive causees and non-agentive NP2s.

2.5.1 Old English

Old English analytic causative constructions have been widely discussed in the scientific literature (e.g. Royster 1918, Visser 1963-1973, Fischer 1989; 1992a, Denison 1993, Timofeeva 2010, Lowrey 2013). Among the studies just mentioned, there is not much agreement on which verbs belong to the category of causative verbs in Old English. The object of major disagreement concerns the position of *hatan.* On the one hand, there are scholars like Royster (1918), Timofeeva (2010) and Lowrey (2013) who include *hatan* in the causative verbs category alongside *lætan* 'let, allow', *(ge)don* and *forlætan* 'permit'. On the other hand, we find Fischer (1989) and Denison (1993), who select as prototypical causatives only *lætan*, *forlætan* and *(ge)don*, and rule out *hatan* for its more specific semantics.

Fischer (1989) is a thorough investigation of infinitival constructions in Old English. The four features that characterise causative verbs in Old English in her account are the following (from Fischer 1989: 188).

1. They are followed by a bare infinitive (sometimes *(ge)don* is followed by a *to*-infinitive).

2. If the verb takes a *þæt*-clause, the syntactic pattern is always NP1 - Vcau - *þæt*-clause, never NP1 - Vcau - NP2 - *þæt*-clause.

3. The case of the NP2 is accusative.

4. The NP2 can refer to both animate and inanimate entities.

An additional feature of Old English causative verbs concerns the argument structure, which according to Fischer contains two arguments, namely the NP1 and the VP expressing the caused situation. As far as *hatan* is concerned, Fischer places it between two categories. In fact, although Fischer recognises that there are some cases in which *hatan* can be used as a causative, she includes it in what she calls the 'persuade verb' category, along with verbs like *biddan* 'ask, bid'. The reasons behind the categorisation of *hatan* as a persuade verb lie in the fact that *hatan* can only take agentive causees and, furthermore, is characterised by a three-argument structure that contains an animate and agentive NP1, an animate and agentive causee and a VP complement (1989: 183). At the same time, *hatan* differs from other persuade verbs in the case of the NP2; while persuade verbs

normally take a dative NP2, *hatan*, like the causative verbs, takes a NP2 marked by the accusative case. For these reasons, Fischer describes *hatan* as being a marginal member of the persuade verb category that can be used as a causative verb, but that cannot be considered a causative verb for its semantic and thematic features. Thus, in Fischer's account, *(ge)don* in example (11) is a causative verb, while *hatan* in (12) is a persuade verb.

(11)   And treowa he deð   færlice   blowan
        And trees   he do.PRS suddenly flourish.INF
        'And he made the trees suddenly flourish' (Vercelli Homilies: 109, from
        Fischer 1989: 189)

(12)   Se   cing het   hi   feohtan agien   Pihtas
        The king hatan.PST them fight.INF against Picts
        'The king commanded them to fight against the Picts' (ChronA: 449.5.137;
        from Fischer 1989: 146)

The analysis offered by Denison (1993) complements Fischer's study. Denison addresses the semantic and syntactic features of causative verbs in the section on the constructions formed by a verb complemented by an infinitive. These constructions are grouped in two categories on the basis of their syntactic pattern, which Denison calls VOSI and V-I, borrowing both terms from Visser (1963-1973: 2234). The label VOSI describes constructions in which there is a noun phrase intervening between V, the verb, and I, the infinitive. O and S are used to indicate the double status of the intervening noun phrase, which is the object (O) of V and the subject (S) of I. V-I constructions, by contrast, are formed by an infinitive whose subject is implied.

    With respect to VOSI constructions, Denison argues that they may have two different argument structures, one formed by two arguments and the other by three arguments. The Present-day English examples that he provides are the following (from Denison 1993: 166).

(13)   Bob expected Liz to tickle Jim.

(14)   Bob persuaded Liz to tickle Jim.

In cases as (13), the semantic structure of *expect* is formed by two arguments, which are the NP *Bob* and the infinitive complement, while the NP *Liz* is an argument of the infinitive only. Conversely, the verb *persuade* in (14) contains three arguments (*Bob*, *Liz* and the infinitive complement), in which *Liz* is considered to play two roles, being an argument of both the verb in the matrix clause and the infinitive in the lower clause.

V-I constructions, according to Denison, display two different semantic structures too. There are cases in which the subject of the infinitive is co-referential with the subject of the main verb, and instances where the subject of the infinitive differs from the subject of the main verb. While the former is widely attested in Present-day English, see example (15), the latter is found only with verbs like *say*, as in (16), or in fixed expressions, but it was extensively used in Old English (both examples are from Denison 1993: 170).

(15)   Bob can drive the car.

(16)   Bob said to bring the car.

Denison suggests that the interpretation of the V-I structure in (16) may be ambiguous in Present-day English, since it cannot be excluded that the subject of the infinitive in the lower clause is co-referential with the subject of the main verb (1993: 171). If one assumes that the subject of the infinitive is co-referential with the subject of the main verb, Denison says, the semantic structure contains two arguments – the subject of V and the infinitive complement. If in turn the subject of the infinitive is understood to be different from the subject of the main verb, i.e. it is assumed the presence of an agent who is left implicit, the semantic structure has three arguments, namely the subject of V, the subject of the infinitive and the infinitive. With respect to Old English, Denison (1993: 174-175) argues that causative verbs are characterised by a two argument structure, and includes in this category the same verbs as Fischer — *(ge)don*, *lætan* and *forlætan*. Nevertheless,

as Fischer does, he acknowledges the occasional use of other verbs as *hatan* and also *bebeodan* 'command' in causative contexts. These verbs, however, show a three-argument structure, as recognised by Denison and shown in example (17).

(17)   het   ða   and bebead raðe   menn swingan and tintregian ðone
        hatan.PST then and ordered quickly men   beat.INF and torture   the
        Godes andettere.
        God   confessor.
        'he quickly ordered and commanded men to beat and torture the confessor

        of God' (Bede: 1.7.36.30; from Denison 1993: 173)

Other scholars have argued that *hatan* can be considered a causative verb. The first to make a case in favour of the inclusion of *hatan* among the causative verb category was Royster (1918), which later was supported by the findings in Timofeeva (2010) and Lowrey (2013). Their accounts revolve around the observation that while in some cases the action ordered by the subject of *hatan* was not carried out, or is uncertain whether it was performed, in other examples there is no doubt that it was completed. In the last context, these scholars argue, *hatan* can be considered a causative verb (for a detailed discussion see section 4.4.1). The classification adopted in this thesis follows the one proposed by Royster, Lowrey and Timofeeva and I include *hatan* in the causative verbs category.

With respect to the features of causative *(ge)don*, more recent studies are those carried out by Timofeeva (2011) and Lowrey (2012). Timofeeva (2011) has focused on the origin of the construction *(ge)don* - infinitive and argues that the two hypotheses put forward in the literature, i.e. native origin and Latin influence, are complementary, as the two accounts describe the history of this construction at different stages of its history. According to Timofeeva, Latin influence can be called upon for early and classical Old English, while a native development describes the situation in late Old English and in the transitional period between Old and Middle English (2011: 94). In terms of semantics, Timofeeva argues that causative *(ge)don* is a two-place verb, both when it takes an infinitive complement and a *þæt*-clause, while it is a three-place verb when it is complemented by a *to*-infinitive, where it has the meaning 'to give, to grant'. A similar analysis is provided by Lowrey (2012), who has investigated causative *(ge)don* in connection with other causative and manipulative verbs in Old English. Lowrey claims that

(ge)don occurs primarily in constructions in which it takes a *þæt*-clause, where it functions as a two-place verb, while it is only sporadically found in combination with an infinitive verb. Note that even when complemented by an infinitive, *(ge)don* is interpreted by Lowrey as a two-place verb. In the instances in which it combines with a *þæt*-clause complement, *(ge)don* generally takes an indicative verb form, which according to Lowrey provides further evidence on the causative status of *(ge)don*, as it assumed that indicative forms indicate factuality, i.e. that the action brought about by the causer has been carried out, as opposed to subjunctive forms, which generally mark nonfactuality, as argued by Givón (1974) and Song (1996).

On the basis of the semantic features of the participants involved in the causative event, I identify three types of analytic causative constructions in Old English. The first is exemplified in (18). In this case, the causative verb has a three-argument structure (causer, causee, caused situation), with the agentive causee that is an agentive entity that is an argument of both the causative verb and the verb in the caused situation, as shown in 2.3. The same construction occurs in Present-day English too, as in 'Michael made John kick the ball'.

(18) þa   bead   he þam folce   þreora daga fæsten and het
      then commanded he the people three   days fast   and hatan.PST
      hi   astigan up to anre sticolre dune, on þære   wæs gefyrn foremære
      them go.INF up to one high   hill, on which was ago   eminent
      tæmpl Sancte Marian gehalgod
      temple Saint   Mary   consecrated
      'then he commanded the people to fast three days and made them go up a

      high hill where long ago there was an eminent temple consecrated to Saint

      Mary' (ÆLS: 234.605)
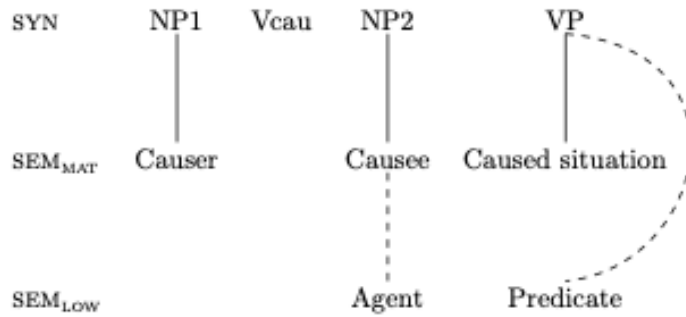
Figure 2.3: Graphic representation of three-argument structure with NP2 expressed.

The second construction is characterised by a non-agentive NP2, as shown in (19). The argument structure of the causative verb is formed by two arguments, the causer and the caused situation. Differently from (18), the non-agentive NP2 has no role with respect to the causative verb, as it is visualised in the semantic level of the matrix clause, but only to the infinitive in the verb phrase expressing the caused situation, as represented by the illustration in 2.4. A Present-day English counterpart is 'Michael made the tree fall'.

(19) Se ðe deð his sunnan scinan ofer ða yfelan and ofer ða godan
      He who do.PRS his sun shine.INF over the evil and over the good
      'He who makes his sun shine over good and evil' (ÆCHom: 123.446)
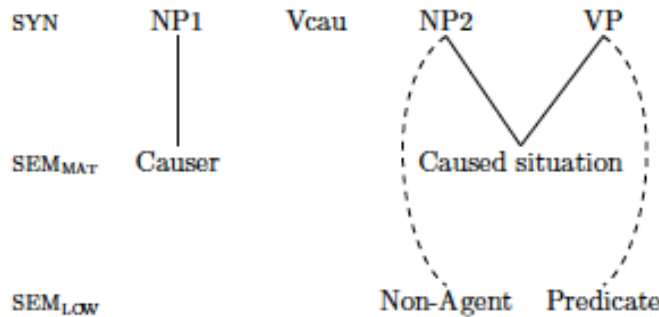
Figure 2.4: Graphic representation of two-argument structure with NP2 expressed.

50

The main argument for the distinction between two and three argument structures is the agentivity of the referent of NP2. When the referent is an agent who carries out an action, NP2 is considered a complement in its own right that is part of the argument structure of both the causative verb and the verb expressing the caused situation. If, on the other hand, NP2 is not an agent, there is no semantic relation between NP2 and the causative verb, but NP2 and the verb expressing the caused situation form together a clause which is embedded as a complement of the causative verb. This interpretation differs from previous accounts discussed above, since it is assumed that the argument structure of Old English causative verbs can contain three arguments as well as two. This interpretation is based on the analysis of the Old English data concerning *(ge)don* presented in section 4.3.1 and on a number of studies that address causative verbs discussed in section 2.5.2.

Thirdly, there were in Old English causative constructions in which the causee was left unexpressed. This type of construction was lost in the transition between Middle English and Early Modern English, where the infinitival complement was replaced by a passive counterpart. Therefore, while a construction like 'the king let build a castle' was possible in Old English, in Present-day English we have 'the king let the castle be built'. An example is given in (20) while its graphic representation is illustrated in 2.5.

(20) Ðeodric þa   þæt anfunde, &   hine het   on carcerne gebringan.
      Deodric then that found,   and him hatan.PST in prison   bring.INF
      'Then Deodric found that out and ordered to bring him to prison' (BoHead:
      1.2)
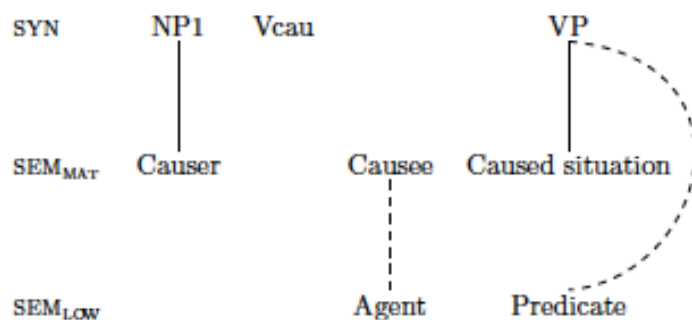
Figure 2.5: Graphic representation of three-argument structure with NP2 non-expressed.

2.5.2 Present-day English

To conclude this chapter, it might be of interest to see how linguists have analysed causative constructions in Present-day English and from a typological perspective. This will serve as a starting point for the discussion concerning causative *(ge)don* and causative *hatan* carried out in section 4.5. Causative constructions and the features that characterise them have been the focus of several studies (e.g. Shibatani 1976; Baron 1974; Talmy 1976; Cole 1983; Palmer 1988; Kemmer and Verhagen 1994; Song 1996; Dixon 2000; Hollmann 2003; Gilquin 2010). Specifically, there are three studies that are relevant to the analysis of causative *(ge)don* and *hatan* carried out in chapter 4, namely Terasawa (1985), Palmer (1988) and Dixon (2000). The accounts proposed by Terasawa (1985) and Palmer (1988) are relevant because they focus on the behaviour of causative *make* in Present-day English, which bears several similarities with *(ge)don* from a semantic perspective. Dixon (2000), on the other hand, offers a typological study in which it is argued that causative verbs may differ according to a number of parameters that involve semantics, syntax and morphology. In this thesis, I will focus on the semantic parameters, which will serve to spell out the differences between causative *(ge)don* and *hatan* in greater detail.

Terasawa (1985) suggests that there are two types of causative verbs, which he labels 'agentive causative' and 'pure causative' verbs. While agentive causative verbs take agentive causees only, pure causatives can take non-agentive NP2s as

well. Interestingly, he argues that in Present-day English *make* can be used both as a pure causative and as an agentive causative verb, as shown in examples (21)-(22), where *make* is used as an agentive causative verb, see in (21), while in (22) it is a pure causative verb (both examples are from Terasawa 1985: 134).

(21)   I made him go there.

(22)   You made me forget my misfortune.

The difference between *make* as an agentive causative verb and as a pure causative verbs concerns the agentivity of the referent of NP2. According to Terasawa, as an agentive causative verb *make* takes an agentive causee and takes three arguments — causer, causee and the verb phrase expressing the caused situation. On the other hand, pure causative *make* occurs with NP2 that refers to non-agentive entity and, therefore, its argument structure contains only two arguments — the causer and the verb phrase. The representation in 2.6 describes the three argument structure of agentive *make*, while the other in 2.7 illustrate the two argument structure of *make* used as a pure causative verb.
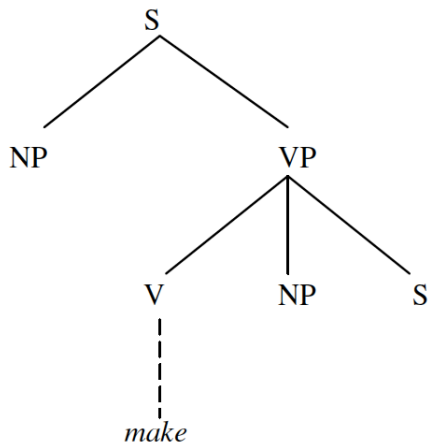
Figure 2.6: Graphic representation of *make* as an agentive causative verb, from Terasawa (1985: 135).
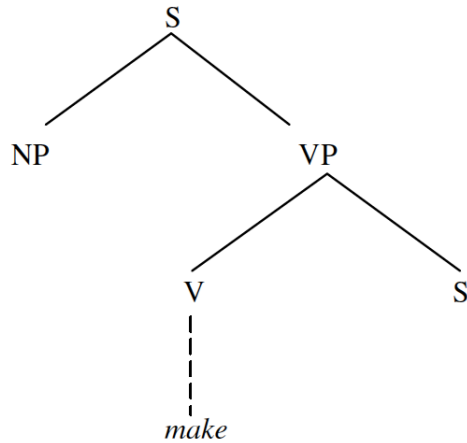
Figure 2.7: Graphic representation of *make* as a pure causative verb, from Terasawa (1985: 135).

A different interpretation of causative *make* is proposed by Palmer (1988). The main difference between Terasawa (1985) and Palmer (1988) is that the latter describes the argument structure of causative *make* as having three arguments. Specifically, the type of analysis that Palmer presents is the following: NP1 V NP2 [(NP2) V], which is meant to capture the fact that the NP2 is an argument of the V outside the squared brackets and of the V inside them (from Palmer 1988: 195). Note that, differently from Terasawa, Palmer does not address the fact that *make* can occur with agentive causees and non-agentive NP2s. An interesting remark made by Palmer (1988: 193) concerns the use of *cause* as a causative verb, since he says that it 'occur[s] with constructions 2 [i.e. NP1 V [NP2 V]] and 3 [i.e. NP1 V NP2 [(NP2) V]] and seem[s] to be simultaneously [a member] of both the WANT and PERSUADE class'. To the purposes of the present study, striking is the difference between the analyses of causative *(ge)don* in Old English presented in the previous section and those of causative *make* in Present-day English. Although they share a number of semantic and syntactic similarities, causative *(ge)don* is unanimously considered a two-place verb, while causative *make* is analysed either as a three-place verb or a two and three-place verb (see Hollmann 2003 for more details). The question that arises thus is whether it is possible to extend the analysis proposed for causative *make* to causative *(ge)don*. I argue that there is evidence for considering causative *(ge)don* as occurring both in two and three-argument structure, as will be discussed in more detail in section

4.5.

Moving on to Dixon (2000), he identifies nine semantic parameters that are meant to capture the differences between causative constructions cross-linguistically. These parameters pertain to the causer, the causee and the verb expressing the caused situation (2000: 62). Three of these parameters are used in the discussion laid out in section 4.3.1 and regard the verb (state/action parameter), the causee (control parameter) and the causer (directness parameter). The state/action parameter concerns whether the causative verb takes only verbs that describe an action, or it can also be used with verbs that describe a state. Control involves whether the causee lacks control, i.e. is non-agentive, or has control on the caused situation, i.e. is an agent. Lastly, the parameter of directness relates to whether the causer acts directly on the caused situation or there is an intermediary, the causee, that performs the caused event. The application of these parameters, which to a certain degree are also connected with each other (see Dixon 2000: 63), will help to capture the differences between causative *(ge)don* and causative *hatan.*

2.6   Summary

In this chapter, I introduced a number of central concepts and notions that will be used throughout this thesis. I divided this chapter in two major parts. In the first part, I discussed some basic assumptions of cognitive linguistics on which this study is based on (section 2.2) and the essential notions that will be instrumental to analyse the development of auxiliary *do* (section 2.3). In particular, I illustrated how the term construction and structural patterns are used in this thesis, pointing out the differences with Construction Grammar approaches. I also showed how I will represent the semantic dimension of the constructions I investigate in this thesis. In addition, I discussed central notions for the understanding of language change, including the main mechanisms that are typically understood to trigger change, like analogy and reanalysis.

In the second part of this chapter, I zoomed in on the constructions under investigation in this dissertation. Section 2.4 discussed the syntactic and semantic features of auxiliary *do.* I followed Anderson (2006), who in turn draws on

Heine (1993) and Kuteva (2003), in describing an auxiliary verb as a semantically bleached item that has grammatical functions. A discussion then followed of how auxiliary *do* can be distinguished from causative *do* in Middle English. In section 2.5, I discussed the type of causative constructions that will be dealt with in the rest of this thesis, namely analytic causative constructions. These causative constructions are intended to describe two-event situations formed by a causing event and a caused situation. The analysis of causative constructions will focus on three participants, namely causer, causee and caused situation. The syntactic and semantic features of causative constructions are represented with graphic illustrations, which are meant to capture the role and the function of each participant involved in the causative event. Different approaches to causative constructions in Old English and Present-day English were also presented in section 2.5.1 and 2.5.2, and we saw that there is still disagreement as to what verbs are considered causatives in Old English. The discussion revolves around the status of *hatan*; some scholars (e.g. Fischer 1989; Denison 1993) analysed as a persuade verb, while others (e.g. Royster 1918; Timofeeva 2010; Lowrey 2013) include it in the causative verb category. In this dissertation, I agree with the latter line of argument and consider *hatan* as a causative verb.

Chapter 3

Literature review

3.1 Introduction

This chapter gives a survey of the rich literature that auxiliary *do* has generated from the end of the 19th century onwards. I identify five major accounts and, accordingly, a specific section is dedicated to each of them. In section 3.2.1, I examine the hypothesis that auxiliary *do* derives from anticipative *(ge)don* in Old English, while in section 3.2.2 I deal with the causative hypothesis. Section 3.2.3 investigates the hypothesis that *do* developed aspectual functions before becoming an auxiliary. Section 3.2.4 reviews the account by which auxiliary *do* has always been a feature of the spoken language, while section 3.2.5 discusses the possibility that auxiliary *do* is the result of language contact between English and Celtic languages; this is referred to as the 'Celtic hypothesis'. Section 3.3 offers some concluding remarks.

3.2 Previous studies on auxiliary *do*

Before starting the discussion of the studies that deal with the origin of auxiliary *do*, it is appropriate to clarify some of the terms that will be encountered in the following sections. In the discussion that follows, I preserve the terminology used by the authors. However, since the studies that are considered in this chapter range from the end of the 19th century to the end of the 20th, there might be cases in which different terms are used by different authors to refer to the same

construction. In order to facilitate the understanding of each account presented, table 3.2 provides a synopsis of all the terms used in the literature and the corresponding labels used in this study.

Previous studies	Present work
Full verb; Lexical verb; Full lexical verb; Factitive verb; Notional verb	Lexical verb
Anticipative verb; Cataphoric verb; Vicarious verb; Half-auxiliary verb	Anticipative verb
Substitute verb; Anaphoric verb; Half-auxiliary verb	Pro-verb
Causative verb	Causative verb

Table 3.1: Comparison between terminology used in previous studies and terminology adopted in this study.

3.2.1 Anticipative origin

The first major line of research examines the hypothesis that auxiliary *do* derives from anticipative *(ge)don* in Old English. Anticipative *(ge)don* is a specific use of lexical *(ge)don* in which *(ge)don* anticipates the occurrence of an action that is specified somewhere else in the clause. An example of this construction is given in (1) below. As can be seen, the person of *(ge)don* is in agreement with the lexical verb it anticipates (but see section 4.3.3 for more details).

(1)   Ægðer he dyde,   ge he egesode   ða   ðe on unryht   hæmdon,
       Both he do.PST, and he terrify.PST those who in wickedness fornicated,
       ge   he liefde   ðæm ðe   hit forberan ne meahton
       and he permit.PST those who it   forgo   not could
       'He did both, as he both inspired with fear those who fornicated, and gave permission to those who could not forgo it' (CP: 51.397.19.2701)

As it will become apparent from the date of the studies presented in this section, the anticipative hypothesis was particularly popular between the end of the 19th and the beginning of the 20th century. After the publication of Ellegård's volume in 1953, the possibility that auxiliary *do* derived from anticipative *(ge)don* has been less explored. Interestingly, all the studies discussed in this section share

the assumption that auxiliary *do* was already part of the language system in Old English. This is due to the fact that, according to some scholars, there seem to be instances of anticipative *(ge)don* in which a finite form of *(ge)don* combines with an infinitive lexical verb, which would closely resemble the structure of auxiliary *do*. Note, however, that such examples are not entirely beyond doubt and in the analysis presented in section 4.3.2 they are interpreted as instances of causative *(ge)don*. Lastly, it is worth noting that the label 'anticipative *(ge)don*' is not consistently used in the accounts reviewed in this section. The term anticipative *(ge)don* in fact is sometimes employed to refer to another construction, which I labelled pro-verb *(ge)don* and concerns the use of *(ge)don* in elliptical contexts (see section 4.3.3). Sweet (1898) and Visser (1963-73), for instance, include in their accounts a few examples of pro-verb *(ge)don*, but there are no accounts that focus solely on pro-verb *(ge)don* as the possible source of auxiliary *do*.[1] In the present study, I adopt the classification of Denison (1993) in which anticipative and pro-verb *(ge)don* are treated separately.

3.2.1.1 Dietze (1895)

Dietze (1895) is the first to propose an account in which it is argued that auxiliary *do* derives from anticipative *(ge)don*. He rejects a possible causative origin of auxiliary *do* that some scholars had already proposed (see section 3.2.2.1.1) because causative *(ge)don* is rarely attested in Old English and, furthermore, most of these instances appear in translations from Latin.

An interesting claim made by Dietze is that there were cases of auxiliary *do* already in Old English, quoting the examples presented in (2)-(3). The idiomatic translation is that of Dietze.

(2)   æftre þæm hie dydon ægþer ge cyninga ricu   settan ge niwu
      after that they do.PST both and king   dominions set.PST and new
      ceastra timbredon
      cities   build.PST
      'after that they did both, founded new kingdoms and built new cities'
      (Orosius 1: 10.30.28)

---

[1]For this reason, I do not dedicate a separate section to a possible pro-verb origin.

(3)   do   me aefter þinum wordum wel gecwician
do.PRS me after your   words   well quicken.INF
'do well quicken me following your words' (Paris Psalter 9: 118-25)

(4)   Swa doþ   nu þa þeostru þinre gedrefednesse wiþstandan minum
So   do.PRS now the darkness your feeling   resist.INF   my
leohtum larum
light   teachers
'So now the darkness of your feelings does resist my light teachers' (ÆCHom:
10.123)

In two of the examples above, however, an auxiliary interpretation can be safely ruled out. In example (2), Dietze interpreted the form *settan* as an infinitive verb. However, as suggested by Ellegård (1953: 16), the form *settan* is likely to be a variant of *setton*, past tense plural, like *timbredon*, past tense of the verb *timbran*. If this is the case, *(ge)don* is used as an anticipative verb and the translation of example (2) would be 'after that they did both, founded new kingdoms and built new cities'. A different reading is given by Clark Hall (1916), who argued that the construction in (2) is an analytic causative construction formed by *(ge)don* and the infinitive *settan* with passive sense, meaning 'they caused kingdoms to be founded'. The example in (3) is, as suggested by Ellegård (1953: 16), a causative construction formed by *(ge)don* and the infinitive *gecwician*. The interpretation of *(ge)don* in example (4) is problematic. The meaning of *(ge)don* in this construction is discussed in detail in section 4.3.1. For now, it will suffice to say that the reading of *(ge)don* is ambiguous, as it can either be interpreted as an auxiliary or as a causative verb in a construction where the causee has been left implicit.

    In addition to these examples, Dietze argues that constructions formed by *(ge)don - þæt*-clause can also be interpreted as auxiliary constructions. This observation has been confuted by Ellegård (1953: 19) and is not supported by the data collected for this study. In fact, in this context *(ge)don* is used either as a causative verb (5) (see section 4.3.1.2), or as a lexical verb, in which the *þæt*-clause is a complement of the object of *(ge)don*, see (6).

(5)   he deð   þæt fyr cymð ufene,
he do.PRS the fire come down
'he makes the fire come down' (ÆCHom I [Pref]:175.96.34)

(6)   Ane misdæda he dyde   þeah to swiðe, þæt he ælþeodige unsida
        One misdeed he do.PST yet   too often, that he foreign   malpractices
        lufode
        loved
        'One misdeed he did too often, which is loving bad foreign habits' (ChronD:

        959.23.1129)

3.2.1.2 Sweet (1898)

Similarly to Dietze (1895), Sweet (1898) argues in his English grammar that some
instances of *do* used as an auxiliary verb can be traced back to Old English. Sweet
identifies a specific use of *(ge)don*, which he refers to as 'half-auxiliary' (1898: 88),
illustrated in examples (7)-(8), as the source of auxiliary *do*.

(7)   Crist   weox   swa-swa oþre cild   doþ
        Christ grow.PST as   other children do.PRS
        'Christ grew up as other children do' (ÆCHom I: 187.247)

(8)   Swa doþ   nu þa þeostru wiþstandan
        So   do.PRS now the darkness resist.INF
        'So does now the darkness resist' (ÆCHom: 10.123)

According to Sweet, half-auxiliary *do* developed into a full auxiliary during the
Middle English period due to analogy with other auxiliary constructions involv-
ing an infinitive complement. The emergence of auxiliary *do* is not described any
further, which is understandable, since Sweet's proposal is part of a grammar.
Thus, it is not clear when the change proposed by Sweet took place and which
auxiliary constructions influenced the development of *do*. Nevertheless, it is in-
teresting that Sweet introduces the analogy with other constructions as a possible
influencing factor in the development of *do*; the role of analogy in the development
of auxiliary *do* will be further discussed in chapter 6.

3.2.1.3 Visser (1963-1973)

Visser (1963-1973) argues that auxiliary *do* developed from factitive *do* used in
anticipative contexts. His account is rather intricate. Visser hypothesises that
the actual source of auxiliary *do* was a non-attested Old English construction
formed by factitive *(ge)don* with an infinitival complement. The assumption that

this hypothetical construction existed is 'only natural' (Visser 1963-1973: 1490), particularly in light of the nominal character of infinitives in Old English and, moreover, that in Old English factitive *(ge)don* could take as a direct object a noun phrase formed by any of the following: a pronoun, a noun, a verb phrase formed by verbs in *-ung*, imperatives or finite verb forms, and finally a clausal complement introduced by *þæt* (Visser 1963-1973: 1489-1490). To support this claim, Visser cites an example of an infinitive used as a direct object, which is given in (9).

(9)   ondrædað syngian
        fear.PRS   sin.INF
        'fears sinning' (Bede: 72.9, from Visser 1963-1973: 1490)

Examples of lexical *(ge)don* with an infinitive similar to (9) are not attested. According to Visser, the absence of factitive *(ge)don* - infinitive is due to the fact that, from a semantic point of view, this construction 'had nothing to recommend itself because it expressed nothing more, or better, than the shorter pattern' (1963-1973: 1490). In other words, since factitive *(ge)don* with an infinitive complement would be semantically equivalent to the finite form of the lexical verb, there was no reason for it to be used in texts. Visser goes on to argue that the hypothetical construction factitive *(ge)don* - infinitive developed into auxiliary *do* once the words intervening between *(ge)don* and the infinitive complement were deleted. Visser claims that this crucial development was supported by the presence of another Old English construction 'with the periphrastic formula' (1963-1973: 1490), namely anticipative *(ge)don*. In other words, Visser posites that anticipative *(ge)don* facilitated the deletion of the material between factitive *(ge)don* and the lexical verb, giving thus rise to auxiliary *do*.

The account proposed by Visser presents several problems. First and foremost, he assumes that the source of auxiliary *do* lies in a construction, lexical *(ge)don* - infinitive, that is not attested. Secondly, he argues that in Old English such a construction is not attested because it was semantically equivalent with the finite form of the verb. The emergence of lexical *(ge)don* - infinitive in Middle English, then, implies that the construction acquired some sort of semantic or syntactic relevance. Visser, however, does not provide any further indication about what function lexical *(ge)don* - infinitive may have developed. Furthermore,

the development proposed by Visser whereby the words between *(ge)don* and the infinitive were deleted lacks motivation; why such a process should have occurred, in fact, is not explained. Denison (1985: 49) is also critical of this hypothetical development, saying that 'it is not clear whether he regards such a process as actually occurring or as merely theoretical support for his hypothesis'.

Finally, the data that Visser presents in support of his argument are not entirely beyond doubt. The anticipative constructions that Visser quotes (1963-1973: 1491) in which the lexical verb is an infinitive, are ambiguous. Examples like (10), which Visser considers anticipative instances, can also be interpreted as instances in which *(ge)don* is appositive verbs inflected for the present subjunctive and depends on the imperative *utan* (see in particular Mitchell 1985: §666 and Denison 1993: 263).

(10)   Ac utan don   swa us ðearf is, helpan   ure sylfra.
        But let's do.INF as   us need is, help.INF our selves.
        'But let's do what is necessary for us, which is to help ourselves' (WHom:174.684)

3.2.2   Causative origin

Research focusing on causative *do* being the source of auxiliary *do* has produced a robust body of work. Starting from the late 19th century, scholars have seen in the structural resemblance between the construction causative *do* - infinitive and auxiliary *do* a possible connection. However, in earlier studies the details of the development causative > auxiliary verb was not explained in great detail. It is only with the publication of Ellegård's (1953) study that the causative hypothesis has acquired a more precise formulation and has become the mainstream account. Ellegård had a great impact on later studies that investigated not only the origin of auxiliary *do*, but also the process of regulation that took place in the Modern English era. Therefore, given the importance of Ellegård's study, this section is divided in two sub-sections: in the first, the discussion will focus on pre-Ellegård studies, while the second section is entirely dedicated to Ellegård's work.

3.2.2.1 Causative hypothesis before Ellegård

3.2.2.1.1 Abbott (1875)

The first account in which it is assumed that auxiliary *do* derives from causative *do* has been proposed by Abbott (1875) in his shakespearean grammar. He argues that when causative *do* appeared in constructions in which the causee was left implicit, *do* could lose its causative meaning. It is interesting to see how Abbott envisions this change. Unlike other studies discussed in this chapter, Abbott argues that crucial for the loss of causative meaning of *do* is not the ambiguity that can arise when the subject of the infinitive complement was implicit. Instead, he claims that the morphological changes that the verbal system went through in Middle English played a decisive role in the emergence of the auxiliary construction. Specifically, the key change in the account proposed by Abbott is the development of the infinitive ending. In Old English, infinitive verbs ended in -*an*, while during the Middle English period the ending first weakened to -*en* and later disappeared. Abbott argues that when the infinitive verb lost its ending, *do* lost any notion of causation and developed into an empty auxiliary verb. Abbott hypotheses that causative constructions like *do stripen* developed into *do strip* and, since the infinitive ending was lost, *do* too lost any notion of causation. No further explanation is provided on the details of this development. It is worth remembering that, as in the case of Sweet (1898) cited above, this account is included in a grammar. Abbott's ultimate interest was to offer a detailed description of the grammar used by Shakespeare and, therefore, he did not devote much attention to the circumstances that led to the development of auxiliary *do*.

There are, however, two interesting observations that he made. Firstly, Abbott noticed some variation in the use of auxiliary *do* in affirmative declaratives in Shakespeare, especially with the verb *eat*; according to Abbott, auxiliary *do* is used in these cases to disambiguate between the present and the past form of 'eat'. Secondly, he pointed out that *do* appears to be used for metrical reasons and in what he calls 'excited narrative' to express emphasis (1875: 215).

3.2.2.1.2 Zilling (1918)

Zilling (1918) has carried out an interesting philological investigation in which he examines the use of auxiliary *do* in different versions of the *Cursor Mundi* (c. 1300) and in *Sir Beues of Hamtoun* (c. 1300). The four versions of the *Cursor Mundi* that Zilling included in his study are manuscripts C, G, T and F. Version C and G were composed before 1350, F after 1350 and T before 1425. The different exemplars of the *Cursor Mundi* are particularly interesting because they represent different dialectal versions of the same text at different points in time. While manuscripts C, G and F are witnesses of the Northern dialect, manuscript T is assumed to have been written in an area south of Hereford (Zilling 1918: 4), representing therefore the Western Midlands dialect.

In his work, Zilling distinguished between *do* having a 'strong meaning', i.e. causative *do*, and a 'weak meaning', i.e. auxiliary *do* (1918: 7-8). The two constructions, taken from manuscript C, are shown in (11) and (12), respectively.

(11) siþen   he did   þam all oute driue
      afterward he do.PST them all out   move.INF
      'after that he made [someone] chase them all out' (Cursor Mundi 1909)

(12) þat þus did   cast   þair goddes dun.
      that thus do.PST cast.INF their gods   down.
      'that so cast down their gods.' (Cursor Mundi: 11744)

The general tendency observed by Zilling is that strong *do* is either preserved or substituted by another causative verb, while weak *do* is replaced by the finite form of the verb, particularly in the more recent versions of the text. An example of weak *do* being replaced by the finite form of the verb is provided in (13)-(16); in manuscripts C, G and F we see the construction with *do*, while in the later (and more southern) version T it has been replaced with the finite verb of the main verb.

Cursor Mundi 11744

(13) C - þat þus did cast þair goddes dun.

(14) G - þat þus did cast his goddes dune.

(15)   F - Atte þus dide caste his goddes doun

(16)   T - þas þus cast his goddes doun

However, it is important to point out that the replacement shown above does not occur only for 'weak' *do*, but also in cases where *do* has a 'strong', i.e. causative, meaning, as Zilling himself acknowledges. This suggests that in some contexts, authors of different eras and dialects might find it difficult to interpret the pattern *do* - infinitive and therefore to distinguish between auxiliary and causative *do*.

The same tendencies identified by Zilling in the *Cursor Mundi* can be observed in *Sir Beues of Hamtoun*. While Zilling does not directly address the issue of the origin of auxiliary *do*, his investigation provides a significant, albeit partial, picture of the situation between the beginning of the 14th and the first half of the 15th century. The fact that in the Western Midlands version of the *Cursor Mundi* the author had problems in some cases to interpret the construction *do* - infinitive is significant. In fact, this might indicate that in the Western Midlands dialect auxiliary *do* was more common than causative *do* and that auxiliary *do* was an established feature of the language spoken in that area; these observation are supported by the results of the analysis presented in chapter 5.

3.2.2.1.3 Royster (1922)

Although the study carried out by Royster (1922) is a thorough investigation of the semantic and syntactic features of Old English causative verbs, he also discussed the possible development of auxiliary *do* from causative *do*. Royster noticed that in his data causative *(ge)don* with an infinitive was not frequent at all in Old English, since he recorded only 14 instances in prose and 3 in poetry (1922: 337). Considerably more common was the construction with a *þæt*-clause complement, of which Royster found 73 examples (61 in prose and 12 in verse). In Royster's data, causative *(ge)don* - infinitive occurs primarily in Latin translations, in particular to render the corresponding causative construction *facere* -

infinitive.

An important contribution made by Royster concerns the analysis of the strategies employed by Old English scribes in texts that are translations from Latin. Specifically, he observed that even when the Latin text has *facere* - infinitive, Old English writers preferred the construction with a *þæt*-clause over the infinitive complement (see section 4.3). Furthermore, Royster observed that in Middle English *do* - *þæt*-clause complement became more sporadic, while the use of the infinitive after causative *do* increased in frequency. According to Royster, this is mainly due to a different writing style of Middle English authors. In fact, Royster claims that while Old English writers used a highly formal style characterised by a higher use of *þæt*-clause complements, Middle English compositions have a more colloquial style, in which an infinitive complement is preferred. In addition, Royster states that infinitive complements were more used in the spoken language, whereas a *þæt*-clause complement was preferred in writing texts. It follows then that in Middle English texts there are features typical of the spoken language that are not present in the highly formal Old English texts. However, an evident obstacle for testing this proposal is the absence of written evidence representing more colloquial Old English, as Royster himself recognises. Overall, Royster concludes that 'the presumption to be drawn from Middle English usage that *(ge)don* plus infinitive was used in the popular Old English speech is stronger than the argument against such an assumption based upon the narrowly restricted appearance of the construction in the written record of the chosen Old English dialect' (1922: 345).

A crucial aspect of the account proposed by Royster is the suggestion that in some Old English examples of *(ge)don* - infinitive, *(ge)don* had already lost its causative meaning. As argued by Grimm (1819-1837) and Steig (1884), there were some examples in Old Saxon and Middle High German of *tun* 'do' used as a tense marker. Royster argues that if *tun* had developed into a tense marker, it cannot be excluded that a tense marker use was available for *(ge)don* too. Specifically, he suggests that such a use could occur only in contexts where the infinitive verb had more than one interpretation. The example provided by Royster to show his point is given in (17). According to Royster, *(ge)don* can have two possible readings depending on the meaning of the infinitive *gecwician*, which can be interpreted as

intransitive, meaning 'to be alive, to come to life', or transitive, with the meaning of 'to make alive, to animate' (1922: 347). If *gecwician* is interpreted as an intransitive verb, Royster claims that *me* is the direct object of *(ge)don* and the meaning of the construction is causative, see the idiomatic translation in (17a) below. Conversely, if *gecwician* is interpreted as transitive, *me* is the direct object of *gecwician*; in such a case, Royster argues that the meaning of *(ge)don* may not be causative, but it would only express tense, see (17b).

(17)   do   me æfter þinum wordum wel gecwician
        do.PRS me after your   words   well quicken.INF
        (a) 'make me well quicken - (b) quicken me well following your words'

        (Paris Psalter 9: 118-25)

Although Royster did not spell out how causative *(ge)don* may have developed into auxiliary *do*, his study provides interesting ideas that will be further expanded in this thesis, particularly the translations tendencies of Old English authors and the possibility that the interpretation of some Old English causative constructions may be ambiguous.

3.2.2.1.4   Engblom (1938)

The study carried out by Engblom (1938) is an attempt to provide a more comprehensive analysis of the origin of auxiliary *do*. On the basis of the modern use of *do* in emphatic contexts, Engblom starts his analysis by distinguishing between emphatic *do*, as in 'Reward him he did' (1938: 48), and non-emphatic *do*, which is the *do*-construction used in negatives and interrogatives. Interestingly, Engblom postulates a different origin for emphatic and non-emphatic *do*. In fact, emphatic *do* would derive from *(ge)don* used as a anticipative, while non-emphatic *do* would develop out of causative *(ge)don*.[2]

Focusing on non-emphatic *do*, Engblom argues that this construction derives from Middle English causative *do*. How the change happened, however, is not explained by Engblom, who simply states:

'In ME causative *do* was very common in affirmative declarative sen-

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[2]Note that the anticipative > emphatic development proposed by Engblom differs from the accounts presented by Dietze (1895) and Sweet (1898), who argued that anticipative *(ge)don* developed into auxiliary *do*.

tences. In many cases it was ambiguous and difficult to distinguish from the auxiliary [...]. In late ME and in early NE (Modern English) the use of *do* as a causative decreased while the auxiliary *do* grew commoner. It is obvious that the causative gradually weakened into an auxiliary' (1938: 16).

No further explanation is given in terms of semantic and syntactic development. In his final remarks, Engblom pays attention to a possible role that the spoken language may have had in the development of auxiliary *do*. Specifically, Engblom argues that since a great number of early auxiliary examples are attested in southern texts, the construction was probably already common in the spoken language and only later was introduced in written language. The consequence of this claim is that Engblom brings forward the development of auxiliary *do* to a period which should correspond to the end of the Old English period. The reason why auxiliary *do* was not adopted in written text, however, is not discussed any further by Engblom.

3.2.2.2 Ellegård (1953)

3.2.2.2.1 Introduction

Ellegård (1953) is still the most comprehensive survey on the history of auxiliary *do*. His study is divided into three parts: the first two are dedicated to the origin of auxiliary *do* (1953: 15-150) and to the regulation of *do* in interrogative, negative and imperative sentences and in emphatic contexts (1953: 151-210), while the last part provides the bibliographical references that Ellegård used in his study (1953: 213-320).

In brief, Ellegård argues that auxiliary *do* originated from *do* used as a causative verb in early Middle English. Initially, he provides a theoretical explanation of the conditions necessary for the change to occur (section 3.2.2.2.2), which is followed by an analysis of all the instances of *do* in a selection of Middle English texts (section 3.2.2.2.3). The results of his investigation support the hypothesis that auxiliary *do* developed from causative *do* and, moreover, that the development took place in the Western Midlands dialect around the 13th century (section 3.2.2.2.4).

3.2.2.2.2 The mechanisms of the change

In his study, Ellegård follows Stern's (1931) terminology in distinguishing between 'equivocal' and 'ambiguous' instances of *do*. 'Equivocal' means that regardless of the interpretation of the single elements, the meaning of the sentence does not change, while 'ambiguous' is used to indicate the items whose meaning changes according to the interpretation chosen (1931: 356). According to Ellegård, there are some causative constructions involving *do* in early Middle English that can be interpreted as equivocal. The presence of equivocal cases provides the possibility for the change causative verb > auxiliary verb, which Ellegård calls permutation, to occur. The notion of permutation is taken from Stern (1931), who defined this mechanism as follows.

> 'Permutations are unintentional sense-changes in which the subjective apprehension of a detail - denoted by a separate word - in a larger total changes, and the changed apprehension (the changed notion) is substituted for the previous meaning of the word' (Stern 1931: 361, cited in Ellegård 1953: 29).

According to Ellegård, cases in which causative *do* is equivocal and, therefore, where the permutation causative-auxiliary could happen are attested in Middle English texts. Specifically, equivocal examples are those in which the subject of the infinitive is left implicit, as in example (18).

(18)   Henry ... þe walles did   doun felle,   þe tours bette he doun
        Henry ... the walls do.PST down fell.INF, the towers beat he down
        (a) 'Henry ... made the walls fell down and he beat down the towers'

        (b) 'Henry ... did fell down the walls and he beat down the towers' (Peter Langtoft's Chronicle, [1307?]: 97-22, from Ellegård 1953: 28-29)

The crucial point in the development proposed by Ellegård is that regardless of the interpretation chosen, the meaning of the sentence does not change, as the lexical verb itself could be interpreted causatively (see also Denison 1993: 278). In fact, Ellegård argues that the causative construction *did felle* could be interpreted in two ways. In the first one, *did* expresses the notion of causation and *felle* is the infinitive complement, with the meaning 'to fell/be felled'. In the second one,

70

did has no causative meaning and *felle* is interpreted as 'caused to fell/be felled'. In his account, the causative and the non-causative reading are considered by Ellegård 'functional synonyms' (Ellegård 1953: 29, from Stern 1931: 356). This would not be the only case in which both interpretations are available, as Ellegård (1953: 108) claims that 'in the great majority of cases the difference of meaning was too slight to be of much practical importance'.

A fundamental requirement in order for permutation to take place concerns the frequency with which the new interpretation occurs in contexts where a new interpretation is possible. Stern argues that the frequency has to be 'sufficient' in order to establish a 'firm association between the word [...] and the notion that comes to form its secondary meaning' (1931: 357). In Stern's account, 'sufficient frequency' refers to the absolute frequency, namely the number of times that an equivocal construction occurs. Ellegård, on the other hand, claims that crucial is not the absolute but the relative frequency of the equivocal instances, which is the frequency of *do* with the new meaning compared with the frequency of *do* without the new meaning. Thus, in order for permutation to occur, the relative frequency of *do* instances with the new meaning has to be higher than cases in which *do* is used with its original meaning (1953: 32-33).

Following this requirement, Ellegård argues that the permutation causative verb - auxiliary verb must have taken place in an area and in a period in which equivocal *do* constructions were more frequent than unambiguous causative instances.

3.2.2.2.3   Constructions analysed and data set

Ellegård includes in his analysis four causative verbs, *do*, *maken* 'make', *ger* 'do, perform' and *cause* 'cause'.[3] Each verb was classified according to the syntactic pattern in which it appears, see table 3.2.

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[3] *Let* and *haten* have only been marginally taken into account, particularly when they appear in the construction without the causee expressed.

Verb - Accusative - Infinitive	Infinitive without *to*	*do ac, make ac, ger ac, cause ac*
	Infinitive with *to*	*do to ac, make to ac, ger to ac, cause to ac*
Verb - Infinitive	Infinitive without *to*	*do x, make x, ger x, cause x*
	Infinitive with *to*	*do to x, make to x, ger to x, cause to x*

Table 3.2: Classification of the constructions analysed by Ellegård.

The *do x* class is further divided by Ellegård into three subclasses: periphrastic (*do x p*), causative (*do x c*) and equivocal or ambiguous instances (*do x ec*).[4] The distinction between unambiguously causative, ambiguous and equivocal instances *do* is entirely based on Ellegård's interpretation of the examples, as 'there is no formal and entirely objective criterion distinguishing the periphrastic instances from the rest' (1953: 37) (see section 2.4).

Examples of unambiguous causative *do* (*do x c*), equivocal *do* (*do x ec*) and periphrastic (*do x p*) are given in (19)-(21).

do x c

(19)　And wulleth that if the seid Thomas paie or do　　paie　　to the seid
　　　And wills　that if the said Thomas pay　or do.PRS pay.INF to the said
　　　Margaret yerly　xviij li.　　as is aboveseid,
　　　Margaret yearly 18　pounds as is said-above,
　　　'And wills that if the said Thomas pays or makes [someone] pay 18 pounds

　　　yearly to the said Margaret as is said above,' (Paston Letters: 229.39)

do x ec

(20)　Gode paniers dede　he make.
　　　Good paniers do.PST he make.INF.
　　　'He (a) made [someone] make good paniers' - (b) He made good paniers'

　　　(Havelock: 761)

do x p

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[4]This additional classification only applies to *do*; it has not been made for *make*, *ger* and *cause* (1953: 38).

(21) alle þe men / þat of þat lond doz   come
      all the men / that of that land do.PRS come.INF
      'all the men that come from that land' (South English Legendary: 50.26)

The data set used by Ellegård is formed by verse and prose texts written in Western, Eastern and Northern dialects in a period that goes from the 13th to the 15th century (for a more detailed discussion on the dialectal classification adopted by Ellegård see section 5.5.1.4). The size of the data set is shown in table 3.3:

	Verse		Prose	
	Number of texts	Number of words	Number of texts	Number of words
West 13th century	14	60,000	8	370
West 14th century	13	15,000	2	1,000
West 15th century	7	10,000	9	1,100
East 13th century	3	25,000	1	75
East 14th century	9	21,000	1	100
East 15th century	11	27,000	3	900
North 13th century	/	/	/	/
North 14th century	7	26,600	2	120
North 15th century	11	30,000	4	190

Table 3.3: Size of the data used by Ellegård (1953: 44, Table 1).

A methodological flaw that is seldom discussed is that Ellegård included in his data set only texts that have auxiliary *do*, then randomly selected 10 pages of each text and counted the number of sentences with and without *do*, while he completely excluded texts that do not contain auxiliary *do* (1953: 159). This methodological practice has to be born in mind when interpreting the numbers on the frequency of causative, equivocal and auxiliary *do* presented in the following section.

3.2.2.2.4 Results

The results of Ellegård's study are as follows. Starting with the numbers concerning causative *do*, the relative frequency of the patterns *do ac* and *do x c* is much higher in the Eastern dialect in both verse and prose, while in the Western dialect causative *do* is only sporadically attested, as shown in table 3.4.

	Western		Eastern		Northern	
	Verse	Prose	Verse	Prose	Verse	Prose
13th century	**0.2** per 1000 verses	**0** per 100 pages	**2.7** per 1000 verses	**13.3** per 100 pages	/	/
14th century	0.4 per 1000 verses	0.2 per 100 pages	2.8 per 1000 verses	18.0 per 100 pages	2.9 per 1000 verses	0.8^5 per 100 pages
15th century	0.7 per 1000 verses	0.2 per 100 pages	0.6 per 1000 verses	4.0 per 100 pages	0.7 per 1000 verses	3.7 per 100 pages

Table 3.4: Relative frequency of causative *do*, based on Ellegård (1953: 44, Table 1), given the sample size provided.

The comparison between causative *do* and the other causative verbs *make*, *ger*, *let*, *het* and *cause*, shows that causative verb *do* accounts for almost the entirety of the causative constructions in the Eastern dialect, whereas in the Western and in the Northern dialects it is rare, see table 3.5.

	Western		Eastern		Northern	
	Verse	Prose	Verse	Prose	Verse	Prose
13th century	9/559 **1.6%**	0/82 **0.0%**	67/78 **85.9%**	10/11 **90.9%**	/	/
14th century	6/137 **4.4%**	2/234 **0.9%**	58/85 **68.2%**	18/18 **100.0%**	78/291 26.8%	1/21 4.8%
15th century	7/34 20.6%	2/290 0.7%	16/240 6.7%	36/433 8.3%	20/188 10.6%	7/28 25.0%

Table 3.5: Proportion of causative *do* compared with all causative verbs (*make*, *ger*, *let*, *het*, *cause*), based on Ellegård (1953: 44, Table 1).

Turning to the statistics regarding auxiliary *do*, the comparison between auxiliary, equivocal and causative instances of *do* in verse shows that the auxiliary construction is more frequently attested in the Western dialect from the 13th century, while in the Eastern dialect it became common only in the 15th century,

see table 3.6.

	Western Verse			Eastern Verse		
	Auxiliary *do*	Equivocal *do*	Causative *do*	Auxiliary *do*	Equivocal *do*	Causative *do*
13th century	57/105 **54.3%**	39/105 **37.1%**	9/105 **8.6%**	0/71 **0.0%**	4/71 **5.6%**	67/71 **94.4%**
14th century	32/66 **48.5%**	28/66 **42.4%**	6/66 **9.1%**	15/237 **6.3%**	164/237 **69.2%**	58/237 **24.5%**
15th century	53/88 60.2%	21/88 23.9%	7/88 7.9%	253/393 64.4%	124/393 31.6%	16/393 4.1%

Table 3.6: Proportion of auxiliary *do* - equivocal *do* - causative *do* in verse texts, based on Ellegård (1953: 44-46, Table 1-4).

The same comparison carried out in prose texts shows that auxiliary *do* is more frequent in the Western dialect than in other dialects. The first appearance, however, is much later than in verse. In the Eastern dialect, auxiliary *do* appears only in the 15th century, while in the Northern dialect it is not attested at all, see table 3.7.

	Western Prose			Eastern Prose		
	Auxiliary *do*	Equivocal *do*	Causative *do*	Auxiliary *do*	Equivocal *do*	Causative *do*
13th century	0 **0.0%**	0 **0.0%**	0 **0.0%**	0 **0.0%**	0 **0.0%**	67/71 94.4%
14th century	2/7 **28.5%**	3/7 **43%**	2/7 **28.5%**	0/33 **0.0%**	15/33 **45.5%**	18/33 **55.5%**
15th century	14/38 36.9%	22/38 57.9%	2/38 5.2%	2/129 1.5%	91/129 70.5%	36/129 28.0%

Table 3.7: Proportion of auxiliary *do* - equivocal *do* - causative *do* in prose texts, based on Ellegård (1953: 44-46, Table 1-4).

The dialectal differences in terms of relative frequency of causative *do* and auxiliary *do* in Western and Eastern texts led Ellegård to draw the following conclusions. On the one hand, *do* as a causative verb is well-established in the Eastern dialect, but it occupies a weak position in the Western one; on the other hand, auxiliary *do* is highly frequent in the Western dialect, whereas in the Eastern one it becomes frequent only in the 15th century.

Thus, Ellegård concludes that auxiliary *do* originated in the Western dialect. He argues that 'the conditions we assumed to be necessary for a sense-change

causative-periphrastic were present in one dialect around 1300 - the Western one - whereas in the East and the North unambiguously causative *do* had a very strong position at that time' (1953: 47). Also, Ellegård suggests that auxiliary *do* originated in verse, given the high frequency with which it is found from the 13th century: 'periphrastic *do* was confined to poetry and causative *do* to prose. But eventually periphrastic *do* was introduced in prose - and, we may surmise, in colloquial speech as well' (1953: 108).

3.2.2.2.5 Comments on Ellegård's account

Ellegård's study represents the most exhaustive investigation that deals with the development of auxiliary *do*. Compared to previous accounts, his study is innovative; alongside a detailed philological examination, which as we have seen had characterised most of earlier works as well, Ellegård included a thorough quantitative analysis which, still today, is an invaluable point of reference. However, there are some points of discussion which should be addressed. Firstly, the possibility for *fell* in example (18) to mean 'cause the walls to fell' is not entirely convincing (see Visser 1963-1973 for a similar objection). In addition, Denison (1993) argues that there is no chronological support for the development causative > equivocal > auxiliary proposed by Ellegård, in particular with respect to the second stage. Ellegård himself acknowledges this issue several times in his study (cf. 1953: 55, 62, 118), but he does not offer a possible solution. Ultimately, he claims that 'we cannot be sure that periphrastic *do* [...] is really due to a permutation of meaning of the causative, or exclusively to this' (1953: 118-119). The second problem regards the role, if any, that poetry played in the development of auxiliary *do*. On this matter, the position taken by Ellegård is contradictory. Initially, he seems to argue that the change took place in poetry, particularly when he claims that auxiliary *do* was 'a peculiarity of the poetic diction, belonging to the paraphernalia of the verse-maker's craft', and that it began to 'gain ground in colloquial speech after having established itself in verse' (1953: 146-147). In his closing remarks, however, Ellegård provides a different explanation, in which he reconsiders the role of poetry and argues that 'it is not necessary to assume that the periphrasis was in fact a product of the language of poetry' (1953: 208). Lastly, it is worth mentioning a further issue that is raised by Ellegård himself and concerns the fact

that auxiliary *do* developed in an area, the South West, where causative *do* was not particularly frequent. Specifically, the frequency with which causative *do* occurs in the Western dialect is lower compared to other causative verbs, with only 9 examples out of the 105 causative constructions (8.6%) in Ellegard's data set (see table 3.6). Ellegård claims that the main issue regarding the low frequency of use of causative *do* in the Western dialect is that, in order for the change to occur, causative *do* has to be sufficiently frequent. For this reason, Ellegård (1953: 55) defines as 'abrupt' the appearance of ambiguous and auxiliary *do* instances and, moreover, he argues that the development of auxiliary *do* still 'remains a problem'. In the diachronic account presented in chapter 6, the low frequency of causative *do* in the Southern and in the Western dialects is not considered a limitation for the emergence of auxiliary *do*. In fact, it will be argued that the paucity of causative *do* is one of the factors that pushed the grammaticalisation of auxiliary *do* (see section 6.3.2).

3.2.3 Aspectual marker origin

There are only two scholars that proposed an account in which *do* acquired aspectual contours before developing into an auxiliary, namely Denison (1985) and Garrett (1998). Although grouped together in this section, their accounts largely differ from one another. Firstly, the starting points are different — causative *do* for Denison and lexical *do* for Garrett. Secondly, the aspectual connotations that *do* is assumed to have developed are also different; while Denison proposes an intermediate stage when *do* acquired a perfective meaning, Garrett claims that *do* was used as a habitual marker. Thus, it is important to stress the fact that while Denison and Garrett's accounts are categorised together, they are by no means similar.

3.2.3.1 Denison (1985)

As Denison (1985) states, his proposal revisits the same data used by Visser and Ellegård, which have been discussed above in sections 3.2.1.3 and 3.2.2.2. Denison's intention is to discuss the development of auxiliary *do* in the context of other syntactic changes and to include other factors that have been left out in previous studies. His account runs as follows. Denison argues that a new construction

formed by the pattern *do* - infinitive with a perfective meaning developed during the 13th century. The predecessor of this new construction is causative *do* - infinitive, which according to Denison is a later development of the causative construction *do* - NP2 - INF that entered the language system in late Old English under the influence of the causative Latin construction with *facere* (1953: 52). The acquisition of perfective connotations of causative *do* is explained by Denison in the following way. While semantically the causative construction with the pattern *do* - NP2 - infinitive is unambiguously causative, the other pattern with an implicit NP2 may acquire, in some contexts, a different interpretation. Specifically, ambiguity can arise with respect to who the performer of the action expressed by the infinitive is. Denison claims that there are examples in which contextual clues allow us to rule out a causative reading and, therefore, we have to interpret *do* as non-causative. This new construction would be used to 'focus not on who did it but on what happened' (1985: 53). More precisely, he states that the construction had a perfective or a completive meaning, expressing 'something like "achieve (the action of the infinitival VP)", but without agentive associations' (1985: 53). Given the completive/perfective meaning of the construction, it is assumed by Denison that *do* was incompatible with verbs that do not express accomplishment (see Vendler 1967 and Dowty 1979). In this respect, Denison, without however providing exact numbers, claims that in the 13th and 14th century the vast majority of the infinitives that occur in combination with *do* are accomplishments. Achievements occur as well, though less frequently, while activities and especially states, as Denison expected, are very rare.

A crucial aspect of the account proposed by Denison is that the emergence of auxiliary *do* is connected to other changes that affected the language system in the Middle English era. Among those, Denison argues that the period between the 11th and the 13th century saw the development of new aspectual markers, which began to come about due to the decline of the Old English prefixal system. Thus, Denison classifies *do* - infinitive as 'an experimental form of Aktionsart marking, later altered in structure and function' (1985: 53). Another change identified as relevant for the development of *do* by Denison concerns the developments that the causative system went through in early Middle English. In that period, new causative verbs were introduced, as *gar* in the Northern dialect and *maken* in

the Southern, while others, particularly *hatan*, became obsolete. Lastly, a further factor included by Denison is the decline of the pattern V - NP2 - INF with verbs expressing commands and causation. This pattern, according to Denison, became unproductive towards the end of Middle English and, as a result, the construction *do* - NP2 - INF gradually fell out of use. With the decline of *do* - NP2 - INF and the other changes discussed above, Denison argues that *do* - infinitive became isolated. However, rather than disappearing, the construction was kept in the language system and entered the modal subsystem, probably due to structural similarities with other modals. At this point, Denison argues that the perfective meaning had already been lost and, finally, at the beginning of early Modern English 'the true *do* periphrasis has now arrived' (1985: 54-55).

The account presented by Denison is interesting. Differently from earlier studies, the development of auxiliary *do* is understood as being connected to other changes that characterised the language system in that period. In particular, the changes within the causative system and the decline of V - NP2 - INF are meant to have played an important role in the rise of auxiliary *do*. However, the intermediate step between causative and auxiliary *do* in which *do* acquired perfective connotations is less convincing. In fact, it may be the case that the high frequency of verbs expressing an accomplishment observed by Denison is a relic of a previous use as a causative verb, since it has been argued that all causatives are accomplishments (Dowty 1979). In other words, the tendency observed by Denison may be due to structural persistence (see Breban 2009). In addition, a perfective use of *do* does not fit with the fact that in several dialects of the south of England, auxiliary *do* was and still is used as an habitual marker.

3.2.3.2 Garrett (1998)

The second account which hypothesises that auxiliary *do* derived from an early use as an aspectual marker is the one provided by Garrett (1998). Garrett rests his proposal on the observation that auxiliary *do* in some modern dialects is used as a habitual marker. The notion of 'habitual' used by Garrett is based on Comrie (1976: 27-28, cited in Garrett 1998: 291), who argues that habitual sentences 'describe a situation which is characteristic of an extended period of time, so extended in fact that the situation referred to is viewed not as an incidental

property of the moment but, precisely, as a characteristic feature of a whole period'. This type of action is generally coded by *used to* and *would* in standard English, but there are some southern dialects, particularly in Dorset and Somerset, which make use of *do* to express such recurrent actions. Habitual *do* is also attested in Irish English and in West Atlantic English, including creoles and Caribbean English (see also Holm 1989: 407).

The account proposed by Garrett runs as follows. He investigated 195 non-causative, i. e. auxiliary, examples of *do* cited in Ellegård (1953) from texts dated c.1400 and earlier, with the addition of Chaucer, Gower and Wyclif. 118 of the 195 (60.5%) auxiliary examples occur, according to Garrett, in habitual contexts. The criteria used by Garrett for interpreting a construction as habitual are: the presence of certain adverbial expressions as *i-lome* 'frequently' in example (22), generic verbal arguments in sentences where the action does not need to be habitual but an habitual interpretation is possible, as in (23),[6] and cases in which the surrounding context supports a habitual reading, e.g. (24) (examples and translations are from Garrett 1998: 297-298).

(22)   A preost was gwilene in one stude þat   dude   him baþie i-lome
        A priest was once   in one place that do.PST him bath frequently
        'A priest was once in a place that frequently bathed him' (Sleg 423/97)

(23)   þat liueþ on likyng   out of lay his hap   he deþ   ful harde   on
        that lives on pleasure out of law his fortune he do.PRS full harden in
        hete
        anger
        'He who lives on unlawful pleasure laments his fortune bitterly' (Middelerd

        for mon wes mad 18-19)

(24)   Blessid be þe wombe þat bare þee, and þe tetis þat þou didst   soke
        Blessed be the womb   that bore you, and the teats that you do.PST suck

        'Blessed be the womb that bore you, and the teats that you sucked' (Serm.

        1.379/26)

With respect to the origin of habitual *do*, Garrett argues that the source of such

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[6]Garrett acknowledges that in such examples the action expressed does not need to be habitual. However, he analyses them as habitual since 'habitual aspect marking is nonetheless suitable given the overall characterizing context' (1998: 297).

habitual instances lies in the use of *do* as a lexical verb followed by a bare singular object noun. The development proposed is the reanalysis of *do* as a habitual marker and the reinterpretation of the direct object as a non-finite verb, as illustrated below (from Garrett 1998: 303).

lexical *do* - deverbal noun > habitual *do* - simplex infinitive

In order for this reinterpretation to take place, it is necessary that the form and the meaning of the direct object were ambiguous with the form and the meaning of the corresponding verb. Garrett argues that this type of ambiguity arose in early Middle English, when a number of changes affected the verbal endings. The Old English infinitival ending *-an* first lost the nasal element in early Middle English, being thus simplified to *-a*, and later was further reduced to *-e* before being lost towards the end of the Middle English period. During this set of changes, Garrett claims that there was a period in which both infinitives and accusatives ended in *-e* (1998: 304). Garrett situates this period between the 13th and the 14th century in the South West dialect, which corresponds to the same area where habitual *do* is first attested.

Semantically, Garrett identifies the class of deverbal action nouns as the one to have the necessary requirements in order for the reanalysis to take place. An example that he provides is the deverbal action noun *gife* 'the action of giving', which pairs with the infinitive *gife* 'to give' (Garrett 1998: 308). In light of these similarities in both form and meaning, Garrett argues that ambiguity could arise and that the original pattern with lexical *do* plus a deverbal noun could be reinterpreted (Garrett 1998: 303). According to Garrett, the presence of *do* in the construction 'lexical *do* - deverbal noun' is semantically redundant, since the meaning of the noun alone describes the type of action performed. As such, the omission of *do* would not alter the meaning of the construction. Important for the rise of habitual meaning is the presence of a bare object that, Garrett claims, would signal an on-going, imperfective activity where 'no specific entity, but instead the general of sortal class of such entities is involved' (Hopper and Thompson 1984: 711, cited in Garrett 1998: 310). Thus, it is the combination of morphological properties and semantic features that would allow lexical *do*

- deverbal action noun to be reinterpreted as habitual *do* - infinitive. Garrett provides further typological support, as in early stages in non-standard German dialects the verb *tun* - infinitive construction denoted habitual activities (see also Stein 1990).

The last stage reconstructed by Garrett concerns the development of habitual *do* into an auxiliary. In brief, Garrett hypothesises that *do* lost its aspectual meaning in contexts in which a non-habitual interpretation was possible. Then, non-habitual *do* - infinitive was reinterpreted as a particular form of pro-verb *(ge)don* in which the infinitive was expressed and not omitted. That is, the construction non-habitual *do* - infinitive is seen as an extension of the use of pro-verb *do.* In sum, Garrett considers what he analysed as habitual examples of *do* as the main source of the modern auxiliary construction, but the final reinterpretation of *do* into an auxiliary was supported by pro-verb *do.* At this point, *do* entered the auxiliary system and habitual *do* was preserved in some peripheral areas.

Garrett's account presents some issues. The first concerns the habitual interpretation he assigns to Middle English instances of *do.* For instance, the interpretation of example (23) provided by Garrett is doubtful, since the surrounding context does not give enough clues that allow us to interpret this type of examples as habitual, as Garrett himself acknowledges. More generally, the parameters he furnishes to identify habitual actions are not convincing. Furthermore, the hypothetical stage in which *do* - infinitive was interpreted as a particular type of pro-verb construction with an expressed infinitive has no written evidence. While the proposal that pro-verb *(ge)don* played a role in the change is interesting and will be explored in chapter 6, the hypothetical existence of a construction pro-verb *(ge)don* - infinitive is not convincing. In particular, how the supposed pro-verb *(ge)don* - infinitive construction arose needs a more exhaustive explanation.

3.2.4   Auxiliary *do* as a spoken language feature

In some of the accounts discussed so far, the role of the spoken language in relation to the development of auxiliary *do* has only been touched upon (e.g. Engblom 1938). The reason lies in the fact that little can be said about the features of the spoken language of the Old English period ten centuries later, given the obvious

absence of spoken data. We do have, however, written data. The crucial question is what type of relationship the written language attested in Old English corpora has with the spoken language of the time. It is widely accepted that many of the Old English texts that we have available have been greatly influenced by Latin prototypes. In that regard, it has been suggested that the language of Old English texts presents different degrees of formality; for instance, there are texts in which the aim of the author was to remain as close as possible to the original Latin text, like Bede, and others in which the attempt was to utilise a simple, possibly more colloquial language, like Ælfric (Godden 1992). However, the prestige of Latin in Old English was such that even in the works of Ælfric, a Latin background can still be identified.

Thus, accounts based only on spoken language are difficult to support, since we do not have access to any spoken record and the remaining Old English texts do not allow us to capture the features of the spoken register in written data. Nevertheless, there is an interesting proposal made by Rissanen in two studies (1985; 1991), in which he proposes that auxiliary *do* has been a feature typical of the spoken language from late Old English - early Middle English onwards.

3.2.4.1   Rissanen (1985; 1991)

The approach adopted by Rissanen is to proceed backwards, investigating first the contexts in which auxiliary *do* is used in Present-day English and then moving back to older stages. The examination of Modern English data brought to light that auxiliary *do* is much more frequent in spoken language than in written texts.[7] According to Rissanen, the higher frequency in spoken language is due to two main factors: phonetic prominence and discourse functions. Phonetic prominence concerns the emphatic use of *do*, while discourse functions are those contexts in which *do* is used to introduce or elaborate a new topic and to conclude or summarise a topic (1991: 322).

Rissanen argues that a survey based on written texts would only provide a slice of the linguistic reality. This holds not only for Present-day English, but also for older stages of the English language. Therefore, for earlier stages of the

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[7]The corpora used by Rissanen are the London-Lund Corpus of spoken English and the Lancaster-Oslo/Bergen Corpus of written British English.

language for which we do not have access to spoken data, Rissanen tried to identify those genres that are understood to be more representative of the spoken register, such as private letters and diaries. The corpus chosen by Rissanen is the Helsinki Corpus of English Texts (HC, Kytö 1996).[8] Initially, he focused on the Modern English period (1500-1710), and observed the relative frequency of auxiliary *do* per 10,000 words. The results of his analysis show that auxiliary *do* occurs more frequently in the genres which are considered to be more representative of the spoken language (1991: 326).

More relevant for the purposes of this thesis is the investigation of Old and Middle English. Interestingly, Rissanen claims that it is possible to extend the same line of argument proposed above not only to Middle English, but to Old English as well. In his account, Rissanen does not consider a causative origin plausible, since causative *(ge)don* is scarcely found in the entire Old English period and, in most cases, it appears in translations from Latin. Instead, he claims that auxiliary *do* was already part of the language system in Old English, in which it 'existed in all dialects, at the level of spoken expression' (1991: 334). Then, *do* emerged in written texts only when causative *do* became more frequently used. According to Rissanen, this hypothesis has several benefits. For instance, it would account for the frequent appearance of the construction in early Middle English poetry. In this respect, Rissanen argues that the vast majority of poetical features that began to appear in early Middle English were inherited from the older tradition of oral poems and the use of auxiliary *do* in poems is, therefore, considered a natural consequence.

Finally, Rissanen discusses the reasons why auxiliary *do* had long been confined to the spoken language. Drawing upon Tieken-Boon van Ostade's account (1988), he claims that auxiliary *do* was initially used by children and second-language learners; this type of use led to a certain stigmatisation of auxiliary *do*, which was consequently avoided by the majority of authors. Rissanen argues that the later destigmatisation was triggered by the use in early Middle English poetry, which also explains why auxiliary *do* is attested earlier in poetry than in prose.

There is no data that support the account proposed by Rissanen and, therefore, his line of argument will not be explored any further. Nevertheless, the

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[8]The HC contains 1,572,800 words and covers the period ranging from c. 730 to 1710.

major criticism towards Rissanen concerns his final remark, where he claims that

> 'the acceptance of the spoken-language bias of periphrastic *do* through-
> out its history would mean the rejection of Ellegård's theory that
> *do*-periphrasis originates from the Old English causative *do*. The
> causative use seems too specific and too literary [...] to serve as a
> satisfactory starting-point for the periphrastic use' (1991: 334).

As it will be argued in several parts of this dissertation, different hypotheses are not mutually exclusive. For instance, an auxiliary use of *do* could have developed from causative *(ge)don* in the more informal spoken language and, for stylistic reasons, not be used in prose texts. This, moreover, would also be compatible with the fact that auxiliary *do* was present in 13th century poems.

3.2.5 The Celtic hypothesis

Some scholars attempted to evaluate the impact of linguistic contacts with Celtic languages in the development of auxiliary *do*. The first to propose a Celtic origin for auxiliary *do* was Preusler (1938) in an early contribution that is part of a series of papers that aim to assess the influence that Celtic languages had on English. Preusler argues that language contact was a key factor in the development of auxiliary *do* and proposes two main points to support his line of argument. The first is purely chronological; since the auxiliary construction is attested earlier in Welsh than in English, it would be reasonable, according to Preusler, to argue that at an early stage in which English and Welsh were in contact, English acquired auxiliary *do* as a borrowing from Welsh. This point has been partially contested by Tristram (1997), who argued that in Brythonic the counterpart of auxiliary *do* was not used in a systematic way and, therefore, less likely to be taken as a model.[9] The second point concerns the use of non-emphatic *do* in the South West dialect. The interpretation offered by Preusler is that the extensive use of the construction is an archaism particularly frequent in this area because of the influence of Welsh and Cornish. This line of argument is supported by the study carried out by Jackson (1953), who investigated the evidence of Celtic place names

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[9] This objection is not fully convincing; as van der Auwera (2002) pointed out, the non-systematic use of the auxiliary construction in Brythonic does not rule out that the construction may have influenced the development of auxiliary *do* in Old English.

in English. Jackson showed that the southwestern area is the one in which there is a greater number of settlement names of Celtic origin than in other regions (Jackson 1953: 220 ff.). This matches with Ellegård's study, since he showed that the South West is the area in which auxiliary *do* was first attested. Preusler's work was not unknown to Ellegård, who, however, gives a highly critical analysis of it. In fact, although he acknowledges that both his and Preusler's account point to a southwestern origin of the construction, Ellegård argues that a Celtic origin cannot be supported (1953: 120). He specifically brings up three arguments. First, he argues that the timing of the emergence of auxiliary *do* is unconvincing, since the closest contacts between English and Celtic occurred before Old English, while auxiliary *do* is attested only in the 13th century. This objection has been made not only by Ellegård, but by other scholars too (e.g. Visser 1963-1973; Denison 1993; Garrett 1998). The lack of written evidence makes it impossible to assess whether this long gap is due to deliberate choices of Old English scribes or whether the absence of auxiliary *do* can be ascribed to the fact that it was not a part of the language system. Secondly, Ellegård speculates on why Scots is slower than other British languages to acquire auxiliary *do*; if the construction was frequent in other Insular Celtic languages, why did Scots develop auxiliary *do* much later than English (1953: 120)? Thirdly, in Ellegård's view the constructions found in English and Celtic are not parallel. The examples quoted by Preusler (1938: 182) are closer to German than to English, and Ellegård argues that in this case an English influence and not vice versa is not to be ruled out. However, despite his critical review and the problems connected to this hypothesis, Ellegård concludes saying that 'it would be rash, however, to exclude the possibility of Celtic influence altogether' (Ellegård 1953: 120).

A more exhaustive account of the Celtic hypothesis has been proposed by Poussa (1990). Her account is based on what she calls 'a creolization-decreolization model' (1990: 407). This model goes as follows. There are English varieties, for example pidgins, creoles, child language and the language of L2 learners that show a higher use of auxiliary *do* compared to standard English (1990: 410). Poussa, following Di Sciullo et al. (1986), claims that auxiliary verbs can develop in the speech of bilingual individuals as a result of the mix between L1 and L2 and the constant code-switching. That is, bilingual adults may insert a native verb as

part of the verbal phrase, with the foreign verb in nominal or infinitive form. This would be done to avoid inflection problems, being the inflected verb the native one. In that regard, Poussa provides an example from Hawaiian Pidgin, in which an old Japanese woman used the verb *shite* 'to do' to turn a foreign noun into a predicate (1990: 412). Importantly, Poussa suggests that the verb 'to do' is a particularly useful device in contact situations to simplify verbal morphology.

In this model language contact is, if not the main reason, at least an important trigger for the development of auxiliary verbs. In that regard, Poussa identifies early Old English as the period when Anglo-Saxons were in contact with Celtic populations, which is when Poussa dates the development of auxiliary *do*. The fact that auxiliary *do* does not appear in texts until the 13th century is not an issue for Poussa, as 'it is quite possible that periphrastic *do* was well developed in spoken Old English dialects, though not written' (1990: 415). Moreover, the appearance of auxiliary *do* in southwestern texts, where Celtic influence is assumed to be more consistent, is considered a further piece of evidence in support to her hypothesis. This area, as already noted by Preusler, is the one which also shows a frequent use of auxiliary *do* as a habitual marker in present dialects. The account that Poussa proposes for the emergence of auxiliary *do* is the following. In present southern Hiberno-English there are two habitual forms, *do be*, see (25), and *do* - non-finite form of the verb, see (26) (examples are from Poussa 1990: 423, from Harris 1984: 306).

(25)   They **do be fighting** among other.
        (Henry, 1957: 170)

(26)   Well, when you put them on to the barrow you do have them in heaps and
        then you **do spread** them and turn them over and all.
        (Derrygonnelly, Fermanagh)

The original habitual construction, which survives in southern Hiberno-English, was *do be* - *ing*-form exemplified in (25). This construction has been simplified in two different ways; in northern Hiberno-English, under the influence of Ulster Scots, which uses habitual *be*, *do* has been deleted. Conversely, in the southwestern area of England the copula *be* has been eliminated, giving rise to the habitual

form *do* - verb. This, in Poussa's view, gave rise to the habitual *do* construction that is still found in some dialects. Then, in the Eastern dialect *do* lost its habitual meaning and was reanalysed as an empty element, i.e. auxiliary *do*. The latter point concerning how *do* lost its habitual meaning, however, is not further expanded by Poussa.

Poussa's account has been criticised by Denison (1993), who pointed out some flaws in her reconstruction. Firstly, the lack of textual evidence argues against a Celtic origin. More specifically, we lack evidence of an early use of *do* as a habitual marker at the time when the contacts between Celtic languages and English are assumed to have happened. Similarly, lack of evidence is called upon for the intermediate stage that involves *do be* (Denison 1993: 283). Another problem is raised by Hickey (1997), who argues that auxiliary *do* without habitual connotations was imported in Ireland and only later acquired an habitual function, presumably under the influence of Irish; in other words, the habitual *do* found in Hiberno-English is not a relic of an earlier use, as Poussa assumes, but an innovation that took place in Ireland (1997: 1001).

The influence of Celtic languages on English is a complex issue that involves not only the rise of auxiliary *do* but also other linguistic features. As far as auxiliary *do* is concerned, every account that investigates a possible Celtic origin is necessarily based on assumptions and circumstantial evidence, given the absence of direct textual data. In principle, one can agree with Ellegård in arguing that it would be hasty to completely exclude any Celtic influence (1953: 120). However, because of the lack of textual evidence, I will not take this factor into consideration in my analysis.

3.3 Discussion

The review presented above shows the variety of approaches taken in addressing the origin of auxiliary *do*. They range from more philological accounts of the first half of the 20th century to more detailed hypotheses, particularly after the publication of Ellegård's (1953) study. While over a century of research has allowed us to gain a better understanding of the diachronic path that led to the development of auxiliary *do*, the discussion above has shown that none of the ac-

counts presented in this chapter fully accounts for the emergence of the auxiliary construction. The construction on which the majority of scholars have focused their attention is causative *do*, particularly in light of the syntactic resemblance that the pattern causative *do* - infinitive has with that of auxiliary *do*. However, the semantic development whereby causative *do* lost its lexical content still represents a major issue. As we have seen, Ellegård left this question open, and other scholars like Denison (1985) and Garrett (1998) proposed an intermediate stage in which *do* acquired aspectual contours before developing into an auxiliary verb. In that regard, it is interesting to note that from the study of the same data set used by Ellegård, Denison and Garrett have drawn completely different conclusions (see section 3.2.3). The anticipative hypothesis, on the other hand, is based on uncertain examples, as the are no clear instances of finite *do* that combines with an infinitive lexical verb. Furthermore, none of the accounts reviewed in section 3.2.1 has been able to explain how the syntactic structure auxiliary *do* - infinitive came about.

The last observation concerns the fact that existing accounts largely assume a one-to-one relationship between the construction source and auxiliary *do*. That is, there is the tendency to draw straight lines between a construction and a single historical predecessor. There are some exceptions. Scholars like Engblom (1938) and Denison (1985) have suggested that multiple factors may be involved in the rise of auxiliary *do*, while Ellegård (1953: 119) in his concluding discussion has also questioned whether auxiliary *do* exclusively derives from the reanalysis of causative *do* or other factors have played a role. As it appears from the discussion carried out in this chapter, this way of thinking has not led to a fully satisfactory account. Hence, I will not exclude *a priori* any possible explanation and will not treat them as being incompatible. Instead, I argue that most of the factors separately investigated by different authors have acted in concert and have contributed to the emergence of auxiliary *do*. Which factors and how they interacted with each other is the topic of chapter 6.

Chapter 4

The prerequisites of the change: *(ge)don* in Old English

4.1 Introduction

This chapter examines the uses of *(ge)don* in Old English, with particular attention to the semantic and syntactic features of causative *(ge)don*. Section 4.2 provides a description of the data set used in this chapter and illustrates the collection process. Section 4.3 discusses in detail the uses of *(ge)don* in Old English. In section 4.4, I discuss the syntactic and semantic features of causative *hatan*. Section 4.5 compares causative *(ge)don* and causative *hatan*; the goal of this section is to bring to light the features that characterise causative *(ge)don* and sets it apart from other Old English causative verbs. Section 4.6 offers some concluding remarks.

4.2 Methodology

4.2.1 Old English corpora

The data relevant for this chapter have been extracted from the York-Toronto-Helsinki Parsed Corpus of Old English Prose (YCOE, Taylor et al. 2003) and the Dictionary of Old English Corpus in Electronic Form (DOEC, diPaolo Healey et al. 2009). The YCOE is a syntactically parsed corpus that consists of ap-

proximately 1,500,000 words from 100 texts in which each word is tagged for part of speech (POS). The annotation scheme is the same as for its sister corpora, The Penn-Helsinki Parsed Corpus of Middle English 2 (PPCME2, Kroch and Taylor 2000) and The Penn-Helsinki Parsed Corpus of Early Modern English (PPCEME, Kroch et al. 2004). The syntactic annotation design is compatible with the software CorpusSearch (Randall 2004), which allows for the extraction of relevant data using specific research queries (see section 4.2.2). The compilers of the YCOE have followed the periodisation of the Helsinki Corpus of English Texts, who divided the Old English period in four sub-periods, as illustrated in table 4.1.

Sub-period	Timeline
OE1	- 850
OE2	850 - 950
OE3	950 - 1050
OE4	1050 - 1150

Table 4.1: Periodisation of the YCOE.

The texts included in the YCOE represent a variety of genres which, however, are not evenly distributed. For instance, while religious texts are robustly represented, the subcorpus for the second most conspicuous genre, scientific texts, is three times smaller than religious texts. Table 4.2 shows the genres comprised in the corpus and the word count for each genre.

Genre	Word Count
Religious texts	980,206
Scientific texts	372,732
Legal texts	82,512
Fiction and travelogue texts	13,816
Total	1,449,266

Table 4.2: Genre and word count of the texts in YCOE.

When dealing with historical corpora, there are issues that are difficult to overcome. The problems that arise when consulting the YCOE pertain to (i) the dialectal representativity of the corpus, (ii) the source of the texts and (iii) the date of composition of each manuscript. In terms of the dialects of the texts contained in the corpus, four dialects are represented: West Saxon, Kentish, Northumbrian, and Mercian.[1] Ideally, a balanced corpus would represent every dialect equally. The nature of the data available, however, does not allow for an even representation of all the dialects. The most represented dialect is West Saxon, but there are also texts which show mixed dialectal features and, furthermore, others for which the dialect is unknown.

The source of the texts contained in the corpus is also a thorny issue. In the YCOE, texts are classified as translations from Latin and original Old English works, although in some cases the origin of the texts is unclear. The identification of Latin and native Old English texts is further complicated by the presence of mixed texts in which some parts have been translated from Latin, while others have not. See, for instance, the *Boethius, Consolation of Philosophy*. The proem is not a Latin translation, while the body is a Latin translation and the head is of unknown origin. In this chapter, I distinguish, where possible, between native texts and Latin translations. The origin and the distribution of the texts in the YCOE is given in table 4.3.

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[1]Kentish and Northumbrian are usually grouped together and referred to as Anglian.

Origin of the text	Distribution
Native texts	42/100
Latin translations	33/100
Unknown	24/100
Mixed	1/100
Total	100/100

Table 4.3: Distribution of the texts in YCOE.

Another problem concerns the chronology of the surviving Old English texts. Besides the uncertainty concerning the date of composition of most manuscripts, it can also happen that date of composition of the original manuscript and date of the surviving manuscript do not correspond. Thus, in such cases the compilers of the YCOE provide a multiple classification; for instance, the filename of *Adrian and Ritheus* is coadrian.o34, with 3 and 4 indicating period of composition and period of the manuscript, respectively.

The YCOE comprises only prose texts, which means that a considerable body of texts formed by poetical texts and glosses is not included. As shown in table 4.4, Old English poems represent a substantial part of the Old English texts we have available. In this thesis, I include verse texts for two reasons. Firstly, since causative *(ge)don* does not occur very frequently in Old English, a greater amount of data is necessary to collect enough instances of constructions that involve causative *(ge)don*. Secondly, the focus of chapter 5 will be on Middle English poetry; the inclusion of Old English poetical data, therefore, will be valuable to highlight the differences between Old and Middle English poetry. Next to poems, I also include glosses. At first glance, they may be of little interest; however, along with Latin translation, glosses provide evidence on the strategies employed by Old English scribes in translating the Latin causative constructions, in particular *facere* 'do' - infinitive, which is the closest equivalent to *(ge)don* in its basic meaning. In light of these considerations, I consulted in my investigation a second corpus, the DOEC. The DOEC is a comprehensive collection of all the

surviving Old English texts, as it includes 3,060 texts and amounts to c. 3 million words of Old English plus c. 1 million Latin words. The period covered by the DOEC is the same as the YCOE, from ca. 600 to 1150. The texts are divided into six categories, from A to F, each letter corresponding to a different type of text: A verse texts, B prose texts, C continuous interlinear and occasional glosses, D collected Latin-Old English glosses, E runic inscriptions, F vernacular inscriptions in Latin alphabet. A summary of these categories with their word count is given in table 4.4.

Category	Old English words	Foreign words
A	177,480	255
B	2,128,781	52,038
C	699,606	635,655
D	26,598	70,511
E	346	4
F	331	40
Total	3,033,142	758,503

Table 4.4: Division of the texts contained in the DOEC by category and word count.

The corpus contains only plain text and is neither tagged for part of speech nor is syntactically annotated. The collection process, therefore, turned out to be rather complex. The software chosen to collect data from the DOEC is AntConc 3.5.9 (Anthony 2020). AntConc presents an advanced search window whereby it is possible to search for a specific term (word A), or a list of multiple terms, and specify whether it occurs in combination with one or more context words. This means that we can, for instance, look for word A, such as *gedyde* 'did', and search if it is found together with other words that are of interest to the researcher. The strategy used here was to search every form of *(ge)don* that occurs in combination

with a bare and an infinitive introduced by *to*.[2] Then, each example was carefully analysed and false positives were manually deleted.

4.2.2   Collection process

I shall start by illustrating the collection process of *(ge)don* - infinitive. The search conducted via CorpusSearch provided a data set of 32 hits contained in the YCOE. The data set, however, did not include only examples relevant to this research, but also other constructions that were manually discarded, resulting in a provisional data set of 26 hits of causative *(ge)don* - infinitive.[3] In collecting data from the DOEC, the search carried out using AntConc produced a large data set which required an intensive process of cleaning-up to remove several irrelevant examples and duplicates. At the end of the collection process, I added 18 instances, bringing the total number of *(ge)don* - infinitive instances to 44.

The same procedure was carried out for causative *(ge)don* - *þæt*-clause and causative *(ge)don* - *to*-infinitive. The construction formed by causative *(ge)don* - *þæt*-clause required an additional step, since all the examples in which *þæt* is an apposition to another NP and not a complement of *(ge)don* were discarded. The instances collected using the YCOE amount to 124, while those extracted from the DOEC are 77, for a total of 201. Finally, constructions in which *(ge)don* takes a *to*-infinitive complement are rare in the data set, since only 12 instances from both corpora were collected. At the end of this process, the final size of the data set concerning causative *(ge)don* examples that amounts to 257 instances. Lastly, all the examples of the constructions under investigation were manually tagged for the properties relevant for this study, which have been illustrated in section 2.5.

As far as causative *hatan* is concerned, the procedure was the following. I ran a search using CorpusSearch to extract every token formed by *hatan* - infinitive from the YCOE, which produced 1,314 hits. Then, I proceeded to delete false hits and irrelevant examples, resulting in a total of 1,252 examples.

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[2]Since *(ge)don* - *þæt*-clause occurs more frequently, no additional data have been collected.

[3]The search query used to collect the data is the following: (IP* iDoms VBP*|VBD*) AND (VBP*|VBD* iDoms d*|$d*|D*|$D*|gedyd*|$gedyd*) AND (IP* iDoms IP-INF*). The 6 constructions eliminated concern other verbs that began with *d-* and took an infinitive complement.

In order to maintain a manageable scope, I selected 200 causative constructions from a selection of texts from different Old English periods, which again were manually coded for the features illustrated in section 2.5. The same procedure was performed for causative *hatan - þæt*-clause, which produced a data set of 105 hits. The DOEC has been consulted only to investigate the use of causative *hatan* with an infinitival complement in Latin translations. Further data regarding *hatan - þæt*-clause have not been collected, as a comprehensive analysis of this construction falls outside the scope of this study.

4.3 The uses of *(ge)don* in Old English

4.3.1 Causative *(ge)*don

There are three types of complements that causative *(ge)don* could take in Old English: a bare infinitival complement, e.g. (1), a *þæt*-clause, e.g. (2), or an infinitive introduced by *to*, e.g. (3).

(1) and ic dyde eow witan ðurh drihtnes mihte
     and I do.PST you know.INF through God might
     'and I made you know through God's might' (ÆCHom: 170.35)

(2) and deþ ðæt ge faraþ of þison lande to þam lande
     and do.PRS that you go from this land to that land
     'and make you go from this to that land' (Genesis: 50.23.2209)

(3) ure larðeawes us doð to understandene
     our teachers us do.PRS to understand.INF
     'our teachers make us understand' (ÆCHom: 14.18)

In Old English, the order of the constituents in such causative constructions could vary (see e.g. Mitchell 1985; Traugott 1992; Denison 1993). Examples (4)-(7) illustrate the different order of the constituents.

   - **NP1 - INF - *(ge)don* - NP2**

(4) and wif awedan doð witan
     and women become-mad.INF do.PRS wise-men
     'and the women made the wise men become mad' (Liber Scintillarum:

28.6)

- NP2 - NP1 - *(ge)don* - INF

(5)   swylce ligræsc   heo dyde   feallan ofer eorþan.
        such   lightning she do.PST fall.INF over earth
        'she made fall such lightning over the earth' (Liber Scintillarum: 17.36)

- NP1 - INF - *(ge)don*

(6)   God se   oneardian deð   anmode   on huse
        God who live.INF   do.PRS unanimously in house
        'God who makes [people] unanimously live in a house' (Canterbury Psalter:

        67.7)

- NP1 - *(ge)don* - INF

(7)   þan cwæd Sanctus Jacobus to þan cwylleren: 'Ic bidde eow eadmoddre
        then said   Saint   Jacob   to the slayer: 'I ask   you humble
        bene   þæt ær   þan þe ge us beheafdigen, doð   us hider
        request that before than that you us behead,   do.PRS us here
        bringan   wæter to, and me brohte heom þa   to sester fulne wæteres.
        bring.INF water to, and one brought them then to cup   full   water
        'then Saint Jacob said to the slayer: 'I ask you a humble request, that

        before you behead us, make [someone] bring the water to us', and then

        one brought a cup full of water to them' (LS11[James]: 136.122)

As already mentioned in section 2.3.1, I generalise over word order and recognise
two structural patterns based on the presence of the NP2, namely NP1 - Vcau -
NP2 - INF and NP1 - Vcau - INF. Thus, I will use NP1 - Vcau - NP2 - INF for
examples like (4)-(5) and NP1 - Vcau - INF for those like (6)-(7).

    The three complementation types presented in (1)-(3) are not equally fre-
quent. As table 4.5 shows, the type of complementation that causative *(ge)don*
takes more frequently is a *þæt*-clause, with the bare infinitive complement coming
second, while the infinitive preceded by *to* is rare.

Complementation patterns	Occurrences	%
(ge)don - infinitive	44/257	17.1%
(ge)don - *to*-infinitive	12/257	4.7%
(ge)don - *þæt*-clause	201/168	78.2%
Total	257/257	100%

Table 4.5: Causative *(ge)don* complementation frequency in my data set.

Furthermore, the three complementation patterns illustrated in table 4.5 have a different distribution across various types of texts. For instance, an infinitive complement is scarcely found outside Latin translations or glosses, in which it was used to translate the causative Latin construction *facere* - infinitive. Even in Latin translations, however, the data show that other causative verbs were used to translate *facere*, as discussed in section 4.3.1.1. It is interesting to note that the verbs that had a similar meaning to *(ge)don*, such as *wyrcan* 'work, labour' and *fremman* 'make, perform', were very rarely used. For instances, in the *Lindisfarne Gospels facere* - infinitive is found 8 times: in 7 *(ge)don* has been used in the gloss, in 1 *wyrcan*, and *fremman* is not attested. In the vast majority of the cases, Old English scribes preferred to use *hatan* and *lætan* (see section 4.3.1.1.2).

A clause introduced by *þæt* occurs both in native texts and in translations from Latin. In Latin translations, *(ge)don* followed by *þæt* is frequently used to translate the construction *facere* - NP2 - infinitive, as Ellegård (1953) and Timofeeva (2011) pointed out. Lastly, *to*- infinitive is the least frequent type of complement that *(ge)don* takes. Though it appears in both native texts and Latin translations, the frequency of use is higher in the latter. This type of complementation is particularly used to express the phrase 'make (someone) know' (see section 4.3.1.3).

4.3.1.1 Infinitival complementation

4.3.1.1.1 Native texts

There are 15 instances of the construction *(ge)don* - infinitive in native texts, while in translations and glosses I found 26 tokens of the construction, as shown in Table 4.6.

Text origin	Occurrences	%
Native texts	15/44	34.1%
Latin translations and glosses	26/44	59.1%
Uncertain origin	3/44	6.8%
Total	44/44	100%

Table 4.6: Distribution of *(ge)don* - infinitive in my data set.

The most frequent pattern is NP1 - Vcau - NP2 - INF, which is exemplified in (8). This structure is found especially in later Old English texts. It is particularly used by Ælfric in the *Catholic Homilies* (c. 1000 - 1050) and in the *Lives of Saints* (c. 990 - 1002), which include 9 of the 15 instances of this construction.

(8) þæt he gedo   us werlice becuman to hælo hyðe
     that he do.PRS us manly arrive.INF to safe place
     'that he makes us arrive manly to the safe place' (ÆLS: 33.316)

The structural pattern without an overt causee is very rare. There are only four late Old English examples in my corpus, provided in (14)-(17), three in different works of Ælfric and one in *James the Greater* (c. 1150).

Construction	Occurrences	%
NP1 - Vcau - NP2 - INF	11/15	73.3%
NP1 - Vcau - INF	4/15	26.7%
Total	15/15	100%

Table 4.7: Frequency of the causee in causative *(ge)don-* infinitive in native texts.

The type of infinitive complement that causative *(ge)don* takes is typically an intransitive verb, either unaccusative, e.g. (9), or unergative, e.g. (10). When the infinitival complement is a transitive verb, the subject of the infinitival complement is generally an agent, as in (11). The frequency of each infinitival type is shown in table 4.8.

(9) Se ðe deð his sunnan scinan ofer ða yfelan and ofer ða godan
He who do.PRS his sun shine.INF over the evil and over the good
'He makes his sun shine over good and evil' (ÆCHom: 123.446)

(10) and deþ hi sittan
and do.PRS them sit.INF
'and makes them sit' (ÆCHom: 2.442)

(11) cwæð se cyning swa swa þu dydest minne broðer his god
said the king so that you do.PST my brother his God
forlætan.
forsake.INF
'the king said so that you made my brother forsake his God' (ÆCHom: 1.468)

Infinitive type	Occurrences	%
Unaccusative	7/15	46.6%
Unergative	4/15	26.7%
Transitive	4/15	26.7%
Total	15/15	100%

Table 4.8: Valency of the infinitives taken by *(ge)don.*

In terms of the thematic features of the causee, it can refer to inanimate and non-agentive entities, e.g. (12), and to animate and agentive entities as well, e.g. (13). The ratio of agentive causees and non-agentive NP2s is fairly similar, as shown in table 4.9.

(12)   And treowa he deð   færlice   blowan   and eft   raðe
       And trees   he do.PRS suddenly flourish.INF and again afterwards
       asearian.
       wither
       'And he makes the trees suddenly flourish and wither again afterwards'

       (Vercelli Homilies: 109)

(13)   þe biscop of Wincestre Henri þe kinges broþer Stephnes spak wiþ
       the bishop of Winchester Henry the king   brother Stephen spoke with
       Rodbert erl &   wiþ þe emperice &   swor hem aþes þat he næfre
       Robert earl and with the empress and swore them oath that he never
       ma   mid þe king his broþer wolde halden. &   cursede alle þe men
       more with the king his brother would hold   and cursed all the men
       þe   mid him helden. &   saȝde hem þat he wolde ȝefen hem up
       that with him held   and said them that he wold give them up
       Wincestre. &   dide   heom cumen   þider.
       Winchester and do.PST them come.INF thither.
       'Henry bishop of Winchester, king Stephen's brother, spoke with earl

       Robert and with the empress, and swore them oath that he never more

       would hold with the king, his brother, and cursed all the men that held

       with him, and he said that he would give up Winchester to them, and he

       made them come thither.' (Peterborough Chronicle: 1140.28)

NP2	Occurrences	%
Non-agentive	6/11	54.5%
Agentive	5/11	45.5%
Total	11/11	100%

Table 4.9: Frequency of agentive and non-agentive NP2.

Moving on to constructions without a NP2, in each example the infinitive complement is a transitive verb that requires an agentive subject. The interpretation of *(ge)don* in three of the four examples is not clear, as the absence of the subject of the infinitive creates an alternative reading different from the prototypical causative interpretation. In particular, the ambiguity arises as to who the performer of the action expressed by the verb phrase in the lower clause is. The two readings are the following. The first is the prototypical causative interpretation whereby it is understood that the performer of the action expressed in the caused situation is an arbitrary agent, who however is implied. Conversely, in the alternative interpretation, which we can refer to as auxiliary interpretation, it is assumed that whoever carried out the action expressed by the infinitival complement is the subject of *(ge)don*. In other words, the presence of an arbitrary causee is not assumed. In the auxiliary interpretation, I assume that *(ge)don* has lost its causative content and performs grammatical functions only; the factors that led to the development of this interpretation are discussed in chapter 6. In the idiomatic translation below, (a) gives the standard causative reading with the unspecified causee in square brackets, while (b) is the alternative auxiliary interpretation.[4]

(14)   and genam þæt husel þe   se hælend gebletsode   tobrælic on þreo
        and took   the housel that the Saviour consecrated, broke   in three

_____

[4]It is interesting to note that these four ambiguous examples are described by the compilers of the YCOE with the label *pro*, a tag for empty subjects which does not only indicate 'small pro', but it also means that 'the current subject is not exactly co-referent with the labelled subject in the previous clause or token. It is left to the interested investigator to determine the appropriate analysis (or analyses) of such subjects' (Taylor et al. 2003).

and onbyrgede anes dæles. Þone oðerne dæl he dyde gehealden mid
and ate one part. The other part he do.PST keep.INF with
him to bebyrgenne æfter his forðsiðe.
him to bury after his departure
'the saint received the consecrated bread, broke it in three parts and ate

one part. He (a) made [someone] keep - (b) kept the other part to be

buried with him after his departure' (ÆLS: 123.531)

(15) Hwæt, eac se broc, þeah he swife of his rihtryne, þonne þær
Ah, also the stream, still he swerves of his course, when there
micel stan wealwiende of þam heohan munte oniman fealþ and hine
great stone rolling of the high mountain therein falls and him
todælð and him his rihtrynes wiðstent. Swa doð nu þa þeostro
divide and him his course withstand. So do.PRS now the darkness
þinre gedrefednesse wiðstandan minum leohtum larum.
your troubles withstand.INF my positive instructions.
'As the stream also swerves from his right course when a great rolling

stone falls into it from the high mountain and divides it and hinders it

from its right course. So now the darkness of your trouble (a) makes [you]

withstand - (b) withstands my positive instructions' (ÆCHom: 10.123)

(16) Ic beo þeah unscyldig ætforan ðam soðan gode seþe demð be þam
I am still guiltless before the true God he-who judges by the
willan and wat ealle þincg. Gif þu me unwilles gewemman nu
will and knows all things. If you me unwillingly seduce.INF now
dest. me bið twifeald clænysse geteald to wuldre.
do.PRS, me is twofold purity imputed to glory.
'I am still guiltless before the true God, he who judges according to the

will and knows everything. If now you unwillingly (a) make [someone]

seduce - (b) seduce me, a twofold purity should be imputed to me with

glory' (ÆLS: 214.90)

(17) þan cwæd Sanctus Jacobus to þan cwylleren: 'Ic bidde eow eadmoddre
then said Saint Jacob to the slayer: 'I ask you humble
bene þæt ær þan þe ge us beheafdigen, doð us hider
request that before than that you us behead, do.PRS us here
bringan wæter to, and me brohte heom þa to sester fulne wæteres.
bring.INF water to, and one brought them then to cup full water
'then Saint Jacob said to the slayer: 'I ask you a humble request, that

before you behead us, make [someone] bring the water to us', and then

one brought a cup full of water to them' (LS11[James]: 136.122)

103

Some of the examples above have been analysed in the literature. Starting from example (14), Ellegård (1953: 18) suggests a different analysis from the present one, arguing that *gehealden* is not an infinitival form but a past participle. Thus, in his interpretation *dyde gehealden* would be an example of causative *(ge)don* with a past participle complement. This analysis, however, is not totally convincing. The main counterargument is provided by Ellegård himself, who states that in his data set there are no other instances of *(ge)don* with a past participle complement; the construction in (14) would, therefore, be a *unicum*. In addition, although the ending *-en* typically indicates past participles, there is evidence that it was also used to mark infinitives. In the same text, the *Lives of Saints*, *-en* is found as an infinitival ending in 23 cases, and more generally there are numerous instances of *-en* used as an infinitival ending in other Old English texts. For these reasons, I interpret *gehealden* as an infinitive form. The causative meaning of the construction, however, is uncertain. On the one hand, there is the prototypical causative interpretation which implies the presence of an agentive causee that is left implicit. On the other hand, in the alternative interpretation it is understood that the agent who 'kept the other part' is the subject of *(ge)don*. A similar analysis holds for (15) and (16). The *do*-construction in (15) is often interpreted as an example of anticipative *(ge)don* (see Dietze (1895) and Sweet (1898) in section 3.2.1.1 and 3.2.1.2). However, if one looks at the surrounding context, it appears that the construction is analogous to the ones in examples (14) and (16). I ruled out an anticipative reading because, in my analysis, I understand the infinitive form *wiðstandan* 'withstand' as being a complement of *doð* 'does', where the causer is *þa þeostro þinre gedrefednesse* 'the darkness of your troubles' and the causee is left unexpressed. As in example (14), the meaning of *(ge)don* is ambiguous. If the construction in (15) is interpreted as causative, the implicit causee would refer to a hypothetical 'you', the addressee of the metaphor expressed in the previous passage. On the other hand, if the subject of the matrix clause *þa þeostro þinre gedrefednesse* is understood to be the subject of the infinitive in the lower clause, i.e. *wiðstandan*, the construction acquires a different, non-causative interpretation, in which the meaning is 'the darkness of your trouble withstands my positive teaching'. The only analysis of example (16) in the literature has been provided by Ellegård, who includes it in the few examples of causative *(ge)don* in

Old English. However, similarly to the construction in (14)-(15), the absence of the causee makes the meaning of the construction unclear. It may be argued that *me* is the causee. However, the entry *ge-weman* 'seduce' in the An Anglo-Saxon Dictionary Online (Northcote Toller et al. 2014) contains only examples in which *gewemman* is used transitively; thus, I interpreted *me* 'me' as the direct object of *gewemman* and not as its subject. It follows that the construction can have two interpretations, the prototypical causative one if the presence of an implicit causee is implied, or the new one in which the subject of *(ge)don* is the same as the subject of the infinitive verb.[5]

Example (17) is interesting, as it is the only example in my data set in which a construction with the pattern *(ge)don* - infinitive unambiguously expresses a causative event. Although the causee is left implicit, the context indicates that the indefinite pronoun *me* 'one', which is the subject of *brohte* 'brought' in the following sentence, is also the causee that performs the caused action of 'bringing the water'. Since the entity of the causee is not essential, it has been left implicit, as it frequently occurred in Old English (see section 2.5.1 and 4.4.1).

4.3.1.1.2   Latin translations and glosses

(Ge)don - infinitive was one of the strategies used by Old English scribes to render the Latin construction *facere* - infinitive. There are 26 cases of causative *(ge)don* - infinitive in Latin translations and glosses in my data set. The most common pattern is NP1 - *(ge)don* - NP2 - INF, which is attested 19 times, while the pattern with no causee expressed is far less frequent, with only 7 examples.

The most frequent type of verbal complements are intransitive infinitives, generally unaccusatives, e.g. (18), but also unergatives are attested, e.g. (19).

(18)   and swylce ligræsc   heo dyde   feallan ofer eorþan
        and such   lightning she do.PST fall.INF over earth
        'and she made such lightning fall over the earth' (Liber Scintillarum: 17.36)

(19)   And þone eadigan Matheum he gedyde gangan to þam eastdæle mid his
        And the   holy   Matthew he do.PST go.INF to the   east   with his
        discipulum.
        disciple

---

[5]Unless the infinitive *gewemman* is interpreted as a passive infinitive and *þu me unwilles gewemman nu dest* means 'you cause me to be seduced'.

'And he made holy Matthew go to the eastern part with his disciples'
(Blickling Homilies: 239.16)

Less common are transitive verbs, which only occur 7 times. The subject of the transitive infinitive in the lower clause is typically non-agentive (5 cases), as in (20), while solely in 2 instances the subject is an agent.

(20) and do   us lufian   þæt þæt ðu bebytst
      and do.PRS us love.INF what that you enjoy
      'and make us love what you enjoy' (Homilies of Ælfric: 42.37)

The use of *(ge)don* - infinitive to translate *facere* - infinitive is mainly found in glosses. In translations, Old English scribes employed different strategies. Firstly, there are some cases in which scribes translated the Latin construction word by word and rendered *facere* with *(ge)don* - infinitive with a bare infinitive, e.g. (21). Secondly, scribes translated *facere* with another causative verb and kept the infinitival complement; Timofeeva (2011: 102) provides an example in which the causative verb used is *hatan*, see (22), while Ellegård (1953: 52) presents 4 examples where *facere* is rendered by *lætan*, one of those is given in (23). Thirdly, Old English translators rendered *facere* with *(ge)don* but translated the infinitival complement with a *þæt*-clause, e.g. (24). The fourth and last strategy, rarely attested in my data set, concerns the use of the *to*-infinitive, which will be discussed in more detail in section 4.3.1.3.

The fact that scribes opted for a different causative verb to translate *facere* in place of *(ge)don* is interesting. In such cases, we can observe two tendencies. The first is that when the subject of the infinitive is either omitted, as in (25), or is a non-agentive entity, see (26), the translators resorted to *lætan*. The second is that when the subject of the infinitive is expressed and is an agent, as in (22), the scribes rendered *facere* with *hatan*.

   - LATIN: *tabescere*.INF *fecisti*.CAUS [...] animam.NP2 eius

(21) aswindan þu des
      perish.INF you do.PST
      'you made me perish' (Vespasian Psalter: 38.12)

- LATIN: Quem.NP2 [...] *calcare*.INF *ipsos paucissimos racimos fecit*.CAUS

(22) het   hine wringan þa   feawa geclystru þære byrgena
      hatan.PST him press.INF those few   bunches   the   grapes
      'ordered him to press those few bunches of grapes' (Corpus Gospels: 58.16)

- LATIN: *decurrere*.INF *faciet*.CAUS *sanguinem*.NP2

(23) læte   yrnan þæt blod
      let.PRS run.INF the blood
      'make the blood run' (Leviticus: 1.15)

- LATIN: *et hos septem fratres.NP2 huc venire*.INF *facito*.CAUS

(24) and gedo   þu þet heo hider cuman   þas   ure seofen broðru
      and do.IMP you that they here come.INF those our seven brothers
      'and you make our seven brothers come here' (Chad: 172.112)

- LATIN: *vivere*.INF *faciam*.CAUS

(25) ic læt   libban
      I let.PRS live.INF
      'I make live' (Deuteronomy: 32.39)

- LATIN: *eam.NP2 requiescere*.INF *facies*.CAUS

(26) læt   hit restan
      let.PRS it   rest.INF
      'make it rest' (Ex: 23.11)

To summarise, causative *(ge)don* occurring with an infinitival complement is rather infrequent in the entire Old English period. The construction is more attested in Latin translations and glosses than in native texts, and overall the most common pattern is the one with the causee expressed. Looking at the semantic features of the causee and the infinitive complements, *(ge)don* appears to be rather versatile. Specifically, the data show that *(ge)don* could take both agentive causees and non-agentive NP2s. In relation to the semantic class of the infinitive, *(ge)don* shows a preference for unaccusative and unergative infinitival complements, but occurs with agentive transitive infinitives as well. There is also a handful of cases, interestingly in native texts only, in which there is the

possibility of a different interpretation. The structural pattern is characterised by a transitive infinitive expressing an agentive action, in which the agent is left implicit and is not unambiguously retrievable from the surrounding context. An alternative reading arises because it is plausible to interpret the causer as the subject of the infinitive in the lower clause. In the account proposed in chapter 6, I identify this context as the 'critical' context (Diewald 2002) for the change from causative verb to auxiliary verb. Lastly, it is also worth stressing a tendency observed in Latin translations. In this type of text, Old English translators opted for *hatan* when the agentive causee was expressed, while when the infinitive was unaccusative or the causee was unexpressed, the choice was *lætan*. I argue that Old English translators adopted this strategy not only because *(ge)don* was infrequent as a causative verb, but also because the interpretation of *(ge)don* in such cases was unclear, as shown for examples (14)-(16) above.

4.3.1.2 *þæt*-clause complementation

4.3.1.2.1 Native texts

The most frequent type of complement that causative *(ge)don* takes in native texts is a finite clause introduced by *þæt* (112 occurrences, see table 4.5). Structurally, there are no instances of a construction with the pattern *(ge)don* - NP2 - *þæt*-clause (see also Fischer 1989, Los 2005; Timofeeva 2011), and the only pattern attested is *(ge)don* - *þæt*-clause, see example (27).

(27)   ic do   þæt seo heofen bið swa heard eow swa isen.
       I do.PRS that the heaven is   as   hard you as   iron.
       'I make the heaven be as hard as the iron to you' (ÆLS: 163)

The subject of the verb inside the *þæt*-clause could be both an agentive and a non-agentive entity, as illustrated in (28) and (29) respectively. With regard to the verb inside the *þæt*-clause, it could be transitive (30), unaccusative (31) and unergative (32).

(28)   and ic gedyde þæt hym man drincan mengde myd eallan and myd
       and I do.PST that them one drink   mingle with gall   and with
       ecede
       vinegar
       'and I made someone mingle him a drink with gall and vinegar' (Nic:

20.2.11.458)

(29) ic do   þæt ðu losast on rode gealgan
      I do.AMB that you perish on cross crucifix
      'I make you die on the cross' (ÆCHom: 38.516.278.7743)

(30) doð   þæt ge   eowre gebroðra wylcumiaþ
      do.PRS that you   your   brothers welcome
      'make you welcome your brothers' (Mt: 5.47.286)

(31) dyde   þæt sunne stod   ane tid   dæiges
      do.PST that sun   stood one hour   day
      'make the sun stand one hour of the day' (Ad: 42.1.96)

(32) dyde   þæt he hine   astrehte   beforan him
      do.PST that he himself prostrated before   him
      'made him prostrate himself before him' (CP: 17.115.9.770)

The mood of the verb in the *þæt*-clause is variable. In the majority of the examples, the mood of the verb is indicative, as shown in (33). There are instances in which the verb is either subjunctive, e.g. (34), or there is a pre-modal verb, see (35).[6]

(33) ic do   þæt ge geswicað   þare wican
      I do.AMB that you relinquish.IND the   function
      'I make you relinquish the functions' (ÆCHom: 7.315.60.3136)

(34) and do   þæt he wifige
      and do.AMB that he marries.SUBJ
      'and make him marry' (ÆLS: 39.7355)

(35) do   þæt ic mæge   geseon
      do.AMB that I may.MDL see
      'make that I may see' (ÆCHom: 10.262.105.1897)

There are some cases in which, in different texts, a similar causative event is expressed by different complement types. An example found in Ælfric's *Catholic Homilies* is provided in (36)-(37). Both causative constructions have the same meaning of 'making them sit down', but the caused situation is expressed by an

_____

[6]In few cases the mood of the infinitive is ambiguous, since indicative and subjunctive could share the same form.

infinitive complement in (36) and by a *þæt*-clause in (37). The semantic features of the causee and the meaning of the verb expressing the caused event are the same: the causees *hi* 'them' and *folk* 'people' are the agentive subjects of the infinitive *sittan* in (36) and of the subjunctive *sitte* in (37), both meaning 'sit'.

(36) and deþ   hi   sittan, and he gæþ sylf and hym þenað
      and do.PRS them sit.INF, and he goes self and them serves
      'and makes them sit down, and goes himself and serves them' (ÆCHom: 8.3908)

(37) þa   cwæð se hælend doð   þæt þæt folc   sitte
      then said   the Saviour do.PRS that the people sit
      'then the Saviour said make the people sit' (ÆCHom: 16.2193)

4.3.1.2.2   Latin translations and glosses

In section 4.3, I mentioned that *(ge)don* with a *þæt*-clause was used in some cases to translate *facere* - NP2 - infinitive, as also noted by Ellegård (1953) and Timofeeva (2011), see example (38). There are no instances in my data set in which *(ge)don* - *þæt*-clause renders the pattern *facere* - infinitive.

   - LATIN: *faciamque*.DO *te*.NP2 *crescere*.INF

(38) &   ic gedo   þæt þu wyxt
      and I do.PRS that you grow
      'and I make you grow' (Gen: 17.6)

Ellegård (1953: 52) reports 7 examples from *The Old English version of the Heptateuch* in which an original *facere* - NP2 - infinitive construction has been translated as *(ge)don* - *þæt*-clause. However, the same Latin constructions appear in other psalters and in 3 cases Old English scribes used *(ge)don* - NP2 - infinitive instead. They are illustrated below.

   - LATIN: *facere* - NP2 - *ascendere*.INF

(39) deþ   þæt ge faraþ
      do.PRS that you ascend
      'makes you ascend' (Gen: 50.23)

(40) heofen astigan   þu do
      heaven ascend.INF you do.AMB
      'you make ascend to heaven' (Arundel Psalter: 8.1)

- LATIN: *facere* - NP2 - *errare*.INF

(41) he dyde   þæt ge   dweledon
      he do.PST that you err
      'he made you err' (Deut: 13.5)

(42) dwelian he dyde   hy
      err.INF he do.PST them
      'he made them err' (Vitellius Psalter: 106.40)

- LATIN: *facere* - NP2 - *cessare*.INF

(43) ic gedo   þæt hyra gemynd geswicþ
      I do.AMB that their memory cease
      'I make their memory cease' (Deut: 32.26)

(44) geswican ic do   of   mannum gemynd heora
      cease.INF I do.AMB from men   memory their
      'I make their memory cease from men' (Vitellius Psalter: 7.26)

In the *Book of Leviticus*, there is a Latin pattern *facere* - NP2 - infinitive that
is translated with *(ge)don* - *þæt*-clause in the *Heptateuch*, as illustrated in (45)
below. In *The Old English Lives of St Margaret*, for which it is unclear whether
it is a Latin translation or not, there is a comparable construction that, however,
is formed by *(ge)don* - NP2 - infinitive, see (46).

(45) deþ   þæt folc syngie
      do.PRS that folk sin.INF
      'makes the people sin' (Leviticus: 4.3)

(46) ic hi   dyde   on þæm sylfan slæpe singian
      I them do.PST in the   self   sleep sin.INF
      'I made them sin in their own sleep' (StMarg: 15.20.200)

The other three *facere* - NP2 - infinitive constructions rendered with *(ge)don* - *þæt*-
clause mentioned by Ellegård do not have a parallel example with an infinitival
complement in my Old English corpus.

The alternation between infinitival and *þæt*-clause complementation in the translation of *facere* - NP2 - infinitive shows the preference of *(ge)don* for a *þæt*-clause complement, which is motivated by the fact that *(ge)don* prototypically takes two arguments, as argued in previous studies (see section 2.5.1) and discussed in section 4.5.

In sum, a *þæt*-clause is the most frequent type of complement found in combination with causative *(ge)don*. It regularly appears both in native texts and in translations from a Latin source. Syntactically, the causee is part of the *þæt*-clause and the only structure attested is *(ge)don* - *þæt*-clause. In Latin translations, a *þæt*-clause is used to translate constructions when in the original Latin text the NP2 is expressed; in my data set, there are no instances of *(ge)don* - *þæt*-clause that render *facere* - infinitive.

4.3.1.3 *To*-infinitive

Given the rarity of this construction in both native and Latin translations and glosses, I discuss all the cases of causative *(ge)don* complemented by a *to*-infinitive in this section. In my data set, 8 of the 12 instances attested are variations of the expression that the Oxford English Dictionary (OED) (v. *do*, 29.b) classifies as *do to wit* 'make (someone) know', where the verb 'know' may be *understandan* 'understand' or *witan* 'know', as in (47).

(47)   do   hit mon us to witanne
       do.PRS it   one us to know.INF
       'one make us know it' (CP: 46.357.3.2412)

Ellegård (1953: 39) and Los (2005: 135) suggest that these examples should receive a different treatment from other *to*-infinitive constructions, since *do to wit* is found in early Old English texts and continued to be used even when causative *do* fell out of use between late Middle English and early Modern English (Ellegård 1953). Among the examples that do not include a 'know' verb, there are no instances in my data set of a *to*-infinitive complement in native texts. *To*-infinitive was used in Latin translations and in glosses as an alternative to render *facere* - NP2 - infinitive; this strategy is attested in the *Canterbury Psalter* and in Bede, see (48) and (49).

(48) Eala drihtne hælne me do   eale drihtne wel to forswebienne
     Oh   Lord   safe   me do.AMB oh   Lord   well to prosper.INF
     'Oh Lord make me safe and prosper well' (Canterbury Psalter: 117.25)

(49) Ond heo swa swiðe leornunge godcundra gewreota &   soðfæstnisse
     And she so   much knowledge Holy   Scriptures and justice
     weorcum hire underþeodde dyde   to bigongenne
     works   her disciples   do.PST to observe.INF
     'And she made her disciples observe much knowledge of the Holy Scriptures

     and works of justice' (Bede: 4.24.334.16.3354)

There are no examples in my data set of *(ge)don - to*-infinitive that translate *facere* - infinitive. In all the four instances that occur in Latin translations, the causee is an agent, as in the two examples above.

4.3.2   Lexical verb

The OED lists a series of contexts in which *(ge)don* could be used as a lexical verb in Old English. Firstly, it was used transitively with the meaning 'to perform, to make' with two arguments, the subject and the direct object (50)-(51).

(50) Wel he gedyde ealle þing þurh   his wundorlican mihte
     Well he do.PST all   thing through his wonderful   might
     'He did well all the things through his incredible might' (ÆHom: 18.39.2528)

(51) Ealle þa þing   þe   Crist   dyde   for us.
     All   the things that Christ do.PST for us.
     'All the things that Christ did for us.' (ÆCHom II: 6.121.97)

(Ge)don is also found, especially in earlier texts, in complex transitive constructions with the meaning 'to put', e.g. (52), a context which is now restricted to regional varieties. More sporadically, it appears in transitive contexts with the meaning 'apply, employ', e.g. (53)

(52) ðæt mon his sweord doo   ofer his hype,
     that man his sword   do.PRS over his hip,
     that a man put his sword over his hip, (CP: 49.383.4.2588)

(53) þine teoþunge do   to Godes cyrican.
     your tithe   do.PRS to God   church
     'your tithe applies to the church of God' (Confessionale Pseudo-Egberti;

from OED, v. *do*, 2 a.)

(Ge)don is found rather frequently in transitive constructions when it occurs in combination with action nouns; in these cases, the action noun characterises the meaning of the entire construction, which is equivalent to a related verb of action, e.g. (54). Furthermore, *(ge)don* appears in transitive constructions with the meaning 'to do a person something', as in (55).

(54) Gif hwa   wrace   do,   ærðon he him ryhtes bidde.
        If   anyone revenge do.PRS, before he him justice asks
        'If anyone exerts revenge, before he asks him for justice' (Laws of Ine
        (Corpus Cambridge 173))

(55) þu me god   dydest
        you me good do.PST
        'you did good to me' (Paris Psalter: 142.10)

Lastly, *(ge)don* could also be used in contexts where it anticipates an action specified later in the clause. The peculiarity of this use is that *(ge)don* is in agreement with the lexical verb. Denison (1993) distinguishes two different patterns of anticipative *(ge)don* depending on the form of the lexical verb (finite or non-finite). The most frequent pattern is the one with the finite form of both *(ge)don* and the lexical verb, as in (56)-(57).

(56) Ægðer he dyde, ge he egesode   ða   ðe on unryht   hæmdon,
        Both   he do.PST, and he terrify.PST those who in wickedness fornicated,
        ge   he liefde   ðæm ðe   hit forberan ne   meahton
        and he permit.PST those who it   forgo   not could
        'He did both, as he both inspired with fear those who fornicated, and gave
        permission to those who could not forgo it' (CP: 51.397.19.2701)

(57) gif he aðor   dyde,   oððe ofergimode, oððe forgeat,   oððe
        if   he anything do.PST, either neglect.PST, or   forget.PST, or
        tobræc   ænig þing
        violate.PST any   thing
        'if he did one of those things, either neglect or forget or violate anything'
        (BenRul: 46.71.13.867)

There are fewer instances of the pattern in which the lexical verb is an infinitive.

Again, *(ge)don* and the lexical verb share the same form, as in (58).

(58) utan don   swa us mycel þearf is, habban   æfre rihtne geleafan
      let's do.INF as   us much need is, have.INF ever right   belief
      'let us do what is necessary for us, which is to have the true faith' (WHom:

      7a.42, cited in Fischer 1992b: 268)

There are no instances in my data set in which *(ge)don* and the lexical verb it refers to have two different forms. The only example put forward in previous studies of finite *(ge)don* in combination with a non-finite lexical verb is in example (15), in which *(ge)don* is interpreted as anticipative and *wiðstandan* is the infinitive it combines with. However, as discussed in section 4.3.1.1.1 above, that construction describes a causative event.

4.3.3   Pro-verb *(ge)don*

The use of *(ge)don* as a pro-verb is widely attested in Old English texts (Warner 1993). In this context, *(ge)don* requires the presence of an antecedent clause with the subject and the lexical verb, while *(ge)don* can replace either the entire VP, i.e. postverbal ellipsis, or the lexical verb only, in which case it retains some or all of its arguments, i.e. pseudogapping (see Warner 1993), see (60). In this context, *(ge)don* has no semantic meaning, since it refers to a lexical verb present somewhere else in the sentence. In the present study, both patterns are included in the heading pro-verb.

(59) he miccle ma   on his deaðe acwealde, þonne he ær   cucu dyde
      he much more on his death kill.PST, then   he early alive do.PST
      'he killed many more in death than he did before when he was alive' (Judg:

      16.27, cited in Fischer 1992b: 268)

(60) Ne luʒe   þu na onnum; ac   dudest god
      Not lie.PST you not men;   but do.PST God
      'You did not lie to men, but you did it to God' (CMLAMBX1: 93.798-799)

Pro-verb *do* constructions are found at all periods of English, including Present-day English, where auxiliary *do* cannot normally substitute for the modals and for the auxiliary verbs *be* and *have.*

4.4 *(Ge)don* among other causatives

There were other verbs in Old English that could be used as causative verbs alongside *(ge)don*, such as *lætan*, *forlætan* and *hatan*, see the discussion in section 2.5.1. In the present dissertation, I exclusively focus on causative *hatan*.

4.4.1 Causative *hatan*

In Old English, *hatan* 'name, order, command' could occur in a variety of contexts.

1. Transitive verb in calling constructions, e.g. (61).

2. Naming verb in active and in passive voice, e.g. (62) and (63) respectively.

3. Ordering verb, e.g. (64).

4. Causative verb, e.g. (65).

(61)   Seoðþan   he hine to Cristes þeowdome gehatenne hæfde
        Afterwards he him to Christ kingdom   hatan.PST had
        'Afterwards he had called him to Christ's kingdom' (Bede: 8.124.13)

(62)   Se leofode six hund   geara, and his sunu hatte   Arfaxað
        He lived   six hundred years, and his son hatan.PST Arphaxad
        'He lived six hundred years and his son was called Arphaxad' (ÆCHom I,

        1: 186.222.236)

(63)   Se   æresta cyning wæs Ninus haten
        The first   king   was Ninus hatan.PPF
        'The first king was called Ninus' (coorosiu,Or: 2.1.36.25.713)

(64)   Þa   het   se cyning ða anlicnysse towurpan. Þæt folc   ða
        Then hatan.PST the king   the image   cast-down. The people then
        caflice   mid rapum hi bewurpon, and mid stengum awegdon; ac
        promptly with ropes it cast,   and with poles   levered; but
        hi   ne   mihton for ðam deofle þa anlicnysse styrian.
        they not could   for the devil the image   stir.
        'Then the king bade to cast down the image. The people promptly cast

        it with ropes and levered it with poles, but they could not, for the devil,

        stir the image.' (ÆCHomI, 31:444.153.6203)

(65)   Se   Hælend þa   het   þa þenincmenn afyllan six stænene fatu
           The Saviour then hatan.PST the servicemen   fill.INF six stone   vessels
           mid   hluttrum wætere, and he mid   his bletsunge þæt wæter to æðelum
           with pure   water,   and he with his blessing   the   water   to noble
           wine awende.
           wine turned.
           'The Saviour then bade the servicemen to fill six stone vessels with pure
           water, and he turned the water into noble wine with his blessing.' (ÆCHom
           I, 4:206.10.647)

The construction of concern in this study is causative *hatan*, exemplified in (65).[7] In the analysis of the data, a critical issue concerns how we can distinguish between ordering *hatan* in (64) and causative *hatan* in (65).[8] In both constructions, the subject of *hatan* gives an order to another agent to perform an action; when the action is not carried out or there is uncertainty on its realisation, *hatan* expresses an order only. By contrast, if the action has been performed, *hatan* is interpreted to have brought about a causative event. Let us look at examples (64) and (65) above. In example (64), the meaning of *hatan* is restricted to giving an order, since in the following sentence it is explicitly said that the order of the king has not been executed. In example (65), the order given by the causer, the Saviour in this case, of filling six vessels with water has been executed, as shown by the following sentence in which the water is turned into wine. We can conceptualise the causative event described by causative *hatan* in terms of a chain 'order given - execution of the order - situation caused', while no such a chain is evoked by ordering *hatan*, since the stage in which the order has been carried out is missing or not specified.

     Another instance of both constructions is given in examples (66) and (67) below. In (66), the order of going all over the earth has been given by Jesus, but whether his followers have actually performed it is not specified. Conversely, in (67) the order of 'breaking the wall' is considered to be performed, as is shown by the following actions of entering the city and then destroying it.

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[7]From now on, I will translate causative *hatan* with 'make' and ordering *hatan* with 'order'. This will serve to mark the difference between the two constructions.

[8]Different terminology has been used in the literature to refer to ordering and causative *hatan*; Royster (1918) speaks of 'imperfective' and 'perfective' *hatan*, while Lowrey (2013) employs the terms 'non-implicative' and 'implicative'.

(66) Com þa   to his apostolum and hi   gefrerode and geonde
Came then to his apostles   and them comforted and through
feowertigra daga fyrst him wid wunode; and ða ylcan lare   þe
forty   days time him with sojourned; and the same doctrine which
he him ær   tæhte eft   geedlæhte and het   hi   faran
he him before taught again repeated   and hatan.PST them go.INF
geond   ealne middangeard, bodigende fulluht   and soðne geleafan.
through all   earth,   preaching baptism and true   faith.
Drihten ða   on ðam feowerteogoðan dæge his æristes   to heofenum
Lord   then on the fortieth   day   his resurrection to heaven
ætforan heora ealra gesihðe, mid þam ylcan lichaman þe   he on
before them all   sight   with the same body   that he on
þrowode
suffered
'Came to his apostles and comforted them and for forty days sojourned

with them; and repeated again the same doctrine that he had taught before

and ordered them to go all over the earth preaching baptism and good

faith. Then, on the fortieth day of his resurrection, the Lord ascended to

heaven in sight of them all with the same body in which he had suffered'

(ÆCHom I:1.188.281.299)

(67) Ða   ne mihte Iudas metelas þær abidan, ac het   abrecan
Then not could Judan longer   there wait,   but hatan.PST break.INF
þone weall, þeah   þe he brad wære. Eodon ða   ealle inn, ofslogon
the   wall, although PTC he large was. Went then all   in, killed
ealle ða hæðenan and aweston   ða burh.
all   the heathens and demolished the town.
'Then Judas could no longer wait there, but made [someone] break the

wall, although it was large. Then, they all went in, killed all the heathen

and demolished the town.' (ÆLS: 447.5141)

The distinction between ordering and causative *hatan* may be operated by looking

at the surrounding context, as shown in the examples above. In addition, Lowrey

(2013) and Moretti (2020) have identified a number of syntactic and morphological

features that allow us to determine in which examples *hatan* is used as a causative

verb. Lowrey (2013) suggests that the syntactic structure provides information

on the meaning of *hatan*, since constructions in which the causee is not present in

the structural pattern are generally associated with causation, while constructions

with an overt NP2 occur when *hatan* expresses an order. In terms of morphology,

Moretti (2020) points out that the infinitive complement is usually prefixed when

hatan expresses causation, while in ordering constructions the infinitive is bare. Two examples are provided below in (68)-(69). In (68), in which it is unclear whether the order has been completed, the NP2 *þa sona* 'the son' is expressed in the structural pattern and the infinitive *blinnan* 'stop' has no prefix. By contrast, in (69) the causer introduces a causative situation in which it is ordered to build a church and, looking at the context, we know that the order has been performed; the action of consecrating the church would have not been possible if the action of building it had not been completed. Here, the causee is not expressed in the structural pattern and, in addition, the infinitive has the prefix *ge-*.

(68) and het þa sona blinnan fram ehtnysse cristenra manna, and
and hatan.PST the son stop.INF from persecution christian people, and
ongan arweoþian ða þrowunge þara haligra martyra
start honour the passion the holy martyrs
'and ordered the son to stop the persecution of the Christian people, and

start honouring the passion of the holy martyrs' (Bede: 1.7.40.16.336)

(69) Æðelberht se cyning weorðlice cyrcan heht getimbran þara
Æthelberht the king beautiful church hatan.PST build.INF the
eadigra apostola Petri and Pauli and mid missenlecum geofum
blessed apostles Peter and Paul and with different gifts
welgade. [...] þa cirican hwæðre nales Agustinus, ac Laurentius
endowed. [...] that church however not Augustine, but Laurentius
biscop his æfterfylgend heo gehalgode.
bishop his successor she consecrated.
'Æthelberht the king made [someone] build a beautiful church to the

blessed apostles Peter and Paul and endowed it with different gifts. [...]

that church however was not consecrated by Augustine but by his succes-

sor, bishop Laurentius' (Bede: 1.17.90.18.827)

Regardless of whether *hatan* is used as an ordering or as a causative verb, the distribution of different types of complement shows that it has a strong preference for infinitival complements, while a *þæt*-clause is rather infrequent, as illustrated in table 4.10. There are no attestations in my data set of *hatan* with a *to*-infinitive complement.

119

Construction	Occurrences	%
hatan - INF	1252/1357	92.2%
hatan - *þæt*-clause	105/1357	7.8%
Total	1357/1357	100%

Table 4.10: Types of complement taken by *hatan* in YCOE.

The distinction between native Old English texts and Latin translations is not as relevant for *hatan* as it was for *(ge)don*; therefore, in the following section I will only divide according to the type of complement.

4.4.1.1 Infinitival complementation

Causative *hatan* complemented by an infinitive is robustly attested in both native texts and Latin translations. In the sub-corpus of 200 instances, causative *hatan* occurs more frequently with the syntactic pattern NP1 - Vcau - INF than the one with the causee expressed, as shown in table 4.11.

Syntactic structure	Occurrences	%
NP1 - Vcau - NP2 - INF	43/200	21.5%
NP1 - Vcau - INF	157/200	78.5%
Total	200/200	100%

Table 4.11: Frequency of the patterns with and without an expressed NP2 in causative *hatan* - infinitive constructions.

The semantic features of the arguments taken by *hatan* are well defined. In every example of my sub-corpus, the causer is an animate agentive entity, as in (70).

(70) and se cyng het   þone arcebisceop Wulfstan þaerto boc
      and the king hatan.PST the   archbishop Wulfstan there book

120

settan
prepare.INF
'and the king made archbishop Wulfstan prepare a book there (codocu3:
8.126)

The causee is typically coded by the accusative case, as in (70), but there are
also two instances in which the case of the NP2 is dative.[9] Strikingly, in all the
instances in which it is expressed, the causee is an animate and agentive entity, as
exemplified below in (71); there are no instances in my sub-corpus in which the
causee is an inanimate non-agentive entity.

(71) ac he het   his agene men hine sændan   on   ðone sæ ond þa
      but he hatan.PST his own   men him throw.INF into the   sea and the
      sædor   hine sona forswulgon
      sea-beast him soon devoured
      'but he made his own men throw him into the sea and the sea-beast soon

      devoured him' (comart3,Mart5: Ja19,A.21.176)

In the instances in which the causee is implicit, it is understood that there is
a semantic agent, crucially not the subject of *hatan*, that performs the action
expressed by the infinitive. In fact, the main difference that set *hatan* apart from
(ge)don is that, in constructions involving *hatan*, the subject of the infinitive
cannot be co-referential with the subject of *hatan*. This happens because *hatan*
maintains its basic meaning and implies the presence of two agents, one that
expresses an order and the other that receives and performs it. An example is
provided in (72), where it is understood that the subject of the infinitive *ahone*
'hang' is not *he* but another, unspecified agent.

(72) þa men mon lædde to Winteceastre to þam cynge and he hi   þær
      the men one led   to Winchester   to the king and he them there
      ahon   het
      hang.INF hatan.PST
      'the men were led to Winchester to the king and he made [someone] hang

      them there' (ChronA: 897.50.1153)

---

[9]In cases where the NP2 is a pronoun, it is often difficult to distinguish between
dative and accusative forms. In fact, the formal distinction between accusative and dative
blurred around the end of the Old English period (see Fischer 1989 and Allen 1995 for
further details).

The semantic features described above influence the type of infinitive that *hatan* takes. There are only unergative and transitive infinitive complements with an agentive subject in my data set, while no examples of unaccusative infinitives are attested. Table 4.12 shows the frequency of the different infinitive types in my sub-corpus.

Infinitive type	Occurrences	%
Transitive	117/200	58.5%
Unergative	83/200	41.5%
Unaccusative	0/200	0.0%
Total	200/200	100%

Table 4.12: Type and frequency of infinitives occurring with *hatan*.

Turning to the use in Latin translations, Timofeeva (2011) pointed out that *hatan* usually renders the verbs *iubeo* 'order, command', as shown in (73), and more rarely the verb *praecipio* 'tell, command'. However, as mentioned in section 4.3.1.1, *hatan* is also used by Old English translators to render *facere* - NP2 - infinitive, as shown in (22) and repeated here in (74). The translation of *facere* with *hatan* occurs only when the construction has an overt causee; when the subject of the infinitive is left implicit, *lætan* or *(ge)don* are used.

- LATIN: *et dixit domine si tu es iube.*HATAN *me.*NP2 *uenire.*INF *ad te super aquas*

(73) &   cwæþ drihten gif þu þæt is hat   mec cume   to þe ofer
      and said   Lord   if you that is hatan.PST me come.INF to you over
      þæt wæter
      the water
      'and he said Lord if that is you, make me come to you over the water'
      (Rushworth Gospel: 14.28)

- LATIN: *calcare.*INF *ipsos paucissimos racimos fecit.*DO

(74) het   hine wringan þa   feawa geclystru þære byrgena
      hatan.PST him press.INF those few   bunches the   grapes
      'ordered him to press those few bunches of grapes' (Corpus Gospels: 58.16)

4.4.1.2 *þæt*-clause complementation

The construction in which *hatan* takes a *þæt*-clause is substantially less frequent than the infinitival complement. There are different syntactic structures associated with this complementation type. There are two main patterns, NP1 - Vcau - NP2 - *þæt*-clause and NP1 - Vcau - *þæt*-clause, which are equally attested in the corpus. The NP1 can either precede *hatan* or be inserted between *hatan* and the *þæt*-clause, especially when there is *þa* 'then' in first position. The NP2 is generally placed between *hatan* and the *þæt*-clause and grammatically is the object of *hatan* and the subject of the verb inside the *þæt*-clause. In the *þæt*-clause there is a resumptive pronoun, which is the subject of the lexical verb that refers back to the (present or absent) NP2, as shown in (75), where *he* indicates the causee *þone hæðenan þegn* 'the heathen servant'.

(75) þa   het   Sebastianus þone hæðenan þegn   þæt he   þa
      then hatan.PST Sebastianus the   heathen servant that he.RSMP the
      hæftlingas þe   he heold on þam cwearterne gebrohte to his spræce,
      prisoners who he held in the   prison   brought to his instruction
      'Then Sebastian made the heathen servant to bring the prisoners whom

      he held in the prison to his instruction' (ÆLS: 121.1284)

The causee is an animate and agentive entity in every example of my sub-corpus; I did not come across instances in which the causee is either inanimate or non-agentive. The resumptive pronoun always refers to an animate and agentive entity, meaning that, even when the causee is unexpressed, we know that it is animate and agentive. An example of such a construction is presented in (76), in which the identity of the causee is left unspecified.

(76) He fandode þa   and afunde ðærinne twegen mæssepreostas, mæres lifes
      He tried   then and found therein two   priests,   great lives
      menn, Euentium and Theodolum of   estdæle cumene. Ða   het
      men, Euentium and Theodolum from east   come.   Then hatan.PST
      Alexander þæt he   mid arwurðnesse sceolde hi   gefeccan swyþe
      Alexander that he.RSMP with honour   should them bring   very

raðe   him to.
soon him to.
'Then he tried and found two priests there, Euentium and Theodolum, men with great lives that came from the east. Then, Alexander made [someone] bring them to him soon with honour' (ÆHom24: 128.3843)

Moving on to the features of the verb inside the *þæt*-clause, the predominant mood appears to be the subjunctive, which is found in 35.2% of the examples. Interestingly, a pre-modal occurs more frequently, 21.9%, than the indicative, which appears in only 19% of the cases. This is illustrated in table 4.13.

Mood	Occurrences	%
Indicative	20/105	19%
Subjunctive	37/105	35.2%
Pre-modal	23/105	21.9%
Ambiguous	25/105	23.9%
Total	105/105	100/100%

Table 4.13: Frequency of the mood inside the *þæt*-clause.

The high frequency of the subjunctive and pre-modal verbs in the *þæt*-clause, more than half of all cases, provides strong indications about the meaning of this construction. The subjunctive mood is assumed to express unreal, unverifiable and potential situations (Traugott 1992), while the presence of pre-modal verbs like *scullan* 'should', *willan* 'will' and *magan* 'may', which generally express possibility, mean that a *þæt*-clause was used in contexts that expressed possibility and irreality. More specifically, Timofeeva (2010) argues that *hatan* - *þæt*-clause was used when the causative situation failed due to an external cause or in cases of potential causation, generally in relation to imaginary contexts. Two examples are given in (77) and (78) (from Timofeeva 2010: 117-118).

(77)   þa   het   Dioclitianus se kasere   þære ceastre gerefa þæt he
        then hatan.PST Diocletian   the emperor the   town   reeve that he

gename on   þam biscope ealle Godes bec   ond forbærnde. ða
took   from the bishop all   God   books and burnt.   Then
nolde   se bisceop þa bec   syllan, ac   cwæð
would-not the bishop the books give,   and said
'Then the emperor Diocletian ordered the reeve of the town to take all the

books of God from the bishop and burn them. The bishop did not want

to give the books, but said' (Mart5: Au,A.3.1602)

(78)   And Petre þæne ealdorscipe he ærest betæhte &   hefenware
         And Peter the   supremacy he first   gave   and heavenly-inhabitants
         cæga eac him befæste   &   het   þæt he heolde &   rihtlice
         keys with him entrusted and hatan.PST that he held   and rightly
         weolde be manna gewyrhtum hwa þærin   moste &   hwa na ne moste
         judged by men   merits   who therein may   and who ne not may
         'And he first gave to Peter the supremacy and also entrusted him with

         the keys of heavenly inhabitants and ordered that he guarded and judged

         rightly by the merits of men who may and who may not therein' (WHom17:

         28.1384)

4.5   Differences between causative *(ge)don* and causative *hatan*

In this section, I provide a semantic comparison of causative *(ge)don* and causative
hatan that draws on the investigation conducted above in 4.3.1 and in 4.4.1 and
the previous accounts discussed in 2.5.1. It will be argued that *(ge)don* and *hatan*
are substantially different, and that the possibility for *(ge)don* to be used in two
and three-argument structures represents a central feature for the development of
auxiliary *do*, as will be discussed in chapter 6.

   Firstly, the difference between *(ge)don* and *hatan* can be described on the
basis of the semantic parameters proposed by Dixon (2000) (see section 2.5.2).
A first generalisation that can be drawn from the data is that *(ge)don* can be
used to express both direct and indirect causation, while *hatan* encodes indirect
causation only. In every example of my data set, the causative event described by
hatan requires the presence of an agentive causee, while there are several examples
concerning *(ge)don* in which the NP2 is not an agent and the causer acts directly
on the caused situation. This is connected to the parameter of control, since the

agentive causees that occur with *hatan* always have control, whereas *(ge)don* takes also non-agentive entities that lack control over the caused situation. Furthermore, *(ge)don* and *hatan* differ with respect to the type of action expressed by the verb in the caused situation. While the causative event that *hatan* brings about applies only to verbs that describe an action, *(ge)don* can also be used with verbs that describe a state.

Secondly, the semantic role of the participants in the two causative constructions at hand is different. The first difference concerns the features of the causer; the data show that while *(ge)don* takes both animate and inanimate agents, *hatan* occurs only in combination with animate agents. The second involves the causee. As already mentioned above, there are only animate and agentive causees occurring in combination with *hatan*, while *(ge)don* can appear with agentive, non-agentive, animate and inanimate NPs. This difference can be ascribed to the different semantic content of *(ge)don* and *hatan.* On the one hand, *(ge)don* is a pure causative in that it only expresses the notion of causation without other lexical connotations (see section 2.5). On the other hand, *hatan* preserves its basic meaning and, therefore, puts more restrictions on the semantic features of the causee, which is typically an agent capable of performing an action.

These differences are relevant because they relate to the argument structure of *hatan* and *(ge)don.* Starting with constructions with the NP2 expressed, *hatan* displays a three-argument structure (NP1, NP2 and VP) in which the causee has a role in the argument structure of both *hatan* and the predicate in the verb phrase describing the caused situation.

(79) Se   Hælend þa   het   þa þenincmenn afyllan six stænene fatu
      The Saviour then hatan.PST the servicemen fill.INF six stone   vessels
      mid hluttrum wætere, and he mid his bletsunge þæt wæter to æðelum
      with pure   water, and he with his blessing   the water to noble
      wine awende.
      wine turned.
      'The Saviour then made the servicemen fill six stone vessels with pure

      water, and he turned the water into noble wine with his blessing.' (ÆCHom

      I, 4:206.10.647)

By contrast, *(ge)don* seems to appear in both two and three-argument structures. The main argument supporting this claim relies on the fact that causative *(ge)don*

could combine with agentive causees and non-agentive NP2s. In fact, I argue that two-argument structures occur in constructions where the NP2 is a non-agentive entity, since the NP2 is only part of the argument structure of the VP and not of the causative verb. In these constructions, NP2 and the infinitive verb together form a clause which is embedded as a complement of *(ge)don*. This means that the only arguments contained in the argument structure of *(ge)don* are the NP1 and the VP. There are several examples in the data set, one of them is provided below in (80).

(80) And treowa he deð   færlice   blowan   and eft   raðe
      And trees   he do.PRS suddenly flourish.INF and again afterwards
      asearian.
      wither
      'And he makes the trees suddenly flourish and wither again afterwards'

      (Vercelli Homilies: 109)

When the referent of NP2 is an agent, on the other hand, the argument structure of *(ge)don* is formed by three arguments, namely NP1, NP2 and VP. In this analysis, the key point concerns the status of NP2 and its relationship with the causative verb. In these constructions, NP2 is a complement in its own right and is an argument of *both* the causative verb and the infinitive complement. In this regard, look at example (81), in which the NP2 *heom* 'them' is an agent that performs the action of coming.

(81) þe biscop of Wincestre Henri þe kinges broþer Stephnes spak wiþ
      the bishop of Winchester Henry the king   brother Stephen spoke with
      Rodbert erl &   wiþ þe emperice &   swor hem aþes þat he næfre
      Robert earl and with the empress and swore them oath that he never
      ma   mid þe king his broþer wolde halden. &   cursede alle þe men
      more with the king his brother would hold   and cursed all the men
      þe   mid him helden. &   saȝde hem þat he wolde ȝefen hem up
      that with him held   and said   them that he wold give them up
      Wincestre. &   dide   heom cumen   þider.
      Winchester and do.PST them come.INF there.
      'Henry bishop of Winchester, king Stephen's brother, spoke with earl
      Robert and with the empress, and swore them oath that he never more
      would hold with the king, his brother, and cursed all the men that held
      with him, and he said that he would give up Winchester to them, and he
      made them come thither' (Peterborough Chronicle: 1140.28)

Overall, examples like (81) are rare in the data set, as shown in table 4.14, which suggests that *(ge)don* was more likely to occur with non-agentive entities, which can be taken as an indication that it was prototypically a two-place verb. This would fit with the findings presented in previous studies, in particular Fischer (1989) and Denison (1993). However, examples like (81) above show that *(ge)don* could also take three arguments, which leads us to conclude that a more accurate classification that accounts for the variation observed in the data would be to consider causative *(ge)don* as being *both* a two or a three-argument structure verb.

NP2	Occurrences	Frequency
Non-agentive entity	24/36	66.7%
Agentive entity	12/36	33.3%
Total	36/36	100%

Table 4.14: Frequency of agentive causee and non-agentive NP2 in constructions involving causative *(ge)don*.

We can visually represent the argument structure of *(ge)don* and *hatan* in the following way. The three-argument structure of both *hatan* and *(ge)don* in example (79) and (81) is illustrated in 4.1, while the two-argument structure of causative *(ge)don* in example (80) is given in 4.2.
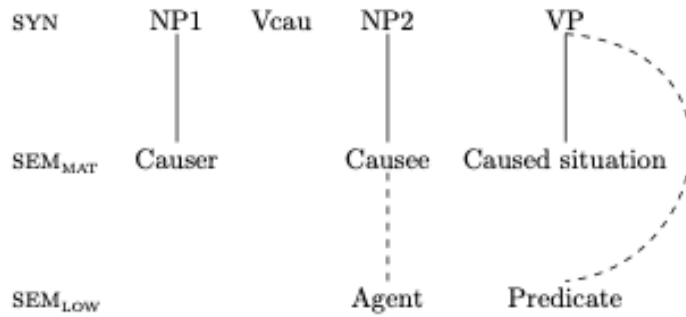
Figure 4.1: Graphic representation of three-argument structure with NP2 expressed.
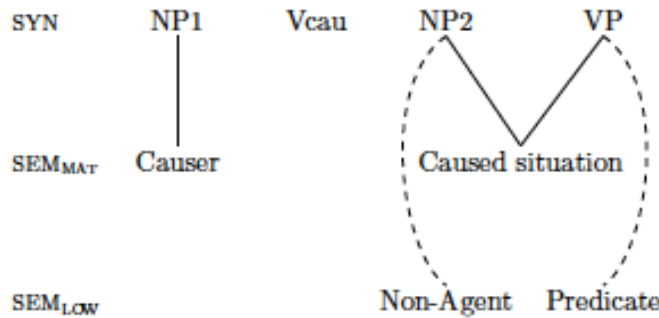
Figure 4.2: Graphic representation of two-argument structure with NP2 expressed.

In 4.1, NP2 is connected by means of a full line to the role of causee in the matrix clause, while the dashed line indicate that it is also an agent in the lower clause. Figure 4.1 represents, therefore, a three-argument structure, since the complements of the causative verb are NP1, NP2 and VP. In 4.2, on the other hand, NP2 is not an independent complement but, along with the infinitive verb in the VP, it forms a clause that is a complement of the causative verb. The argument structure of the causative verb has then two arguments, namely NP1 and VP. In these constructions, NP2 is not an agent, as shown by the dashed line that connects NP2 to its role of non-agent in the lower clause.

Moving on to examples where the causee is left unexpressed, we see even greater differences. In constructions involving *hatan*, the omission of the causee

does not change the interpretation of the construction, since it is understood that there is an implicit agent that carries out the action in the caused situation.

(82)   and het   onælan   þone ofen swiðe ðearle.
       and hatan.PST kindle.INF the   oven very   intensely.
       'and made [someone] kindle the oven very intensely' (ÆCHom II: 9.238.204)

Thus, we can posit the following representation.
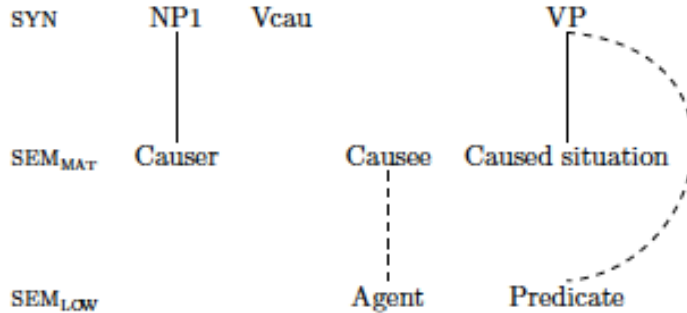
Figure 4.3: Graphic representation of three-argument structure with NP2 non-expressed.

In these examples, the omitted causee is a vague, human agentive entity whose identity is not relevant. However, there is no doubt that there is an implied agent and that the structure contains three arguments.

The situation is different for *(ge)don*. In fact, it appears that in the few examples in which the causee is not expressed, the interpretation of *(ge)don* is ambiguous. This occurs because, as suggested above, the argument structure of *(ge)don* does not necessarily imply the presence of an external agent. Let us take a look at example (14) repeated in (83).

(83)   and genam þæt husel þe   se hælend gebletsode tobrælic on þreo
       and took   the housel PTCL the Saviour consecrated, broke   in three
       and onbyrgede anes dæles. Þone oðerne dæl he dyde   gehealden mid
       and ate   one part. The other part he do.PST keep.INF   with
       him to bebyrgenne æfter his forðsiðe.
       him to bury   after his departure
       'the saint received the consecrated bread, broke it in three parts and ate

       one part. He (a) made [someone] keep - (b) kept the other part to be

       buried with him after his departure' (ÆLS: 123.531)

In example (83), the infinitive *gehealden* 'keep' is a transitive verb that takes an agentive subject. Who the subject of 'keeping the other part' is is ambiguous; it may be an external agent, but it cannot be excluded that the subject of *gehealden* is the same subject as that of *(ge)don*. The illustration of the two possible interpretations is given below in figure 4.4-4.5. Figure 4.4 shows a causative situation with the presence of an external causee, while figure 4.5 illustrates the argument structure of the auxiliary interpretation.

SYN	NP1	Vcau		VP
SEM$_{MAT}$	Causer		Causee	Caused situation
SEM$_{LOW}$			Agent	Predicate
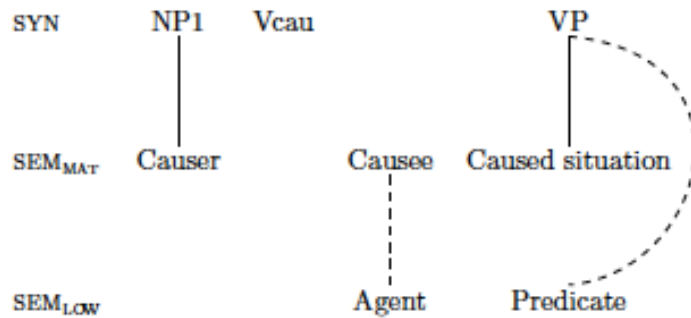
Figure 4.4: Graphic representation of three-argument structure with NP2 non-expressed.

SYN	NP1	Vaux	VP
SEM$_{MAT}$	Any semantic role		Predicate
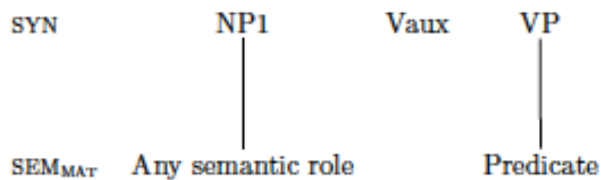
Figure 4.5: Graphic representation of the structure where causer and causee are coreferential.

As can be seen, the two representations greatly differ from one another. The emergence of the auxiliary interpretation resulted from the interaction of multiple construction sources and was aided by a number of factors that are intertwined with the synchronic state of the language at the beginning of the Middle English period. The account on the development of auxiliary *do* will be discussed in great detail in chapter 6.

4.6 Summary

This chapter focused on the uses of *(ge)don* and *hatan* in Old English. In section 4.3, I discussed the uses of *(ge)don*, paying particular attention to causative *(ge)don*. It has been shown that *(ge)don* could appear in constructions with two arguments, i.e. NP1 and VP, and three arguments, i.e. NP1, NP2 and VP. In two-argument structures, the NP2 is not an agent and is a complement of the infinitive verb only, while in three argument structures there is a causee that is a complement of both *(ge)don* and the infinitive verb. A discussion then followed of three examples in which an alternative interpretation may develop, and we have seen that it was characterised by constructions in which the causee was left implicit and the infinitive required an agentive subject. In the alternative interpretation, it is understood that the subject of the infinitive is the subject of *(ge)don*; importantly, this reading does not clash with the argument structure of *(ge)don*. I also examined the other uses of *(ge)don* and it was shown that pro-verb *(ge)don* had no semantic semantic meaning. The crucial finding of this analysis is that it has been shown that *(ge)don* possessed the semantic and syntactic features that anticipate the emergence of auxiliary *do* already in Old English. In section 4.4, I analysed causative *hatan*. Based on my sub-corpus of 200 instances, it has been shown that *hatan* occurs exclusively in three-argument structures, while there are no instances of *hatan* in two-argument structures. Strikingly, it was discussed that even when the causee is left implicit, it is understood the presence of an agent that performs the action brought about by the causer. This is due to the fact that *hatan* preserved its meaning of 'ordering', which implies (i) the presence of an agent that issues the order and (ii) the presence of an agent that receives and performs the order. Section 4.5 compared *(ge)don* and *hatan*. It was observed that while *hatan* put several restrictions on the semantic features of the causee, *(ge)don* did not. It will be argued in chapter 6 that this feature played a decisive role in the development of auxiliary *do*.

Chapter 5

Tracking the change in poetry: the use of *do* in Middle English poems

5.1 Introduction

The presence of auxiliary *do* in early Middle English poems and the contemporary absence from prose texts of the same period has been noticed by several scholars (e.g. Royster 1922; Engblom 1938; Ellegård 1953). However, the only study which focuses on this issue is Ellegård (1953), which has been discussed in section 3.2.2.2. He suggested that auxiliary *do* served as a 'poetical licence' to place the infinitive in rhyme position (1953: 70). This proposal has been universally accepted and since then there have been no further studies that addressed this topic. Moreover, poetry is hardly taken into account in studies on the history of *do*, as the general tendency in historical linguistics is to focus on prose when studying morphosyntactic change. The aim of the present chapter is to examine the distribution and the functions of auxiliary *do* in Middle English poetry and evaluate whether poetry played any role in the development of the auxiliary construction. Section 5.2 presents some important characteristics of the Old and Middle English poetical traditions. Section 5.3 provides an overview of the data set, while 5.4 presents a qualitative analysis of the data. In section 5.5 I introduce the statistical techniques used to analyse the data and the possible explanatory factors that may

underlie the use of auxiliary *do* in poetry, while section 5.6 presents the results of the quantitative analysis. In section 5.7, I include in my investigation other analytic constructions, such as the modal verbs *can* 'can', *may/mouen* 'may', *shulen* 'shall' , *willen* 'will' and the construction *gan* - infinitive. Section 5.8 examines what the main findings of this chapter mean for the development of auxiliary *do*. Section 5.9 summarises the chapter.

5.2   Old and Middle English poetical features

5.2.1   Old English poetry

Old English poetical texts are exceptionally consistent in that they show the presence of a single metrical form, with only minor variations attested throughout the Old English period. This form is based upon a rhythmic pattern that is made up of two essential characteristics: stress and alliteration. Each line of poetry is formed by four stresses, two in the first half-line (a-verse or on-verse) and two in the second (b-verse or off-verse); the two half-lines are divided by a strong pause, called *caesura*, and are joined by alliteration (Pearsall 1977; Minkova 2004). Alliteration is determined by the first stressed syllable of the off-verse, which can alliterate with one or both the stressed syllables in the on-verse, while the second stressed syllable of the off-verse rarely alliterates — if it happens, it is purely ornamental (Minkova 2004).

Sievers (1893) identified five stress-patterns on the basis of the position of the stressed syllables in each half-line; these are illustrated in table 5.1, with / representing a stressed syllable, x an unstressed syllable and \ a secondary stress:

Type	Stress pattern
Type A	/ x / x
Type B	x / x /
Type C	x / / x
Type D	/ / \x
Type E	/ \x /

Table 5.1: Stress patterns in the Old English alliterative tradition (from Pearsall 1977: 15).

Variation is found among these patterns in the number of unstressed syllables, which could be higher, while the number of stresses is more stable — usually four. The element carrying the stress in the line is determined by the word class, as nouns, adjectives and adverbs are stressed, whereas demonstratives, prepositions and conjunctions rarely carry the stress. Verbs are variable; infinitives and participles are generally stressed, but finite verbs can either be stressed or unstressed. Whether a finite lexical verb is stressed depends upon several factors; it is always stressed when it is the only verb in the line, but it may lose the stress when it occurs at the beginning of the on-verse, at the end of the on-verse or at the end of the off-verse (see also Minkova 2004).

The strength of the alliterative tradition is shown by the fact that even Old English translations from Latin sources were adapted to fit the principles of alliteration. In such cases, the influence of Latin is only seen in the themes and the motives of the poems, as the epic and heroic sagas rich of pagan allusions were mixed with Christian elements (Pearsall 1977). Conversely, the metrical features of the alliterative tradition were not influenced by Latin. . However, although alliteration was undoubtedly the predominant metrical form, we have evidence that rhyme, both internal and at the end of the verse, was not unknown to Old English poets. Specifically, rhyming poems began to appear towards the end of the 10th century in what Pearsall calls 'popular' poetry (1977: 70-74), but the use of rhyme was rather unsystematic, suggesting that it was utilised only

as an ornamental feature (Lester 1996; Minkova 2004). The first work to show a rudimentary use of the rhyme is a poem on the death of Edgar dated around 975 and found in the *Worchester Chronicle* and in the *Peterborough Chronicle.* This poem seems to be a hybrid: it has lines dominated by alliteration, lines in which there are traditional formulae, a typical feature of Old English alliterative tradition that consist of words which are recurrently used to express the same notion (see Godden 1992), but what stands out is the presence of the rhyme, which is, however, not consistently followed throughout the poem. An example is provided below, where the rhyming syllables are underlined.

Her Eadgar gefor / bugon to cyni<u>nge</u>

Angla reccent / swa wæs him gecy<u>nde</u>.

West Seaxena wine / Næs se flota swa r<u>ang</u>.

& Myrcene mundbora. / ne se here swa str<u>ang</u>.

Cuð wæs þet wide / þe on Angelcynne

geond feola þeoda / æs him gefetede

Þe aferan Eadmund[es] / þa hwile þe se ætela cyning

ofer ganetes bað / cynestol gerehte.

Cyningas hine w<u>ide</u>

wurðodon s<u>ide</u>.[1]

(Peterborough Chronicle: 959)

A piece of poetry which more regularly uses rhyme is a poem of the first half of the 11th century on the persecution of Alfred the Ætheling found in the *Abingdon Chronicle* and the *Worchester Chronicle.* Here, end-rhyme is more consistent but still 'clumsily' used, while alliteration seems to play a minor role

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[1]'In this year Edgar died, ruler of the English, friend of the West Saxons, protector of the Mercians. It was well known to many people that Edmund's son commanded the allegiance of kings far and wide over the ocean, as was his birthright. No fleet or army was so strong that it could win plunder for itself in England while this noble king possessed the throne' (from Pearsall 1977: 70-71).

(Pearsall 1977: 71). More advanced is the poem on the death of William the Conqueror, dated at the end of the 11th century, in which end-rhyme and internal rhyme are more consciously used, despite being irregular in some cases (Pearsall 1977).

Finally, an interesting albeit puzzling poem is a short piece of poetry of 87 lines called the *Rhyming Poem*, found in the Exeter Book and generally dated around the 8th century (Pearsall 1977: 73),[2] which is entirely composed in rhyme, both internal and at the end of the verse. Alliteration is extensively found as well, following a pattern in which the first stressed syllable of the off-verse alliterates with both the stressed syllables of the on-verse. The poem has no meaningful content and seems an extreme poetical exercise, in which alliteration and rhyme are forcefully combined together; however, it is a valuable piece of evidence which indicates the knowledge of rhyme in a period prior to the 10th century.

5.2.2 Middle English poetry

The beginning of the Middle English period and particularly the 11th century mark a crucial shift in the way poetical texts were composed. While the Old English poetical production is remarkably consistent, early Middle English poems are characterised by a mixture of styles. This variety is due to several factors that came into play between the 10th and the 12th century. One of these factors concerns a more consistent and regular use of the rhyme, both internal and at the end of the verse. While it has been shown in section 5.2.1 that, despite being rarely used, rhyme was not unknown to Old English poets, it became the most frequent poetical pattern in Middle English. The spread of rhyme in early Middle English poems does not mean that the alliterative verse disappeared; alliteration continued to be used, although less frequently, until the end of the 13th century and returned to be popular between the 14th and 16th century with the so-called Alliterative Revival (Pearsall 1977).

Variation in Middle English poetry does not only refer to the possibility to use both rhyme and alliteration, but also concerns different types of rhyme. It appears from the very first Middle English poems that there are two types of

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[2]The date of composition of the *Exeter Book* is the 10th century, but it is generally agreed that it is a copy of a collection of texts which is of the 8th century (see also Lehmann 1970: 438).

rhyme, which are called 'perfect' and 'imperfect' (e.g. Schipper 1910; Jefferson et al. 2014). Two words share a perfect rhyme when the sound of the vowel and the sound of the consonants in the final syllable exhibit an exact correspondence; when it does not happen, the rhyme is called imperfect rhyme. The most frequent type of imperfect rhyme is when consonants share some phonological features and are close in sound, which is called 'feature rhyme'. In example (1) from the *King Horn*, -*k* and -*t* share the same manner of articulation but have different places of articulation, the former being velar and the latter alveolar.

(1)   That his ribbes him tobra<u>k</u>e

        And suthe com in atte ga<u>t</u>e

          (King Horn: 1087-1088)

There are cases in which only the vowels rhyme, while the consonants do not; this type of imperfect rhyme is called assonance. The frequency and the distribution of imperfect rhyme across Middle English varies from author to author. It is found more frequently in early poems, while later authors such as Chaucer and Gower do not use it, but it is considered acceptable in romances such as *Thomas of Erceldoune* and *The Sowdone of Babylon* (see Jefferson et al. 2014 for further details).

As said above, alliteration was not completely abandoned during the Middle English period, but continued to be used along with rhyme. Thus, we see the use of both rhyme and alliteration, particularly in early Middle English poems, where it is possible to observe at least four different types of versification (Schipper 1910). In some, as the short poem *The Grave* (c. 1150) or the first half of the *Brut* (c. 1190 - 1215) show, the type of verse used is alliteration. In others, as the *Poema Morale* (c. 1175), there is an extensive use of rhyme. Mixture of alliteration and rhyme is also frequent, as shown by *The Proverbs of Alfred* (c. 1180), *Body and Soul* (c. 1160) and in some parts of the *Brut*, in which the two half-lines are linked by alliteration and internal rhyme. Finally, there are a few cases, especially in some parts of the *The Proverbs of Alfred* and of the *Brut*, in which there is neither alliteration nor rhyme.[3] Examples of the different types of

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[3]Schipper argues, however, that the absence of any recognisable metrical pattern has to be attributed to corruption of the text (1910: 69).

verse are given below.

-**alliteration** (in italics)

*B*ute if he *b*eo | in *b*oke ilered (The Proverbs of Alfred: 3.65.66)

-**rhyme** (underlined)

Alto lome ich habbe igult werke and a wo<u>rde</u>

Alto muchel ich habbe ispend to litel ileid on ho<u>rde</u>

(Poema Morale: 13.220.11-12)

-**mix of alliteration** (in italics) and **rhyme** (underlined)

biuoren wende *H*eng<u>est</u>, | and *H*ors him alre *h*ænd<u>est</u>.

(Brut: 13973-13974)

-**neither rhyme nor alliteration**

he may beon on elde & wenliche lorþeu. (The Proverbs of Alfred: 6.101-102)

The diversity of early Middle English poems is also shown by the different number of syllables by which the line could be made up. Putter (in press) illustrates the variety of Middle English poems with an analysis of the *Ormulum* (c. 1150-1180), *Poema Morale* and *King Horn* (c. 1225). Despite the temporal proximity, the three poems show notable differences in terms of poetical features. The author of the *Ormulum* is meticulous in the metre adopted, the iambic septenary of Latin and French origin, with a fixed number of fifteen syllables in each line, while rhyme is completely absent. *King Horn* shows an extensive use of rhyme, but in some cases alliteration is also used to link the two half-lines, while the number of syllables and stresses is variable. Finally, *Poema Morale* shares the same metre as the *Ormulum*, the iambic septenary; however, the number of syllables is not fixed but is rather variable, and contrarily to the *Ormulum*, the author of *Poema Morale* makes regular use of rhyme. Such flexibility in the number of syllables is also found in other early Middle English poems, such as the *South English Legendary* (c. 1270-1285). Therefore, it would be meaningless to generalise over the different styles used by Middle English poets. In that regard,

I agree with Putter (in press), who argues that:

> [G]eneralisations about the configuration of these patterns or the degree of regularity that Middle English poets sought to achieve are pointless. In every generation, there existed poets who composed tightly regulated verse and others who did not.

Next to the factors mentioned above, a further, crucial event in the history of English that had a strong influence on poetry is the Norman Conquest of 1066. In fact, while the poetical features of Latin did not affect the Old English metre, the new poetical practices introduced by the Normans were adopted by poets, especially in the South, where the Norman influence was more significant. Among those, the number of syllables and the adoption of the iambic pentameter will become the foundation of the English poetical tradition in the 15th century.

5.2.3 Poetic language in Old and Middle English: possible relation with the use of auxiliary *do*

The nature of Old and Middle English poetic language is a complex issue that has been widely discussed in the literature (Tatlock 1923; Magoun 1953; Pearsall 1977; Cable 1974; Fulk 1992; Godden 1992; Orchard 1994; Minkova 2004). The matter of major concern here is to what extent the poetical conventions discussed in the previous sections influenced the language used in Old and Middle English poems. In other words, the crucial point concerns whether poets selected one linguistic form over another due to metrical needs. I narrow my analysis down to the role that poetical conventions had on the use of auxiliary *do*. In section 5.2.3.1, I deal with Old English and the impact of alliterative conventions on analytic constructions, while in section 5.2.3.2 I address the effect of metre on the use of auxiliary *do* in Middle English.

5.2.3.1 Old English

Alliteration has a great influence on the language found in Old English poems, in which fixed formulae and archaic constructions were frequently used, creating thus a linguistic canon that does not necessarily reflect the language spoken in

that period. However, the language of alliterative verses could not depart too far from the spoken norm, as poetic compositions were originally written to be delivered orally (Minkova 2004). Thus, it seems that the truth may lie in the middle and it is likely that the poetic language used in Old English is the result of the combination of both tradition and poetical conventions on the one hand and actual language use on the other. The influence of the strict poetical principles of alliteration is well-exemplified in the vocabulary used in Old English poems. In fact, alliteration requires the use of a wide vocabulary in order to provide different initial, and therefore alliterative, sounds; this results in a series of words that are characteristic of poetry and are not found in prose, such as *beorn*, *guma*, *hæleð*, *rinc* and *secg*, which all mean 'man, warrior' and are exclusive of poetry.

The syntax of the Old English alliterative verse is a complex matter, the details of which are beyond the goal of this study. Here, I only explore the behaviour of analytic verbal constructions, given their structural resemblance with auxiliary *do* (see Getty 2000 on the role of finite verbs and auxiliaries in Old English poetry). It has to be born in mind that infinitives are generally stressed and part of the alliteration only if they do not occur in final position in the verse, while finite verbs may or may not carry the stress. Example (2) below will serve as a starting point.

(2)   ofer hron-rade **hyran scolde**,
        gomban gyldan þæt wæs god cyning[4]
         (Beowulf: 10-11)

The analytic construction under scrutiny is *hyran scolde* 'had to obey' where *scolde* is the finite verb. The construction participates in the alliteration, but only the infinitive is part of the alliterative pattern. Alliteration in fact is created by the sound *h* present in the first syllable of the infinitive *hyran* in the off-verse, which alliterates with *hron-rade* in the on-verse. The presence of *scolde* is motivated by its meaning and its contribution to alliteration is rather limited. From a metrical perspective, since it occurs in final position, *scolde* cannot be stressed. Nevertheless, the presence of *scolde* in final position allows the infinitive *hyran* to

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[4]'Across the whale-road, had to obey and pay him tribute; that was a good king' (from Arnold 1876: 1-2).

be in a stressed position and, therefore, be part of the alliterative pattern.

In examples (3)-(4) below, the syntactic configuration of the verbal phrase is different. In (3), the main verb *don* 'do' follows the auxiliary *sceal* 'ought to', while in (4) the auxiliary *scolde* 'ought to' is the last element of the off-verse and the infinitive it takes, *linnan* 'lose', is in the on-verse of the following line.

(3)   mund-gripe mægenes. Swa **sceal** man **don**
        þonne he æt guðe gegan þenceð
         longsumne lof, na ymb his lif cearað[5]
        (Beowulf: 1534)

(4)   Gif ic æt þearfe þinre **scolde**
        aldre **linnan** þæt þu me a wære
         forð-gewitenum on fæder stæle[6]
        (Beowulf: 1477-1479)

In neither of the examples above does the finite verb have a role in the realisation of the alliterative pattern. In (3), the construction *sceal don* is not stressed and is not part of the alliterative pattern, which is governed by the sound *m* in *man.* In example (4), the auxiliary *scolde* is the last element of the verse and is therefore unstressed. A case in which the first element of the analytic construction participates in the alliteration is given in (5). The analytic construction is formed by the verb *hatan* and the infinitive *beran* 'bring', where *hatan* has the 'ordering' meaning (see section 4.4.1). Here, *heht* carries the stress and participates in the alliterative pattern, while the infinitival complement *beran*, being the last element of the line, does not alliterate.

(5)   **Heht** þe se hearda Hruntig **beran**[7]
         (Beowulf: 1807)

However, despite some cases in which the finite verb in analytic constructions was

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[5]'Powerful grip of his hand. So must a man do, when he thinks in battle to win lasting praise, nor cares about his life' (from Arnold 1876: 101).

[6]'If I in your need should lose my life, you would ever be to me, when departed, in a father's stead' (from Arnold 1876: 98).

[7]'Then the brave one ordered to bring Hrunting'.

part of the alliterative pattern, as in example (5), the tendency in Old English was for finite verbs in V - INF constructions not to participate in alliteration. In that regard, Getty (2000) carried out a quantitative study in which he shows that Old English auxiliaries occur in position which do not typically carry the stress and, within these positions, they have 'the ability to evade metrical restrictions' (2000: 64).

As far as analytic constructions involving *(ge)don* are concerned, causative *(ge)don* appears to be rarely used in poems. In the Old English data set described in chapter 4.2, the construction appears five times and all of them occur in the same text, *The Paris Psalter*, in which *(ge)don* is used to render the causative Latin construction *facere* - infinitive (see section 4.3.1). In two cases, causative *(ge)don* participates in alliteration, as in (6), where *(ge)don* alliterates with *domum*, while in (7) it is the infinitival complement of *(ge)don*, *cwicne*, that alliterates with *cuðlice*.

(6)   æfter þinum domum **do** me cwicne[8]

  (The Paris Psalter: 118.467)

(7)   for þinre spræce, **do** me spedlice

  and cuðlice cwicne nu ða[9]

  (The Paris Psalter: 118.462-463)

In the other examples, which are listed below in (8)-(10), neither causative *(ge)don* nor the infinitival complement are part of the alliterative pattern.

(8)   **deð** hi for his egsan ealle beofian[10]

  (The Paris Psalter: 103.98)

(9)   se þe eardian **deð** anes modes[11].

  (The Paris Psalter: 67.6)

(10)   **do** me æfter þinum wordum wel gecwician[12]

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[8]'After your judgement make me live'.

[9]'For your speech makes me live now successfully and happily'.

[10]'Made them all shake for his great fear'.

[11]'Who made inhabit all together'

[12]'Make me live well after your word'.

(The Paris Psalter: 118. 25)

5.2.3.2 Middle English

The constraints that tied language and metrical form so closely in early Old English became looser towards the end of the period. Alongside the metrical transformations discussed above, the late Old English-early Middle English period is characterised by a series of linguistic changes, as for instance the loss of the inflectional system, the grammaticalisation of auxiliary verbs and the change from synthetic to analytic expressions of grammatical relations (for a summary see Fischer 1992b). Linguistic transformations and looser poetical restrictions affected the structure of the verse, which is characterised by a more fixed syntax and a wider use of analytic constructions. Royster (1922: 345) argues that the language of these poems is 'more nearly vernacular' and therefore more representative of the language spoken in the period. It is in this context that the first cases of auxiliary *do* are attested in poetic texts.

According to Lester (1996: 120), auxiliary *do* was frequently used in Middle English poetry because it served two purposes. Firstly, it allowed the infinitive verb to be placed at the end of the verse in rhyming position. The view that auxiliary *do* was used as a metrical device is in line with the account proposed by Ellegård (1953: 67), who argues that the main purpose of auxiliary *do* in poems was to put the infinitive in the final position of the verse to favour end-verse rhyme. In relation to this, it is worth taking into account the changes that affected word order patterns in early Middle English. In several studies it has been shown that the position of the finite verb in Middle English was less free than in Old English (e.g. Mitchell 1985; Bech 2001). More generally, the data show a shift towards a more homogeneous SVO structure, while in Old English main clauses typically had SVO order and subordinate clauses a SOV order, along with a greater freedom of the constituents in the clause. Moreover, the word order in Middle English poetical texts was slightly different from prose texts, as the order of the constituents could, to a certain degree, be manipulated in order to fulfil metrical needs. This is illustrated in (11), where the main verb *tok* 'took' does not occupy the second position, but has been moved to the end of the line in order to rhyme with *hok* 'hook', the last element of the following verse, while the direct

object *mani god fish* has been fronted.

(11)   Mani god fish   þer-inne he tok   / boþe with neth and with hok
           Many good fishes there-in he took / both with net   and with hook
           'He took many good fishes in there both with a net and with a hook'

           (Havelok: 23.752.372)

In addition to moving constituents, poets could resort to other strategies to manipulate the position of the constituents in the line and facilitate rhyme, one of them being the insertion of auxiliary *do.* Focusing on the auxiliary construction, its inclusion means that the lexical verb is no longer the finite form and, therefore, freer to occur elsewhere in the line. Two examples are given below. In (12), the auxiliary construction formed by *doth ofsende* is used in place of *ofsendeth* to rhyme with *hende.* Similarly, in (13) the addition of *do* allowed the poet to turn the finite form *fleigheth* into the infinitive *fleigh*, which rhymes with *cry* in the previous verse.

(12)   Kyng Alisaundre doth   of-sende / alle his dukes and barounes hende
           King Alisander do.PRS send.INF / alle his dukes and barons   noble
           'King Alisaunder sends all his noble dukes and barons' (Alisaunder: 61.1369-
           1370)

(13)   And strangled hym in litel stounde / and with how,   and with cry,
           And strangled him in little while   / and with sorrow, and with tears,
           / the other duden away fleighe
           / the others do.PST away fly.INF
           'And strangled him in short time and, with sorrow and tears, the others
           flew away' (Alisaunder: 220.3142)

Looking at the examples above, two points can be made. The first concerns the fact that poets may have tried to avoid the presence of the ending *-eth* at the end of the line, as illustrated in example (12). This suggests that poets found *-eth* problematic to rhyme; I will return to this issue in section 5.5.1. The second is that infinitive endings appear to be particularly suitable for rhyme. In that regard, it is worth noting that the ending of the infinitive is subject to considerable variation in Middle English. There are three forms of the infinitive ending, namely *-en, -e* and *ø.* The two most common forms up until the 14th century are *-en*, which

derives from Old English ending -*an*, and -*e*, which is an orthographic variant of
-*en* with the omission of the nasal. To investigate the distribution of the infinitival
endings, I searched for all the infinitives in the Parsed Corpus of Middle English
Poetry (PCMEP, Zimmermann 2015). As shown in figure 5.1, the ending -*en* is
the most frequent form up to the 13th century, when it loses ground to -*e* until it
virtually disappears in the second half of the 14th century. The ø variant, which
is a further development of -*en* > -*e* > ø, appears already in early Middle English,
but it was limited in its distribution to a few cases and became frequent only in
the 14th century. Examples of all the three forms are given below in (14)-(16)
(the infinitive is in bold).

(14)　He　　sholen hire cloþen washen and wringen and to hondes water
　　　They should her　dress　wash　　and wring　　and to hand　　water
　　　bringen
　　　bringen
　　　'They should wash and wring her clothes and bring water to the hand'

　　　(Havelok: 38.1234.649)

(15)　Wider　sholde　ich wimman **bringe**?
　　　Where should I　　woman　bring?
　　　'Where should I bring the woman?' (Havelok: 35.1139.587)

(16)　Þan　seyd þe　knigt　in þat　tide,　"to þe　doukes court here biside　to
　　　Then said　the knight in that time, "to the duke　　court here nearby to
　　　bring me þider þou fond"
　　　bring　me there you go"
　　　'Then the knight said in that time "you go pass by the duke's court to

　　　bring me there"' (AmisAmiloun: 83.1869.854)
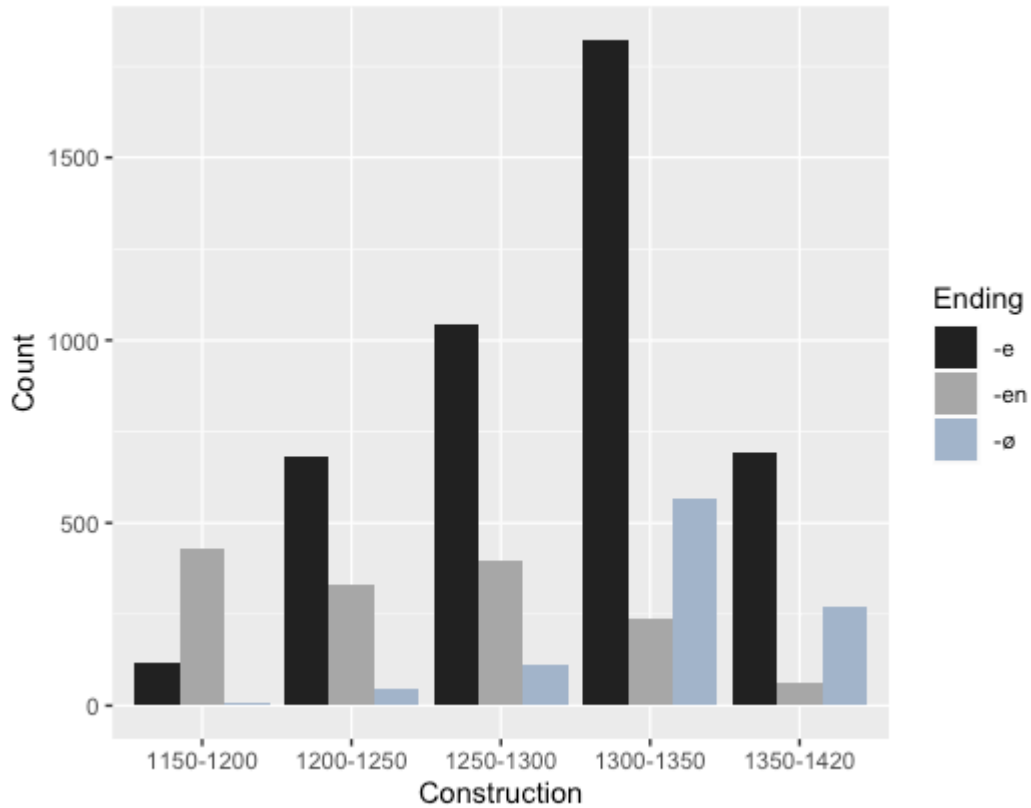
Figure 5.1: Distribution on the infinitival ending -*e*, -*en* and -*ø* in the PCMEP.

Rhyme, however, was not the only element of novelty that we can observe in Middle English poems. Another important innovation is the adoption of the iambic pentameter. It is generally assumed that the iambic pentameter was imported in England after the Norman Conquest of 1066 and gradually became the most frequent type of metre. An iambic foot is a sequence of an unstressed syllable (x) followed by a stressed syllable (/), and a standard iambic pentameter line, which is described below, is formed by 5 iambic feet.

x / x / x / x / x /

The standard sequence illustrated above is subject to a certain degree of variation, which is generally caused by the inversion of the order of the syllables in the foot. Germanic languages usually stress the first syllable of the word (/ x), making it more difficult for them to be used in a pentameter line, while foreign words, especially of French origin, carry the stress on the second syllable. An

example is the word *destroye* 'to destroy', a verb of French origin that entered in Middle English after the Norman Conquest, which is stressed on the second syllable (x /), forming thus an immediate iambic foot.

Work on the relation between analytic constructions and iamb has been carried out by Putter and Stokes (2000), who showed that the construction *gan* - infinitive was used to create an iambic foot in the work of the *Gawain*-poet (see section 5.7.3). This line of argument can be extended to auxiliary *do*, since *do*, like *gan*, is an unstressed monosyllabic element that creates an iambic foot with the stressed syllable of the adjacent infinitive. However, the variety of metre in early Middle English does not allow us to statistically measure the effect of the iambic practice on the use of auxiliary *do*. Metrical variety is present not only among texts, but within texts; an example is the *King Horn*, which has been composed using both the iambic trimeter and other metrical patterns that have not been identified and are still a matter of debate (Putter in press). Therefore, I will not include iamb among the possible influencing factors in the quantitative analysis carried out in section 5.6. Nevertheless, the possibility that auxiliary *do* was used as part of an iambic foot should not be discarded, especially in later periods when Chaucer regularised the structure of the iambic pentameter as a ten-syllable line, which became the prevalent type of meter in English.

5.3   Data set description

5.3.1   Main corpus

The main corpus used in this study is the PCMEP. The version used here is that of October 2019, which comprises 47 texts and a total of 202,892 words; the details concerning the texts included in the corpus and the word count of each text are given in table 5.2.

Text Name	Estimated Date	Word Count	Text Name	Estimated Date	Word Count
The Grave	1150	200	Dame Sirith	1270	2,539
Body and Soul	1160	2,781	The Thrush and the Nightingale	1270	1,108
Pater Noster	1170	1,906	The Fox and the Wolf	1275	1,816
Poema Morale	1175	4,080	A Metrical Treatise on Dreams	1285	1,736
The Proverbs of Alfred	1180	3,095	Havelok the Dane	1290	17,394
Lord as Thou art one God	1195	2,910	The Song of the Husbandman	1297	604
A Good Orison of Our Lady	1205	1,501	Kyng Alisaunder	1300	45,881
Meidan Meregrete	1215	2,915	The Land of Cokaygne	1300	1,081
Bestiary	1225	4,259	The Legend of Frideswide	1305	1,884
Wise Admonitions	1225	823	The Execution of Sir Simon Fraser	1307	1,550
A Prisoner's Prayer	1230	212	Adam Davy's Five Dreams	1308	1,155
Maximian	1240	1,338	Amis and Amiloun	1315	15,325
The Assumption of the Virgin	1240	1,540	An Orison of the Five Joys	1320	560
The Harrowing of Hell	1240	1,461	The Life of Saint Marina	1320	1,384
A Lutel Soth Sermun	1245	438	The Simonie	1325	4,817
The Passion of Our Lord	1245	6,249	Nicodemus	1340	10,397
Love Ron	1250	1,274	The Dispute between Mary and the Cross	1350	3,237
Penitence for Wasted Life	1250	394	11 Poems by Laurence Minot	1352	6,664
The Eleven Pains of Hell	1250	1,610	How to Hear Mass	1355	4,043
The Owl and the Nightingale	1250	10,941	Wynnere and Wastoure	1360	4,743
Debate between Body and Soul	1255	1,197	Sir Cleges	1395	3,384
Saint Brendan	1260	8,511	The Bird with Four Feathers	1400	1,508
Joseph and Jacob	1265	4,605	The Letter of Cupid	1402	3,522
Saint Eustace	1265	2,320			

Table 5.2: Description of the texts included in the PCMEP.

PCMEP approximately follows the same periodisation as the HC and the PPCME2. The period covered by PCMEP is slightly smaller compared to its sister corpora, since the texts included in the PCMEP range from c. 1150 to c. 1420, while the Middle English part of the HC and PPCME2 include also texts written in the period 1420-1500. The focus on early Middle English is in line with the main goal of the corpus, which is 'to help close the substantial gap in English prose texts between c. 1250 and 1350 with available poetic records from the same period' (Zimmermann 2015).

A further difference between PCMEP on the one hand and HC and PPCME2

on the other concerns the periodisation of the first two periods; PPCME2 and HC use the periodisation established by the HC, which is M1, M2 and M3, while the PCMEP has further divided M1 into M1a and M1b and M2 into M2a and M2b. The details of what has been described above are given in table 5.3.

HC	PPCME2	PCMEP
M1 (1150-1250)		M1a (1150-1200)
		M1b (1200-1250)
M2 (1250-1350)		M2a (1250-1300)
		M2b (1300-1350)
M3 (1350-1420)	M3 (1350-1420)	M3 (1350-1420)
M4 (1420-1500)	M4 (1420-1500)	

Table 5.3: Periodisation of the HC, PPCME2 and PCMEP.

The word count of each sub-period of the PCMEP is provided in table 5.4:

Period	PCMEP Word Count
M1	49,927
M2	129,101
M3	23,864
Total	202,892

Table 5.4: Word count of each sub-period of the PCMEP.

The PCMEP is a parsed corpus that is annotated according to the same principles used in PPCME2. The annotation scheme allows for the collection of all the forms of *do* by using the following POS tags that are specific to the lemma *do*: DAG (present participle), DAN (passive participle, both verbal and adjectival),

DO (infinitive), DOD (past, including past subjunctive), DOI (imperative), DON (perfect participle), DOP (present, including present subjunctive).

The software used to extract the data is AntConc 3.5.9 (see section 4.2). Compared to the Old English data, the collection process was facilitated by the presence of the relevant POS tags described above. The extraction procedure involved the collection of all the examples of *do* (DO*, which excludes present participle and passive participle) followed by an infinitive, which is coded in the corpus with the label IP-INF in cases in which the infinitive is a complement of *do*, or with VB when the infinitive is not a complement of *do*. I include both labels in the search, which produced a total of 172 examples.

5.3.2   Additional data

The focus of the PCMEP on early Middle English poems fits particularly well with the goal of this study, which is to investigate the use of *do* in poetical works of this period. However, the size of the corpus is rather limited and some texts have not been included yet; among those, the *South English Legendary*, Layamon's *Brut*, the *Ormulum* and the *King Horn* are of great interest.

A part of the *South English Legendary* is included in another corpus, A Parsed Linguistic Atlas of Early Middle English, 1250-1325 (PLAEME, Truswell et al. 2018). PLAEME is a syntactically annotated corpus based on the Linguistic Atlas of Early Middle English (LAEME, Laing 2013). The time span covered by PLAEME is quite limited, as it includes texts only from 1250-1325, which corresponds to the sub-periods M2a-M2b in the PCMEP. PLAEME is a valuable tool for the study of this period and is designed to supplement other existing corpora, as the strategy adopted by the compilers of the corpus was to include only texts larger than 100 words that are not parsed in the PPCME2 and PCMEP. The tagged sections of the *South English Legendary* in PLAEME are the following: *Inventio Crucis, St. Quiriac, St. Brandan, St. Barnabas, St. Theophilus, St. Alban, St. John the Baptist, St. James the Great, St. Christopher, St. Martha* and *St. Oswald the King*, for a total word count of 30,237; the remaining sections were manually search for all forms of *do* - infinitive.[13] PLAEME contains other

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[13]The edition used is *The early South-English legendary or Lives of saints*, Ms. Laud, 108, in the Bodleian library, edited by Carl Hortsmann (1851).

manuscripts of considerable importance; among those, I have added to the data set the following texts: the *Cursor Mundi*, *Genesis and Exodus*, *Infancy of Christ* and *The Northern Homily Collection.*

Other texts chosen to supplement the data set are the *Ormulum*, the *Brut* and *King Horn*. The *Ormulum* is included in the PPCME2 and is the only poetical text that is part of this corpus. Finally, the *Brut* and *King Horn*, which are not part of the corpora described above but are easily accessible online, have been manually analysed and all the examples of *do* - infinitive have been included in the data used in this study.[14] The estimated date of composition and the word count of each of the additional texts are given in table 5.5.

Text Name	Estimated Date	Period	Word Count
Ormulum	c. 1150-1180	M1a	50,579
Brut	c. 1190-1215	M1a	136,562
King Horn	c. 1225	M1b	7,308
Genesis and Exodus	c. 1250	M2a	12,467
South English Legendary	c. 1270-1285	M2a	207,876
Infancy of Christ	c. 1300	M2a	12,489
Cursor Mundi	c. 1300	M2b	29,194
The Northern Homily Collection	c. 1315	M2b	22,164

Table 5.5: Data of composition and word count of each additional text.

All the texts chosen to complement the PCMEP were composed between c. 1150 and c. 1325, which corresponds to the sub-periods M1a to M2a, following the periodisation used in the PCMEP. As can be seen in table 5.4, M1 and M3

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[14]The version of the *Brut* is the *Ms. Cotton Caligula A.IX* which is available at the following website: https://quod.lib.umich.edu/c/cme/LayCal?rgn=main;view=fulltext. The version of *King Horn* is manuscript C, which was probably composed in Hampshire (Ellegård 1953: 75) and can be found at the following website: https://d.lib.rochester.edu/teams/text/salisbury-king-horn.

are quite underrepresented compared to M2; this is due to the presence of long poems such as *Havelok* and *Kyng Alisaunder* in M2. Therefore, an advantadge of adding these texts was to increase the data available especially for the first period, given its importance for this study. As a result, the final word count of the data set is more than three times larger than the size of the PCMEP and the number of words for M1 significantly increased. The word count for each period is detailed in table 5.6.

Period	Word Count
M1	244,376
M2	413,291
M3	23,864
Total	681,531

Table 5.6: Final word count of each period of the data set.

Finally, as has been shown in section 5.2, most of the additional poems have been extensively studied in the literature, and valuable information about the metre and the language used are already available. The number of *do* constructions extracted from the additional texts is 181, bringing the total of the data set to 353 instances.

The same data set has been used to retrieve all the relevant instances of *gan*. The data collection process turned out to be more complicated than for auxiliary *do*, since there is no label dedicated to *gan* in the corpora consulted in this study. In addition, there have been examples in which it was unclear whether *gan* was the verb under investigation or *gan* meaning 'go', since in early Middle English the two verbs shared the same form. At the end of the cleaning-up process, the data set was made up of 1,103 instances of the construction formed by the pattern *gan* - infinitive. The comparison between auxiliary *do* and *gan* is carried out in section 5.7.3, while in the following sections I focus on the data concerning auxiliary *do* and its use in poetry.

5.4   Data exploration

5.4.1   *Do* in Middle English poetical texts

5.4.1.1   Causative *do*

The same causative construction found in Old English with an expressed causee (see section 4.3) continues in Middle English. The causer (NP1) could appear before the causative verb, as in (17), or between the causative verb and the infinitive, see (18). Similarly, the causee (NP2) could be found between the causative verb and the infinitive (18) or preceding causative *do* and the infinitive (19).

    - **NP1 - *do* - NP2 - INF**

(17)   þe   king dede   þe mayden arise   / and þe erl   hire bitaucte
        the king do.PST the maiden arise.INF / and the earl her bestowed
        'the king made the maiden arise and bestowed her to the earl' (Havelok:

        7.208.95)

- ***do* - NP1 - NP2 - INF**

(18)   Þat   dede   he him sweren   on þe bok
        That do.PST he him swear.INF on the book
        'That he made him swear on the Bible' (Havelok: 7.201.93)

- **NP1 - NP2 - *do* - INF**

(19)   The king Aþelwald me dide   swere   / upon al þe
        The king Athelwald me do.PST swear.INF / upon all the
        messe-gere
        mass-instruments
        'King Athelwald made me swear on the instruments of the mass' (Havelok:

        33.1081.552)

The features of the participants in the causative event are the same as for the Old English period (see section 4.3.1). The major development that causative *do* underwent between Old and Middle English regards an increase in frequency of use of agentive causees, suggesting that *do* went from expressing non-agentive

causation to being used in contexts of agentive causation (cf. Lowrey 2013).

5.4.1.2 Auxiliary *do*

The syntactic configuration of auxiliary *do* is formed by *do* being adjacent and preceding the infinitive, as in (20). However, there are also instances in which other elements intervene between *do* and the infinitive, such as the subject (NP1) of *do*, e.g. (21), the direct object (NP2) of the infinitive, e.g. (22), an adverbial phrase (ADVP), e.g. (23), or a prepositional phrase (PP), e.g. (24).

- *do* - **INF**

(20)　　Ase ore louerdes wille was þare-aftur it dude　bifalle
　　　　As　our lord　　will　was there-after it do.PST happen.INF
　　　　'As was our lord's will it happened thereafter ' (South English Legendary:
　　　　51.99)

- *do* - **NP1 - INF**

(21)　　Wyn　and ale deden　he fete,　　and maden hem　glade and bliþe
　　　　Wine and ale do.PST he get.INF, and made　them glad　and happy
　　　　'He got wine and ale and made them happy and glad' (Havelok: 38.1244.656)

- *do* - **NP2 - INF**

(22)　　that dudyn　me dispyse.
　　　　that do.PST me dispise.INF.
　　　　'that despised me' (Alisaunder: 132.3172.1861)

- *do* - **ADVP - INF**

(23)　　He dude　quyk　harnesche hors
　　　　He do.PST quickly equip.INF　horse
　　　　'He (a) made [someone] equip - (b) equipped the horse' (Alisaunder: 192.4708.2811)

- *do* - **PP - INF**

(24)　　He dide　　un-to þe borw　　bringe　　/ sone anon　　　　al with
　　　　He do.PST un-to the mountain bring.INF / soon immediately all with
　　　　ioynge / his wif　and his serganz　þree
　　　　joy　　 / his wife and his servants three

'He brought his wife and his three servants to the mountain and immediately with joy' (Havelok: 58.2089.993)

I illustrated in section 2.4 the parameters that I have used to distinguish between causative and auxiliary *do*. In addition, further help in the analysis of the data has been provided by the PCMEP. The marking scheme used by the compilers of the PCMEP does not allow for the presence of ambiguous cases; this means that each example has been coded either as causative or as auxiliary *do*. Causative cases are coded with the tag IP-INF, since the verb phrase headed by the infinitive is a complement of *do*, whereas auxiliary constructions are those where the infinitive is tagged just as VB, meaning that it is not considered a complement of *do*. The strategy adopted by the compilers is to assign an auxiliary interpretation only when a causative reading is excluded, while those examples in which both a causative and an auxiliary meaning are possible are grouped with causative instances and marked with the label IP-INF.[15] Besides two instances, which are illustrated below in (25)-(26), my understanding of the data is consistent with the reading assigned in the PCMEP. In these two examples the PCMEP marks the construction involving *do* as a causative/ambiguous construction, while I interpreted them as auxiliary constructions.

(25) Hauelok ne durste, þe   he were adrad / nouth with-sitten þat
      Havelok not dared, because he was afraid / not   refuse   that
      Ubbe bad   / his wif he dide   with him lede   / unto þe heye
      Ubbe requested / his wife he do.PST with him take.INF / into the high
      curt   he yede
      court he walked
      'Although he was afraid, Havelok did not dare to refuse Ubbe's request
      and took his wife with him to the high court' (Havelok: 46.1685.795)

(26) Feste   he made of nobleye / n' as nowher such yseyghe / after mete
      Festival he made of noblesse / not is nowhere such seen   / after meal
      anon ryghtis / he dude   noumbre his gode knyghtis / and sent fiftene
      soon directly / he do.PST count.INF his good knights / and sent fifteen
      thousand and hundredis seven / al of Grece ybore by heven
      thousands and hundreds seven / all of Greece born to heaven
      'He made such a festival that nobody had ever seen, immediately after the

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meal he counted his good knights and sent fifteen thousands and seven hundreds all born in Greece to heaven' (Alisaunder: 62.1396.844)

Lastly, the data were double checked with relevant studies proposed in the literature, in particular with Ellegård (1953). In most examples, Ellegård and I assign the same analysis; there are, however, cases in which the two analyses differ. An example is given in (27), where Ellegård assigned a causative reading ('they made [someone] build churches'), while I prefer to be more cautious and analyse *do* as ambiguous. An example in which my interpretation is auxiliary and Ellegård's is ambiguous is given in (5) and is repeated below in (28).

(27)   Ich wot   huy nomen heore false godes / and casten heom þare doune /
           I   know they took   their false Gods / and threw them there down /
           and brenden al-to poudre / feor fram euerech toune / huy duden
           and burned all-to powder / fire from every   town / they do.PST
           arere   churces / ouer al the contreies / and priories   wurche /
           build.INF churches / over all the regions   / and monasteries make   /
           and manie guode abbeies
           and many good abbeys
           'I know that they took their false gods and threw them down, gave fire and burnt to powder every town and (a) they made [someone] build - (b) built churches and many good abbeys over all the regions' (South English Legendary: 66.533)

(28)   Hwan he hauede eten, and was fed, Grim dede   maken   a ful
           when he had   eaten and was fed, Grim do.PST make.INF a full
           fayr   bed; unclothede him and dede him therinne, and seyde, "Slep,
           beautiful bed; undressed him and put him therein, and said, "Sleep,
           sone, with muchel winne! slep wel faste and dred thee nouth   - fro
           son, with much joy!   sleep well fast and fear you nothing - from
           sorwe to joie art thu brouth."
           sorrow to joy are you brought."
           'When he had eaten and was fed, Grim made a beautiful bed, undressed him, put him in the bed and said: "Sleep son, and with much joy! Fall asleep quickly and do not fear anything - you have been brought from sorrow to joy."' (Havelok: 21.658.318)

At the end of the analysis of each example, the distribution of auxiliary, causative and ambiguous constructions in my data set was the following.

Construction	Occurrences	Total
Ambiguous *do*	97	28.3%
Auxiliary *do*	116	31.8%
Causative *do*	140	39.9%
Total	353	100%

Table 5.7: Frequency of ambiguous, auxiliary and causative *do* in the data set of Middle English poetry.

The first unambiguous example of auxiliary *do* is attested in the second half of the 13th century in the *King Horn*, e.g. (29), while causative *do* was attested in Old English and continued to occur regularly from the earliest texts of the corpus. Ambiguous cases began to appear slightly earlier than auxiliary ones; besides the three late Old English examples discussed in section 4.3.1, two instances of ambiguous *do* are found in the *Poema Morale* (c. 1175) and in the *Brut* (c. 1190-1215), but they appear more frequently in texts of the late 13th century.

(29)   His sclauyn he dude   dun   legge,   And tok   hit on his rigge,
        His cloak   he do.PST down lay.INF, And took it   on his back,
        'He laid down his cloak and put it on his back' (King Horn: 1067-1068)

The last examples of ambiguous and causative *do* in my data set are attested around the second half of the 14th century, while auxiliary instances are still found in the latest texts of the corpus, which date at the beginning of the 15th century.[16]

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[16]Causative *do*, however, continued to be used; the last example cited by the OED dates to 1886 (OED *do*, 29 II, see section 6.3.2).
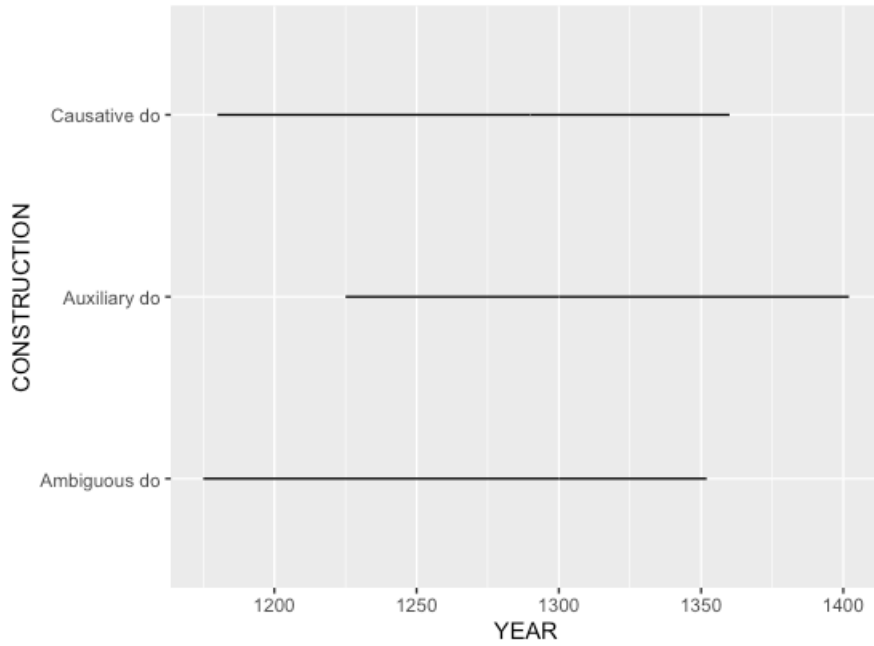
Figure 5.2: Chronology of ambiguous, auxiliary and causative *do* in the the data set of Middle English poetry.

5.5 Methodology

The following four statistical techniques have been chosen to analyse the data: conditional inference tree, random forests, logistic regression and distinctive collexeme analysis. Every analysis is carried out using the software R (R Core Team 2017). The conditional inference tree and the random forests will serve to investigate the functions of auxiliary *do* in Middle English poetry. The logistic regression and the distinctive collexeme analysis will be used to compare auxiliary *do* with a similar construction like *gan* - infinitive. Specifically, the logistic regression model presented here is designed to determine the factors that made poets choose between auxiliary *do* and *gan*, while the distinctive collexeme analysis will allow for the examination of the lexical differences between these two verbs. Before describing these techniques, I introduce and discuss the independent variables that will be tested in the statistical analyses performed in sections 5.6 and 5.7.3.1.

5.5.1 Description of the explanatory factors

5.5.1.1 Position of the infinitive in the line

The first factor that I investigate concerns the position of the infinitive in the line. The procedure adopted in this case is the following. All the examples of causative, ambiguous and auxiliary *do* have been tagged for the position that the infinitive occupies in the verse. Two positions are taken into account, specifically whether the infinitive is in final position or anywhere else in the line. By end of the line or final position is meant that the infinitive is the last element of the line and *do* is either adjacent to the infinitive or is separated from the infinitive by other constituents. An example of auxiliary, causative and ambiguous *do* in final and in non-final position is given below in (30)-(35).

- **Auxiliary *do*: Infinitive in Non-Final Position**

(30) He was aferd sore   of harme / Anon   he dude   caste   his
      He was afraid greatly of harm / Immediately he do.PST cast.INF his
      charme
      spell
      'He was very afraid of being harmed and immediately cast his spell' (Alisaunder: 9.104.45)

- **Auxiliary *do*: Infinitive in Final Position**

(31) The kyng onon   dude   crye   / that non   mysdone hem
      The king immediately do.PST shout.INF / that nobody harm   they
      ne   sholde
      not should
      'The king immediately shouted that nobody should harm them' (Alisaunder: 221.5335.3159)

- **Causative *do*: Infinitive in Non-Final Position**

(32) He dude   the child to have   norices / Gentil ladies and maidenes
      He do.PST the child to have.INF nurses / Noble ladies and maidens
      'He made the child have nurses noble ladies and maidens' (Alisaunder: 31.651.375)

- **Causative *do*: Infinitive in Final Position**

(33)   And dide   him þere sone wedde   / Hire þat was ful   swete in bedde
          And do.PST him there soon wed.INF / Her that was fully sweet in bed

          'And made him wed her immediately, who was so sweet in bed' (Havelok:

          83.2927.1320)

- **Ambiguous *do*: Infinitive in Non-Final Position**

(34)   And dide   him binde   and fetere   well / With gode feteres al of
          And do.PST him bind.INF and shackle well / with good chain   all of
          stel
          steal
          'And (a) made [someone] bind - (b) bound and shackle him well with good

          chains all made of steel' (Havelok: 78.2759.1268)

- **Ambiguous *do*: Infinitive in Final Position**

(35)   Heo no myghte nought forsake / A pyt heo dude   sone make
          She not might   not   forsake / a pit she do.PST soon make.INF
          'She might not forsake and immediately (a) made [someone] make - (b)

          made a pit' (Alisaunder: 35.749.443)

The results of this investigation are illustrated below in table 5.8. As can be seen, in the vast majority of the auxiliary examples the infinitive occurs at the end of the line, which in principle supports the claim that auxiliary *do* was used as a metrical tool in order to place the infinitive at the end of the line. Causative *do*, on the other hand, occurs with equal frequency both in final and in non-final position, meaning that it was unlikely that it was used for metrical needs. Finally, cases of ambiguous *do* occur more frequently at the end of the verse. The statistical significance of these observations will be tested using a conditional inference tree and random forests in section 5.6.

	Non-Final Position	Final Position	Total
Ambiguous *do*	44	53	97
Auxiliary *do*	20	96	116
Causative *do*	73	67	140
Total	137	216	353

Table 5.8: Occurrences of all *do* constructions with respect to the position of the infinitive in the line.
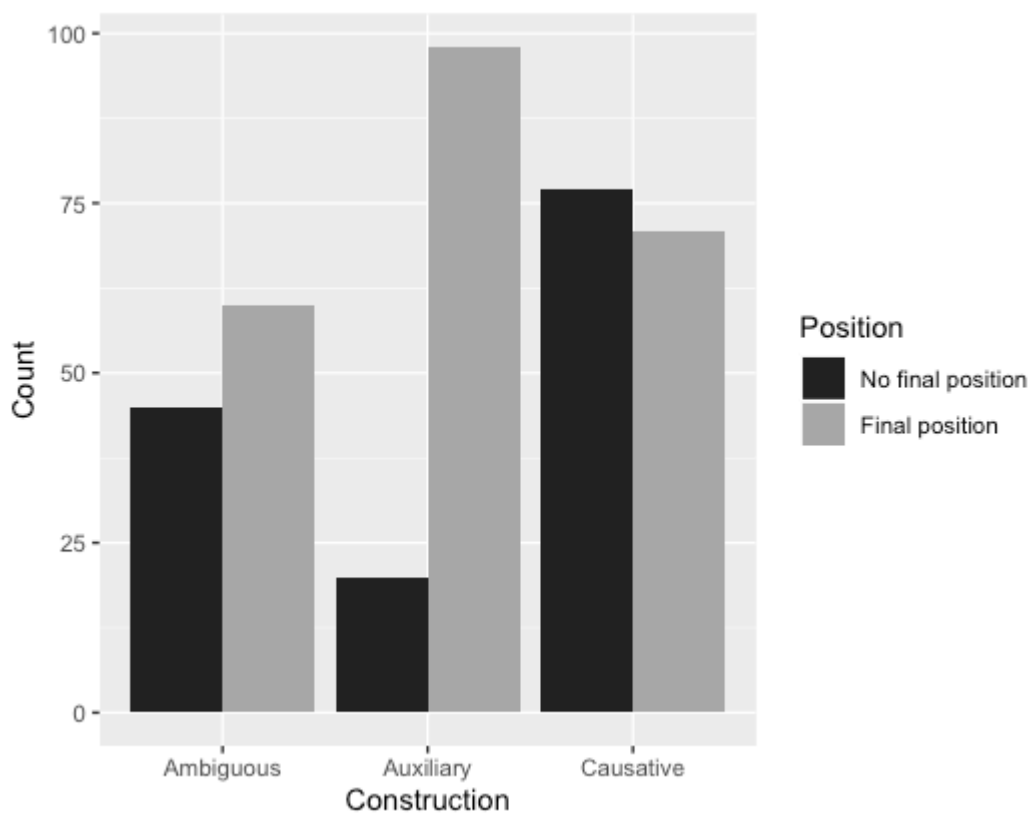

Figure 5.3: Distribution of all *do* constructions with respect to the position of the infinitive in the line.

5.5.1.2 Verbal morphology

The second factor included in the statistical analyses concerns the possibility that auxiliary *do* was used to avoid the presence of particular consonant clusters created

by verbal endings at the end of the verse. That is, it is hypothesised that auxiliary *do* was used as a facilitator device which served to modify 'hard to rhyme forms' into infinitival forms that offered more rhyming opportunities. This is another factor that is strictly related to development of poetical styles in Middle English. In fact, while verse ending syllables formed by a group of consonants were not an issue in the Old English alliterative verse, they could represent a challenging task for Middle English poets, when rhyme mattered.

An example to illustrate this point is the following: forms as *he maketh* 'he makes' could be turned into constructions like *he doth maken* or *he doth make* 'he makes', which offer more possibilities to rhyme. Table 5.9 illustrates the verbal morphology of the present tense in Middle English in each dialect.

Present Tense

			Northern	Midlands	Southern
Indicative	Singular	1st	*-(e)*	*-e*	*-e*
		2nd	*-es*	*-es(t)*	*-est*
		3rd	*-es*	*-eth, -es*	*-eth*
	Plural		*-es*	*-en, -es*	*-eth*

Table 5.9: Middle English present tense inflection by dialect.

The 1st person singular ends in *-e* in all dialects. The ending *-e* is extremely frequent in words occurring at the end of the verse; a corpus investigation shows that there are 16,578 words ending in *-e* in the PCMEP. It seems intuitively obvious that regardless of the consonant preceding *-e*, there were many opportunities for the ending -C*e* to rhyme. The 2nd and the 3rd person singular, especially in the Midlands and in the Southern dialects where the endings are *-est* and *-eth* respectively, seem to be harder to rhyme with than other endings.[17] I extracted every instance of these two endings in PCMEP and checked their frequency with respect to the position the verb occupies in the verse. The results are given in table 5.10 below.

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[17]This holds for the 3rd person plural ending in *-eth* in the Southern dialect too.

Ending	Occurrences	Occurrences in final position	%
-eth	689	71	9.7
-est	334	60	17.9
Total	1,023	131	12.8

Table 5.10: Frequency of 2nd and 3rd person singular endings with respect to position in the line in PCMEP.
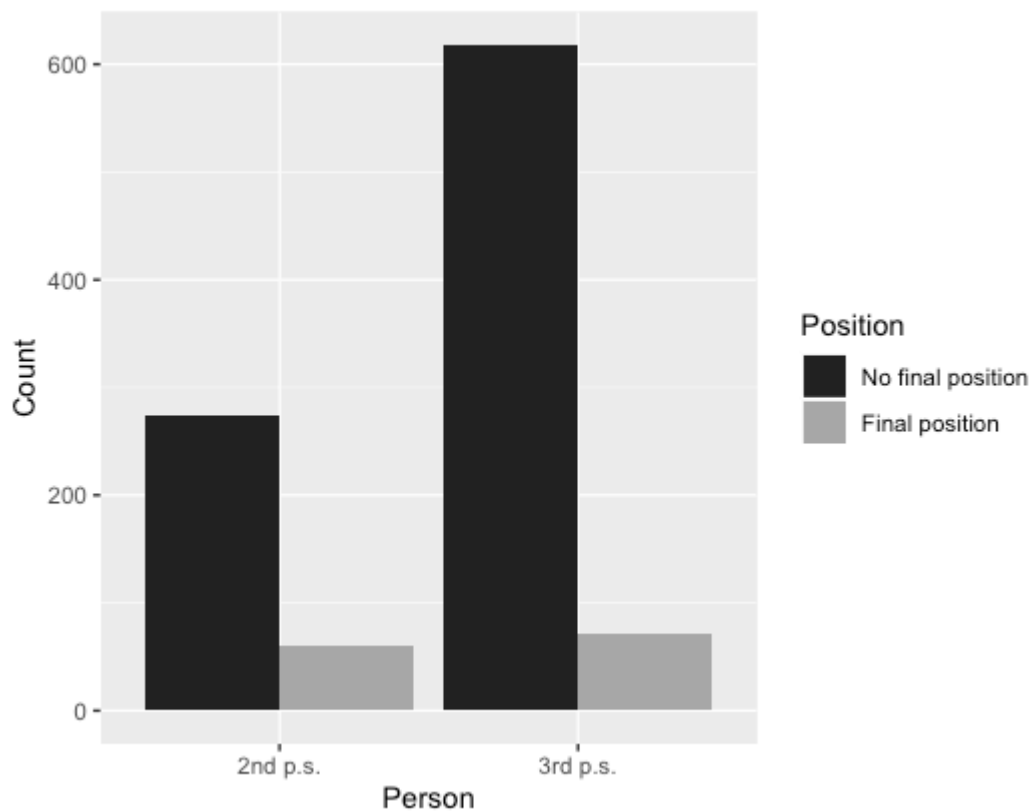
Figure 5.4: Distribution of 2nd and 3rd person singular endings with respect to position in the line in PCMEP.

A corpus analysis carried out using the PCMEP reveals that there are only a few words ending in *-eth* that are not verbal forms; among those, the most frequent in my data set are *deth* 'death', which occurs 35 times (4 in final position), *hundreth* 'hundred', occurring 29 times (never in final position), *teth* 'teeth' 9

times (1 in final position), *neth* 'cow' or 'net for catching fish' 6 times (2 in final position). These data suggest that, besides other verbal forms ending in -*eth*, the range of words with which verbs in -*eth* could rhyme is rather limited.

It is worth pointing out that the use of -*eth* varies across Middle English dialects. In Old English, the ending -*eþ/eð* in the 3rd person singular present-tense indicative was consistently used in all the dialects, but in the North there is evidence of an early use of -*es*. Towards the end of the Old English and the beginning of the Middle English period, the verbal system underwent major changes that largely modified the morphological features of the verbs (Lass 1992). As a result, the situation regarding -*eþ* is the following: in the Northern dialect, the ending for the 3rd person singular is -*es*, which spread across the country during the 16th and 17th century and became the standard form (Nevalainen 2006; Jenset and McGillivray 2017). In the dialect of the Midlands, -*eth* was the predominant form, but -*es* was also used. In the Southern dialect, -*eth* was the standard form for the 3rd person singular and plural in the present tense; -*es* replaced it in late Middle English, but in some southwestern dialects it is still found in the 20th century (Nevalainen 2006).

Moving to the 2nd person in -*(e)st*, the situation appears to be different. Unlike -*eth*, which is essentially found as a verbal ending only, there are several words which end in -*(e)st* outside the verbal system. The ending -*(e)st* is, for instance, typical of the superlative form of several adjectives and quantifiers, and is also found in other grammatical categories, as nouns and adverbs; table 5.11 shows the seven most frequent non-verbal forms ending in -*(e)st* in the PCMEP.

Word	Occurrences	Occurrences in final position
best/beest	105	29
prest	38	8
est	30	12
mest	27	5
west	22	9
brest	22	8
gest	16	4

Table 5.11: Frequency of non-verbal forms ending in -*(e)st* in the PCMEP.

The plural inflection in the present tense is characterised by a more regular ending in -*es* — except for the Southern dialect. Overall, the ending -*es* was particularly frequent in Middle English, being a marker of plural for most nouns, and it was commonly found at the end of the verse; a corpus investigation shows that there are 788 words ending in -*es* in rhyme position.

In light of this discussion, I will investigate whether verbal morphology influenced the use of auxiliary *do*. More specifically, since the potential for rhyme is larger for endings that do not end in -*eth*, I expect to find a larger number of auxiliary examples that are used to replace verbal forms with the endings -*eth* in final position.

5.5.1.3   The adoption of foreign verbs

The following influencing factor is related to the introduction of words of French origin following the Norman Conquest, when the Germanic core of the Middle English vocabulary was enriched with numerous borrowings from French. The influence of Norman French on Middle English has been widely acknowledged and there have been some attempts to quantify the number of words that entered the language. Kastovsky (2006: 250), for instance, argues that a total of 10,000

words were incorporated during the Middle English period.

A general issue involving the acquisition of foreign words concerns when the borrowings have been adopted in the recipient language, as it is impossible to determine how long they had been present in the language before their first appearance in a written text. Baugh and Cable (2002) argue that in the period going from the second half of the 13th century to the beginning of the 15th century approximately 40% of all the Norman French words entered in the English language. Similarly, Kastovsky (2006) divides the period of the Norman French influence in two stages, one pre-1250 and the other post-1250. During the first stage, the impact of Norman French on the English vocabulary is rather limited, with the adoption of approximately 900 words (Kastovsky 2006: 249). The second stage, on the other hand, is the period in which the vast majority of French borrowings were acquired. This is in line with Baugh and Cable (2002) and with previous studies as Blake (1992), who found out that in earlier texts, like the *Brut*, the presence of Norman French borrowings is only occasional, while in late Middle English texts the number is considerably higher.

In this investigation, the origin of the infinitives was checked using the OED. Verbs that were adopted during the Middle English period have been labelled as *Borrowings*, while those which were already in the language as *Native*. This means that the verbs of foreign origin that entered the English language during the Old English period, mainly from Latin, have been grouped under the label *Native*; I assume that those verbs were fully integrated in the language and were not considered as non-native by Middle English speakers. Lastly, verbs of Germanic origin which were borrowed from other Germanic languages in the Middle English period, mostly from Scandinavian languages, were labelled as borrowings.

The acquisition of foreign words is not straightforward. Borrowings may be subject to a process of adaptation when they are integrated in the recipient language, which can involve the semantic, syntactic, morphological or phonological level (Winford 2010). Specifically, the use of foreign verbs as finite forms involved the addition of a native ending to a foreign stem, which could create phonological or morphological difficulties. In this process, auxiliary *do* could be used as a device to facilitate the adoption of such foreign verbs. If so, auxiliary *do* would be the verb in the finite form, while the borrowed verb was used in the infinitive

form. A preliminary result in which causative *do* and auxiliary *do* are compared with respect to the origin of the infinitive they co-occur with is provided in table 5.12.

	Native infinitives	Borrowed infinitives
Causative *do*	133	7
Auxiliary *do*	96	20
Total	229	27

Table 5.12: Origin of the infinitives occurring with auxiliary and causative *do*.

The occurrence of auxiliary *do* with a foreign verb is shown in (36)-(37). In example (36), the infinitive *sayse* 'take possession of' derives from Old French *saisir/seisir*, whose first appearance in written texts dates back to the end of the 13th-beginning of the 14th century. In this case, auxiliary *do* indicates the past tense and its presence prevents the attachment of the ending -*ed* to a foreign stem. Similarly, the infinitive *crye* 'cry, shout' in (37) is an early 13th century borrowing from Old French *crier*. Again, auxiliary *do* is in the past tense and avoids the addition of the ending -*ed*.

(36) þat he ne dede   al engelond sone sayse   intil his hond
      that he not do.PST all England soon take.INF in   his hand
      'that he did not take into possession all England' (Havelok: 8.251.113)

(37) The kyng onon   dude   crye
      The king immediately do.PST shout.INF
      'The king immediately shouted' (Alisaunder: 221.3157)

5.5.1.4 Dialect

A further influencing factor included in the statistical models is dialect of composition. Ellegård (1953) conducted the most accurate analysis on the dialectal distribution of causative and auxiliary *do* in Middle English (see section 3.2.2.2). Ellegård distinguished three dialectal areas, Northern, Western and Eastern, and

pointed out that causative *do* occurs more frequently in the Eastern dialect, while auxiliary *do* is more common in the Western dialect, suggesting thus a western origin for auxiliary *do*. The map of the dialects used by Ellegård is based on Oakden (1930), in which the following areas are distinguished: South-Eastern, Central, North-Western, Western, Eastern, Northern. Ellegård further divided the Western area into West Midlands and South-Western when necessary, with the dividing line being the estuary of the river Severn (1953: 42). The classification used in this study is slightly different, since it is based on the standard dialect division proposed by the Helsinki Corpus. The dialectal areas that the Helsinki Corpus recognises are the following: South-Western, South-Eastern, Northern, Eastern Midlands, Western Midlands. Given that there are no instances from the South-Eastern dialect in my data set, the South-Eastern and the South-Western dialects have been merged together in one dialect, labelled Southern. The Northern dialect overlaps with Ellegård's Northern dialect, while the Eastern Midlands dialect roughly matches with the Eastern dialect plus the eastern part of the Central dialect in Ellegård. The Western Midlands dialect corresponds to Ellegård's North-Western, part of the Western and the Central dialects; finally, the Southern dialect coincides with Ellegård's lower Western dialect and his South-Western dialect. There is one text in the PCMEP composed in Irish, which however has been omitted from the quantitative analysis.

The operationalisation of a dialectal factor is particularly complicated when it comes to data of the middle ages. This is due to several factors, such as scribal copying, classification of the dialects and other reasons discussed by Zimmermann (2020: 9). Nevertheless, dialect has been shown to be an important factor in the use of auxiliary *do* (Ellegård 1953) and, therefore, it has been included in the statistical models. The PCMEP and PLAEME offer detailed information about each text, including differences between the dialect of the original manuscript and the dialect of the surviving manuscript. In the present study, I took into account the date of the surviving manuscript, as it cannot be excluded that scribes may have manipulated the original text in the copying process. Lastly, it has to be noted that, in some cases, the mixture of linguistic features of a manuscript makes it impossible to assign it to one particular dialect.

Each dialect has its own textual record, as figure 4 shows. As can be seen,

the dialect of the Western Midlands is the most consistently represented variety in the data set from the 12th century up until the first half of the 14th century. The Eastern Midlands dialect is also moderately well-witnessed, except for a significant gap in the second part of the 14th century. The Northern and the Southern dialects are less well-represented in the data set; the former is firstly attested in the 14th century and is only represented by four texts, while the latter appears only in few manuscripts from the second half of the 13th century to the beginning of the 14th. Finally, there are six manuscripts for which the localisation was impossible to establish with certainty, which will not be taken into account in the statistical models.
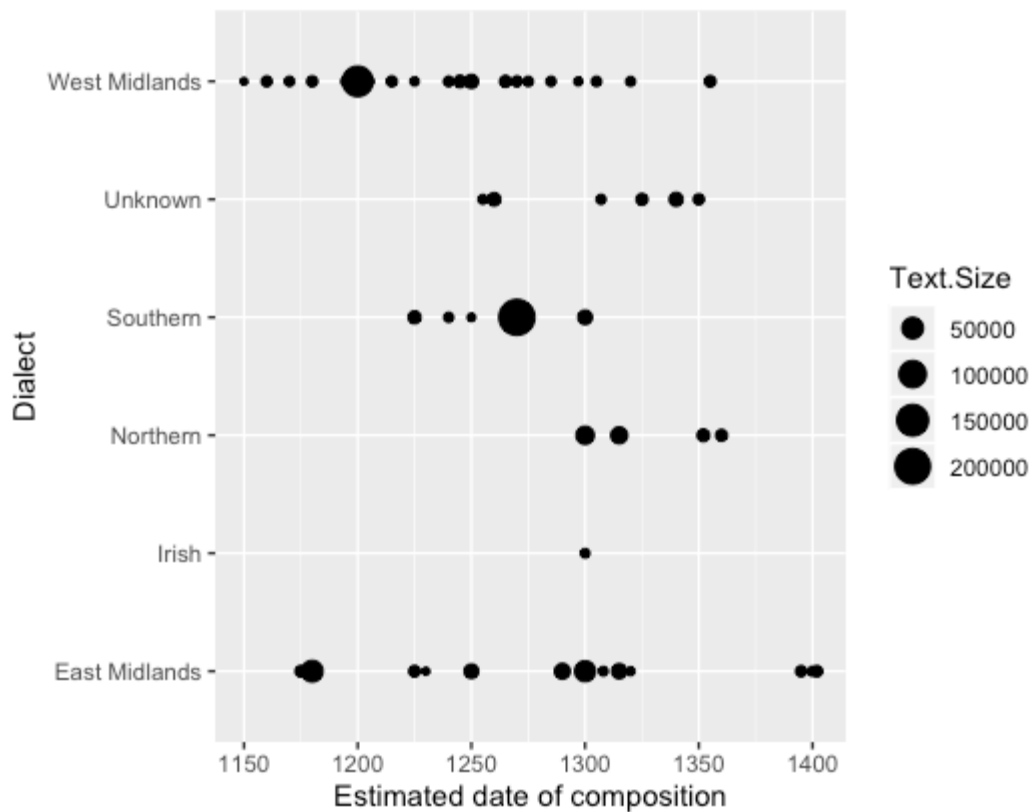

Figure 5.5: Temporal distribution and size of the texts considered in this study.

5.5.1.5 Meter variety

The predictor Verse, which considers the different types of verse of each text, is another variable that will be included in the statistical analyses. Looking at the

data, it appears that the variety of metrical practices described in section 5.2.2 is well represented. The texts have been divided into three categories: rhymed, non-rhymed, i.e. alliterative poems and works which show neither alliteration nor rhymes (see section 5.2.2), and mixed texts, on the basis of the information provided for each text by the compilers of the PCMEP and PLAEME. The word count and the frequency in each sub-period of rhymed, non-rhymed and mixed texts is detailed in table 5.13.

Period	Rhymed	%	Non-Rhymed	%	Mixed	%	Total	%
M1	39,592	16.2%	50,779	20.8%	154,005	63%	244,376	100%
M2	394,125	95.3%	0	0%	19,166	4.7%	413,291	100%
M3	12,457	52.2%	4,743	19.9%	6,664	27.9%	23,864	100%

Table 5.13: Frequency of rhymed, non-rhymed and mixed texts in each period.

Table 5.13 shows that the practice of rhyme takes over only at the beginning of the 13th century, while in earlier periods non-rhymed (mostly alliterative) and mixed texts are still frequent; the texts representative of these traditions are the *Ormulum* and and the *Brut*, respectively. Entirely alliterative texts are absent during the 13th century, but alliteration did not disappear, as the presence in mixed compositions shows. The decrease in the use of rhyme corresponds to the renaissance of alliteration and the beginning of the Alliterative Revival in the second part of the 14th century.

The distribution of ambiguous, auxiliary and causative *do* across different types of verse is illustrated in table 5.14, in which it is shown that auxiliary *do* is only attested in rhyming texts and, to a lesser extent, in mixed texts, while it is completely absent in non-rhymed texts.

	Rhymed	Non-Rhymed	Mixed	Total
Ambiguous *do*	92	0	5	97
Auxiliary *do*	114	0	2	116
Causative *do*	80	41	19	140
Total	286	41	26	353

Table 5.14: Distribution of ambiguous, auxiliary and causative *do* across different types of verse.

5.5.1.6 Period

Lastly, the time factor will also be taken into account. The Period variable consists of three levels, which correspond to the sub-periods M1 (1150-1250), M2 (1250-1350) and M3 (1350-1420). The inclusion of a variable investigating the effect of time on the use of *do* will allow us to determine whether (i) the use of auxiliary *do* changes in different periods and (ii) the time variable interacts with the other variables included in the model.

5.5.2 Conditional inference trees and random forests

In recent years, logistic regression models have emerged as the standard statistical approach in historical linguistic studies (e.g. Hilpert and Gries 2010; Speelman et al. 2018; Wieling et al. 2018; Sommerer and Hofmann 2020; Zimmermann 2020), as they allow for the investigation of the effect of a number of independent variables, or predictors, on the dependent variable, or response, of interest. This type of approach is the one that was initially chosen to examine the use of auxiliary *do* in poetry as well. However, logistic regression models proved to be particularly problematic to investigate my data set, since the sparsity of the data and multicollinearity (the risk that the independent variables in the model are correlated) created models that did not converge (for a similar issue, see Deshors and Gries 2016). These problems were resolved by using two statistical methods that have become more popular in recent years and have been used in a number of linguistic studies (e.g. Hansen and Schneider 2013, Szmrecsanyi et al. 2016,

Tomaschek et al. 2018, Hundt 2018), namely conditional inference trees and random forests (Levshina 2015; Gries 2020). There are two important reasons that make conditional inference trees and random forests particularly suitable for the purposes of this study. Firstly, they are well suited to handle cases where the number of the observations is small and the number of predictors is large. Secondly, as Szmrecsanyi et al. (2016: 114) argue, these methods are 'able to explore complex interactions in ways that surpass regression models'. Thus, the combination of these two statistical techniques is a perfect match: while a conditional inference tree provides an elegant way to visualise the interactions among the independent variables, random forests allow us to assess the strength of each independent variable. Since both techniques are relatively novel – they were introduced to linguistic studies by Tagliamonte and Baayen (2012) – I will devote the remainder of this section to explain the logic behind these statistical methods.

Conditional inference tree is a method based on binary recursive partitioning which works as follows. Initially, the algorithm determines whether any of the independent variables included in the model is associated with the dependent variable under study. Then, the model evaluates which independent variable has the strongest effect on the dependent variable and divides the data set into two subsets. In the present case study, in which the dependent variable has three levels (ambiguous *do*, auxiliary *do* and causative *do*), the algorithm splits the data set into two subsets: the first will contain all the observations with value X (e.g. causative *do*), while the other will be formed by the observations with values Y (e.g. auxiliary *do*) and Z (e.g. ambiguous *do*). This procedure is repeated until there is no independent variable that can be associated with the response of the dependent variable at a statistically significant level, which in this study is the canonical 0.05. How powerful every predictor is is quantified by the algorithm using permutation. That is, the algorithm randomly permutes the values of the independent variable considered and computes the statistical significance. Then, it assesses the proportion of the permutations that return a test statistic which is either greater than or equal to the test statistic observed in the data; if such a proportion is smaller than the significance level (<0.05 in this case), then the result is statistically significant. Lastly, the accuracy of the tree will be measured by comparing the predicted probabilities with the observed values.

Random forests are essentially an extension of conditional inference trees, since the noun 'forest' refers to the fact that this method consists of several conditional inference trees merged together. Each tree of the forest is grown for a subset of the data and is generated from a random sample, which is given by the observations present in the data set and the independent variables. The basic concept behind random forests is that by producing a large number of uncorrelated trees that are merged together, the algorithm provides a result that is more accurate than just one tree. It is possible to specify the size of the forest, as the command *ntree* allows us to determine how many trees will be grown in the forest. A drawback of this statistical method is that the interpretation is not as straightforward as it is, for instance, for conditional inference trees. In this study, I represent the outcome of the random forests model using a dot chart, which is designed in the following way. On the y-axis there are listed the independent variables, while on the x-axis there are values that range from 0.00 to 0.10, which estimate the importance of the variables: the closer they are to 0.00, the less important they are. The accuracy of the model is calculated as described above for the conditional inference tree.

The design of the conditional inference tree and the random forests includes the following variables.

- A DEPENDENT VARIABLE called CONSTRUCTION: ambiguous *do* vs. auxiliary *do* vs. causative *do*.

- An INDEPENDENT BINARY VARIABLE named POSITION: End verse vs. Other, which indicates whether the infinitive is at the end of the line.

- An INDEPENDENT BINARY VARIABLE called ENDING: person ending in *-th* vs. Other, indicating whether the finite verb ends in *-th*.

- An INDEPENDENT BINARY VARIABLE named INF_ORIGIN: Native vs Borrowing, which indicates the origin of the infinitive occurring with *do*.

- A CATEGORICAL INDEPENDENT VARIABLE named DIALECT: Eastern Midlands (EM) vs. Western Midlands (WM) vs. Northern vs. Southern, representing the dialect of each text.

- A CATEGORICAL INDEPENDENT VARIABLE named VERSE: rhymed vs. non-rhymed vs. mixed texts, which refers to the type of verse used in each text.

- A CATEGORICAL INDEPENDENT VARIABLE named PERIOD: M1 vs. M2 vs. M3, indicating when the text was composed.

5.5.3 Logistic regression

The statistical model chosen to investigate the differences between auxiliary *do* and the construction formed by *gan* - infinitive is a binary logistic regression model. In linguistics, binary logistic regression models are used in cases of binary variation to determine the effect of one or more explanatory factors on a linguistic variable that has two values. The values of the dependent variable are computed as '0' and '1' and the model predicts the probability that the outcome of the dependent variable has a value of 1 based on the explanatory factors included in the model. A typical example is the genitive alternation between *of* and *'s*, as in 'the player's goal' and 'the goal of the player', which can be interchangeably used in some contexts. This alternation can be investigated by using a logistic regression model, in which the dependent binary variable is represented by the two genitive constructions, and taking into account different independent variables, as the animacy of the possessor, the animacy of the possessed and the number of syllables. This statistical method is particularly powerful, because it allows us to determine which explanatory factor has a significant influence on the dependent variable and how strong the influence of each predictor is. To assess whether the explanatory factor is statistically significant, the outcome of the logistic regression model returns the *p*-value of each independent variable, which has to be lower than the usual threshold of 0.05 to be significant. The degree of influence of each independent variable on the dependent variable is measured by the coefficient value, which can be understood in terms of odds ratios. The odds ratios are computed by raising the Euler's number (2.718) to the power of the coefficient value; therefore, to calculate the odds ratio of a hypothetical coefficient of 1.23, the math will be $2.718^{1.23} = 3.42$.

Lastly, the statistic performance of each model will be evaluated reporting four values. The first concerns the significance of the model, which is measured

performing a Likelihood Ratio Test that provides the *p*-value of the model. The second value is the Nagelkerke Pseudo-R2, which measures the amount of variation in the data explained by the model; this value ranges from 0 to 1, where 0 indicates no variation explained and 1 all variation explained. The third value is called C-index, which reports the classification quality of the model, i. e. the degree of accuracy of the model in the prediction of the outcome. The value of the C-index ranges from 0.5 to 1, where values above 0.7 are considered good, above 0.8 excellent and above 0.9 outstanding. The last value is the AIC value, which stands for Akaike information criterion (e.g. Gries 2013; Levshina 2015; Brezina 2018). The AIC value compares two different models and calculates which one has a better performance: to interpret this measurement correctly, the smaller the AIC value is, the better is the performance of the model. The logistic regression model includes the same predictors used for the conditional inference tree and the random forests illustrated in section 5.5.2, while the dependent variable contains two levels, namely auxiliary *do* and *gan*.

5.5.4 Distinctive collexeme analysis

In order to investigate in depth the relation between auxiliary *gan* and auxiliary *do*, an additional statistical analysis will be performed, namely a distinctive collexeme analysis (Gries and Stefanowitsch 2004b). A distinctive collexeme analysis is used to determine the extent to which a particular element in a construction, in our case auxiliary *do* and *gan*, is attracted to or repelled by a specific semantic class of lexical items; this allows us to assess if the two constructions display significant differences in terms of the infinitives they occur with. In brief, a distinctive collexeme analysis generates a list of the lexical items that are most attracted to a verb; to what extent a lexical item is attracted to auxiliary *do* and *gan* is determined by the collostructional strength (CollStr), which is measured through a comparison between the frequencies of the two elements of the construction under investigation both in conjunction and in isolation. For instance, if one is interested in investigating how strong the level of attraction is between 'will' and 'go' in 'will go', the collostructional strength of 'go' is calculated through the extraction of the frequency of the construction 'will go' as a whole, and then of 'will' and 'go' in isolation. The association measure used to calculate the collostructional strength

176

is the Fisher exact test, which according to Gries and Stefanowitsch (2004b: 101) is better suited to capture rare collocations.

The starting point of a distinctive collexeme analysis involves the exhaustive collection of all the examples of the construction under scrutiny; in this case, I extracted all the instances of auxiliary *do* and *gan* in the corpora described above. Secondly, I listed all the infinitives occurring in combination with *do* and *gan* and then I calculated the corpus frequency of each infinitive form. The reliance on annotated corpora at this stage is essential, as the tag VB allows for the immediate identification of every instance of infinitives. Unfortunately, the *South English Legendary*, the *Brut* and the *King Horn* were not tagged and the collection of the infinitives was done manually. This operation proved to be particularly complex and challenging, given the abundance of orthographic variants of each verb in Middle English texts. All the variants have been taken from the online version of the *Middle English Dictionary* and then double-checked with the OED. The last step involved the disambiguation of those examples in which two different infinitives had the same spelling, i.e. *riden* could stand for *reden* 'read' or *riden* 'ride'. Finally, the last piece of data required is the size of the corpus, which is 681,531 words.

5.6   The use of auxiliary *do* in poetry

The results of the conditional inference tree are given in figure 5.6 below. The ovals contain the independent variable selected by the algorithm to get the best split in terms of classification accuracy when predicting the dependent variable, and the *p*-values. The levels of the independent variable are described by the branches, while the bar plots represent the leaves and indicate the proportions of ambiguous, auxiliary and causative *do* in each end node, called bin, which includes all the observations for every level of the dependent variable. The total number of the observations in each bin is given in parentheses above the boxes.
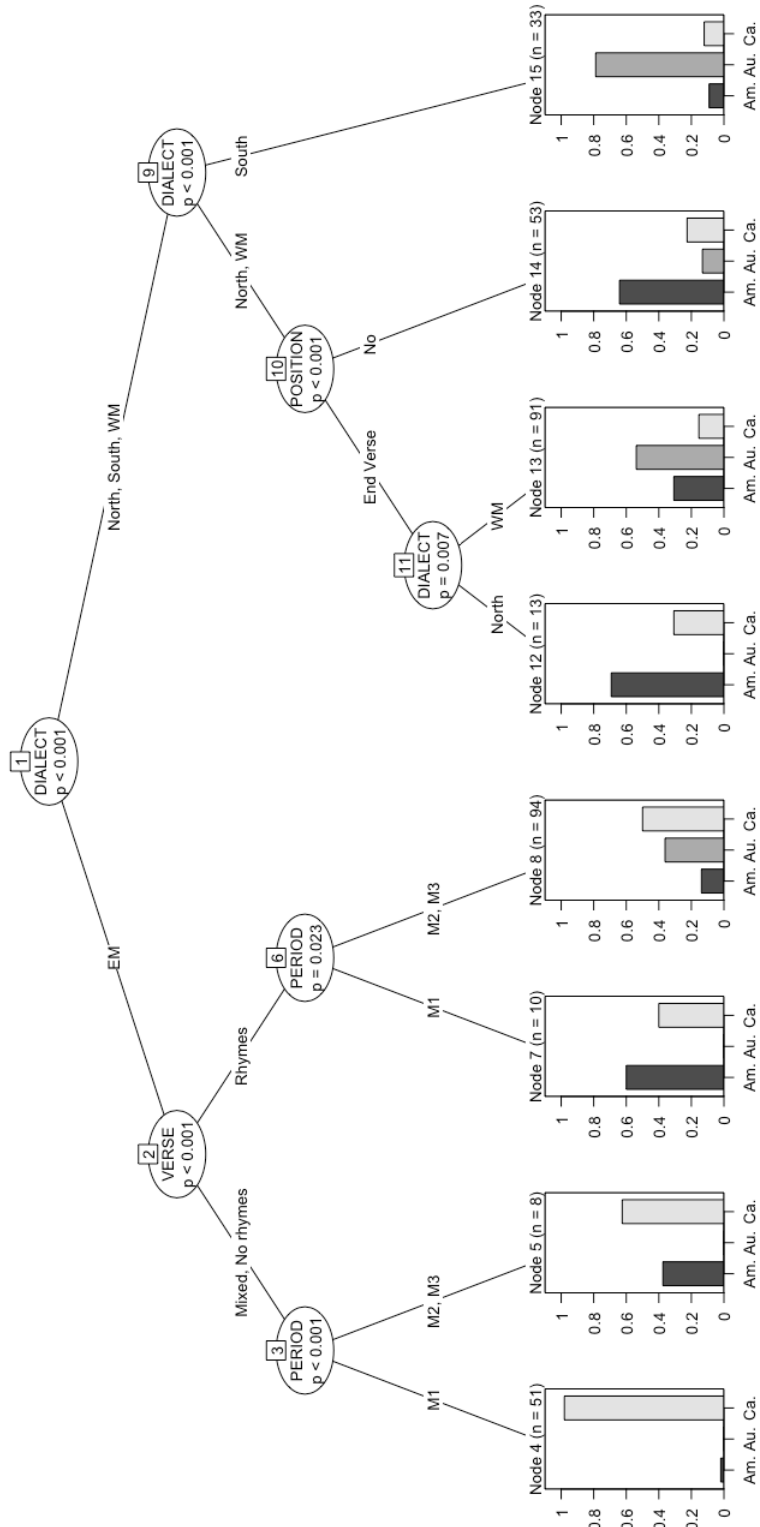
Figure 5.6: Conditional inference tree of ambiguous, auxiliary and causative *do*.

The first conspicuous result is that two predictors, the origin of the infinitive and the ending in -*th*, are not part of the tree, meaning that they are not statistically significant. Among the significant predictors, the first split at the top of the figure (Node 1) divides the data set into two major dialectal branches: the left branch contains only data from the Eastern Midlands dialect, while the right one has the Northern, Southern and Western Midlands dialects. Moving down from Node 1, we see that the data from the Eastern Midlands dialect are further divided into texts that are written in rhyme and those that present no rhyme at all or have a mixed style (Node 2). Non-rhymed and mixed texts are further split according to the period in which they were composed. In Node 4, we find texts of the period M1, while in Node 5 there are the observations of the M2 and M3 sub-periods. In neither of these two nodes there are instances of auxiliary *do*, while the bin at Node 5 contains some instances of ambiguous *do*. This means that auxiliary *do* is not attested in the Eastern Midlands dialect in non-rhymed and mixed texts in any Middle English sub-period. With respect to rhymed texts, the bin at Node 7 shows that auxiliary *do* is not attested in M1, while it occurs in M2 and M3 (Node 8). On the other hand, causative *do* is consistently found in every period and in every type of texts in the Eastern Midlands dialect. Getting back to the right branch with the Northern, Southern and Western Midlands dialects, the first split divides this portion of the data set into two branches, one connected to Node 10 containing the Northern and the Western Midlands dialects, the other connected to Node 15 with the Southern one. The bin at Node 15, which consists of 33 observations from the Southern dialect, contains a great number of auxiliary *do* examples. This means that auxiliary *do* was particularly frequent in the Southern dialect regardless of any other predictor. The branch with the Northern and the Western Midlands dialects is further split into two branches: one in which the infinitives in the *do*-constructions do not occur at the end of the verse (Node 14) and the other in which they are placed at the end of the verse (Node 11). In the bin at Node 14, which includes 53 observations, auxiliary *do* is scarcely attested, while the majority of the examples are ambiguous *do*. In other words, in the Northern and the Western Midlands dialects auxiliary *do* sporadically occurs when the infinitive is not the last element in the verse. Node 11 is divided into two bins, one with the Northern dialect (Node 12) and the other with the Western

179

Midlands dialect (Node 13). The bin at Node 13 with 91 observations illustrates that in the final position of the verse, auxiliary *do* is frequently attested, as well as ambiguous instances of *do*, while causative *do* is more rare. The situation in the Northern dialect is given in the bin at Node 12, in which is shown that of the 13 observations recorded, there are no instances of auxiliary *do*, causative *do* is attested but the majority of the instances represents cases in which *do* is ambiguous.

The model indicates that the most significant predictor is the Dialect variable. In the Southern dialect, the fact that the algorithm does not split that portion of the data set any further means that auxiliary *do* occurs regardless of the other predictors. In the Western Midlands dialect, auxiliary *do* is more frequent at the end of the verse, but it is also attested in other positions. In the Northern dialect, auxiliary *do* is not present at all: there are no instances at the end of the line and all the instances inside the bin at Node 4 occur in the Western Midlands dialect. In the Eastern Midlands dialects, auxiliary *do* only occurs in texts written in rhyme starting from the second sub-period (M2, 1250-1350), while in any texts (including rhymed ones) prior to that period the auxiliary construction is totally absent. In terms of the model's accuracy, table 5.15 illustrates the predicted probabilities.

	Ambiguous *do*	Auxiliary *do*	Causative *do*
Ambiguous *do*	51	8	11
Auxiliary *do*	26	82	14
Causative *do*	21	29	111

Table 5.15: Predicted probabilities computed by the conditional inference tree.

The accuracy of the model is calculated by adding up the numbers on the diagonal (51+82+111) and divide the resulting number by the number of the total observations (353). The result is 244/353, which gives 0.69, meaning that the correct predictions are made for 69% of the total observations.

The strength of each predictor has been evaluated in the random forest analysis (ntree=2000, mtry=2). The outcome is shown in figure 5.7. The most powerful predictor is the dialect, with the one addressing the position of the construction in the verse coming second. Less powerful are the Period and Verse variables, while the origin of the infinitive and the ending in -*th* have no explanatory power in this model, as also indicated by their absence in the conditional inference tree.
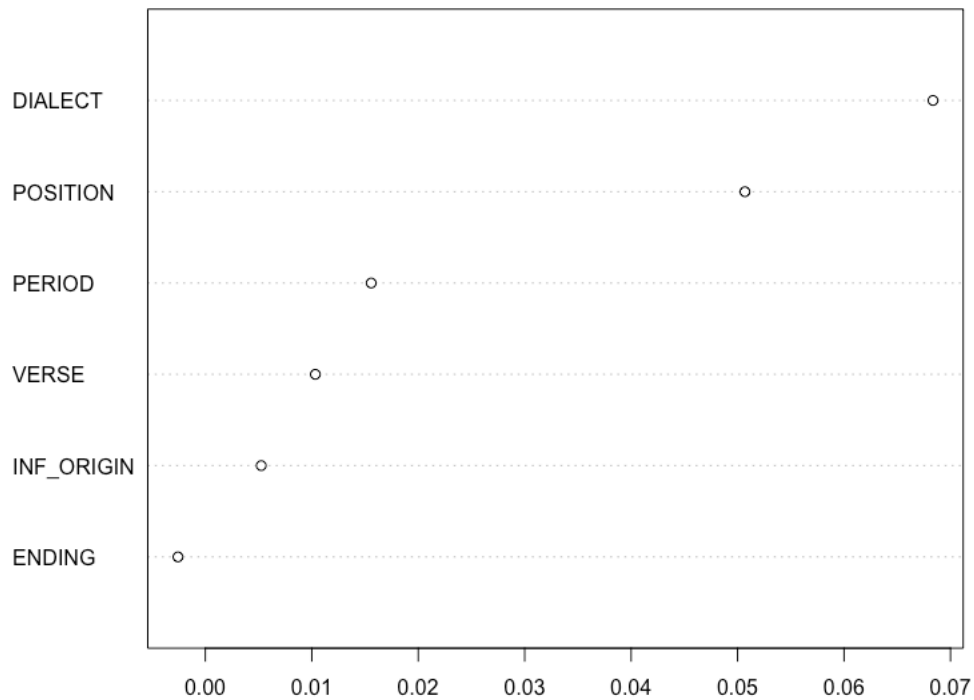
Figure 5.7: Dot chart evaluating the conditional variable importance of each predictor.

Testing for model accuracy, the random forests model has a superior performance to that of the conditional inference tree. Replicating the same calculation performed above, the prediction accuracy of the random forests is 77%, which represents a substantial increase compared to the accuracy value of the conditional inference tree. The predicted probabilities are given in table 5.16 below.

	Ambiguous *do*	Auxiliary *do*	Causative *do*
Ambiguous *do*	59	4	7
Auxiliary *do*	21	91	7
Causative *do*	18	24	122

Table 5.16: Predicted probabilities computed by the random forests.

The combination of the conditional inference tree and the random forest allows us to assess whether auxiliary *do* was used as a metrical device in Middle English poetry. The results of the statistical analysis suggest that auxiliary *do* was in fact employed for metrical purposes, but not in every dialect. In the Southern dialect, auxiliary *do* is frequently attested regardless of any of the variables considered in this study. This means that auxiliary *do* was not used more than expected for metrical purposes, perhaps because the construction was an already established feature of the dialect spoken in this area and the type of text did not influence the use of auxiliary *do*. In the Northern dialect, by contrast, the construction is totally absent. In the Midlands dialects we can observe interesting tendencies. On the one hand, in the Western Midlands dialect auxiliary *do* seems to be mainly used as a strategy to place the infinitive in rhyme position, although it is also attested in other positions of the verse. On the other hand, it appears that in the Eastern Midlands auxiliary *do* was exclusively used as a metrical device, since there are no unambiguous examples of auxiliary *do* in non-rhymed and mixed texts. In addition, we can observe a diachronic development taking place in rhymed texts in the Eastern Midlands dialects. While auxiliary *do* does not appear in early (M1, 1150-1250) texts, it began to be used in later compositions, from 1250 onwards. Given what has been observed in other dialects, we can hypothesise that the use of auxiliary *do* in poetry was due to metrical reasons, specifically to place the infinitive at the end of the verse. In fact, although the algorithm did not produce a further split, a rapid look at the distribution of auxiliary *do* in the Eastern Midlands dialect in M2-M3 (Node 8) shows that most of the occurrences of auxiliary *do* are in final position, as illustrated in table 5.17.

	End verse	**No end verse**	**% end verse**
Ambiguous *do*	10	6	62.5%
Auxiliary *do*	24	9	72.7%
Causative *do*	19	26	42.2%
Total	53	41	59.1%

Table 5.17: Frequency of auxiliary *do* in the Eastern Midlands dialect by position in the verse in M2-M3 sub-periods.

These results have important implications for the history of auxiliary *do*. In fact, we can conclude that while there is no evidence that poetry played any role in the origin of auxiliary *do*, the conditional inference tree and the random forests suggest that the use of the construction in poetical texts helped (i) the preservation of the auxiliary construction in the language and (ii) the spread of auxiliary *do*, particularly towards the Eastern Midlands area.

In terms of where auxiliary *do* may have originated, my analysis seems to be slightly different from the one proposed by Ellegård (1953). In fact, while he claimed that auxiliary *do* originated in the southern area of the Western Midlands dialect, my model points towards the Southern dialect. The different result can be explained by several factors. Firstly, the data sets are different. While Ellegård's data set includes only texts in which auxiliary *do* is present and has a total word count of approximately 214,600 words (based on 1953: 44), the data set used in this study is a comprehensive collection of Middle English poems and has a total of 681,531 words, see section 3.2.2.2. The collection process was different, since Ellegård could not count on electronic, and more reliable, resources. Secondly, the interpretation of causative, auxiliary and ambiguous constructions in some cases was different, as discussed in section 5.4.1.2. Thirdly, the classification of the dialects is different, which in turn led to a different localisation of some texts. The crucial difference concerns the *South English Legendary*, in which most of the auxiliary examples are found. Ellegård classified this text as Western/South-Western, while I labelled it as Southern. The localisation of this

text is particularly problematic, as it appears to be composed on the border between the Western Midlands and the Southern dialects: Hortsmann (1851) argues that it was composed in the abbey of Gloucester; the LAEME localised it slightly further southeast, in the western part of the county of Oxfordshire (LAEME 2013, index number #286), while Thompson (2003) argues that it was composed in the South West or West Midlands. Thus, it appears that the area of composition varies between the northwestern area of the Southern dialect and the southern part of the Western Midlands dialect. Bearing these differences in mind, it seems that the results of my model and Ellegård's analysis point to the same dialectal area. The apparent difference is purely classificatory: both Ellegård and I identify the southwestern area as the one in which auxiliary *do* is more likely to have originated.

To summarise, this investigation aimed to analyse the role of poetry in the development of auxiliary *do*. The results of this study have provided quantitative support for the suggestion that auxiliary *do* was used as a metrical device to place the infinitive at the end of the verse to facilitate rhyme. In the Southern dialect, auxiliary *do* was extensively used regardless of the other variables included in the statistical model. This is interesting, since it implies that the position in the verse was not a significant factor in the use of the auxiliary construction. One possible explanation is that auxiliary *do* was not used for metrical reasons only, but was an established feature of the dialect spoken in the south of England whose presence was not affected by the genre of the text. In the Midlands, auxiliary *do* was employed as a metrical tool, but with some differences between the Western and the Eastern dialect. In fact, while in the Western Midlands dialect auxiliary *do* occurred more frequently at the end of the verse than in other positions, in the Eastern Midlands dialect it was exclusively used to place the infinitive in rhyme position. Furthermore, the conditional inference tree indicates that auxiliary *do* was introduced in the Eastern Midlands dialect only in later Middle English poems, as there are no unambiguous instances of auxiliary *do* in early Middle English (M1, 1150-1250). In the Western Midlands dialect, on the other hand, auxiliary *do* is present in early Middle English texts and is consistently used throughout the Middle English period. In the Northern dialect we do not find any instances of unambiguous auxiliary *do*, as expected. Lastly, these findings also indicate that

the auxiliary construction is likely to have originated in the southwestern area of England, as proposed by Ellegård (1953).

5.7 The role of other analytic constructions

5.7.1 Introduction

In section 5.6 it was shown that, in some dialects, auxiliary *do* was employed in Middle English poems to place the infinitive in rhyme position. In this section, I investigate whether constructions like modal verb - infinitive and *gan* - infinitive were used for the same metrical purpose. Specifically, the question that will be answered is whether metrical conventions influenced the use of other analytic constructions that share the same syntactic structure with auxiliary *do*. It is important to point out that despite being structurally similar, the modals have different semantic features compared to auxiliary *do*. Thus, we expect that the modals do not follow the same pattern that has been observed with auxiliary *do*. The construction *gan* - infinitive, on the other hand, might resemble the distribution of auxiliary *do*, since *gan* is considered to be only a tense marker and several scholars have suggested that it was a poetical device used to place the infinitive in rhyme position (Visser 1963-73; Smyser 1967; Terasawa 1974; Tajima 1975; Fischer 1992b; Brinton 1996; Putter and Stokes 2000; Ogura 2018). In that regard, Ogura (2018) argues that 'the periphrasis has a close connection with the development of the periphrastic *do*' and both verbs serve the poetical function of placing 'the infinitive at the end of the verse line for end-rhyme' (2018: 47). Moreover, the relation between auxiliary *do* and *gan* is further analysed with the use of a distinctive collexeme analysis (Stefanowitsch and Gries 2004b; Hilpert 2008). Distinctive collexeme analysis is part of the family of collostructional analyses that includes collexeme analysis and diachronic distinctive collexeme analysis (Stefanowitsch and Gries 2003; Stefanowitsch and Gries 2005; Hilpert 2008), and is used to contrast the collocational preferences of two, or more, constructions by generating a list of the lexical items that are most attracted, or repelled, to a verb. The verbs that will be compared are auxiliary *do* and *gan*; the aim of this distinctive collexeme analysis is to investigate whether the infinitives that

occur in combination with *gan* and auxiliary *do* show semantic differences. The comparison between auxiliary *do* and the modal verbs is carried out in section 5.7.2, while the one with *gan* is discussed in section 5.7.3.

5.7.2   Modal verbs

The construction taken into consideration is formed by a modal and a bare infinitive verb. Specifically, the modal verbs examined are the following: *can* 'can', *may/mouen* 'may', *shulen* 'shall' , *willen* 'will'. The construction involving a modal verb and an infinitive could have different structural patterns; with respect to the position of the modal verb, it could either precede or follow the infinitive, but the far more frequent pattern is modal verb - infinitive, while examples of infinitive - modal are limited to few cases. Moreover, the modal verb and the infinitive can be separate, with a noun phrase, an adverbial, a prepositional phrase or a combination of those intervening between them. These patterns are exemplified below in (38)-(42).

- Modal - INF

(38)   And he þat brought me þis present, y schall make hym so content, it
       And he that brought me this present, I shall make him so happy,   it
       schall   hym wele a-vayle
       shulen.PRS him well benefit.INF
       'And he who brought me this present, I shall make him so happy and it

       shall well benefit him' (SirCleges,52.396.219)

- INF - Modal

(39)   Werke wittnesse will bere who wirche   kane   beste
       Work   witness   will bear who work.INF can.PRS best
       'The work will bear witness to who can work best' (WinnerWaster: 14.3.30.In-

       tro)

- Modal - NP - INF

(40)   To schip he may   hit beore   anon
       To ship   he mouen.PRS it   bear.INF immediately
       'He may immediately carry it to the ship' (Alisaunder: 290.7085.4182)

- Modal - ADVP - INF

(41) And swor   he schold   sure   abygge the heved for that gult
      And swore he shulen.PRS painfully pay.INF the head   for that crime
      ligge.
      laid
      'And swore he should pay a high price, laid the head for that crime' (Al-
      isaunder: 42.902.536)

- Modal - PP - INF

(42) That thou schuldust   to deth   teo?
      That you   shulen.PRS to death go.INF?
      'That you should die?' (Alisaunder: 34.731.427)

All the patterns illustrated above have been considered in this study. The pro-
cedure conducted here is the same as carried out in section 5.6 for auxiliary *do*:
all the examples of modal verb - infinitive constructions have been tagged for the
position occupied by the infinitive in the verse, specifically final vs. non-final po-
sition. The distribution and the frequency of the infinitive governed by the modal
with respect to the position in the verse is illustrated below in table 5.18.

Modal	Occurrences	Infinitive in final position	%
Can	209	99	47.4%
Shulen	1,622	645	39.8%
Willen	1,043	489	46.9%
May	1,167	568	48.7%
Total	4,041	1,801	44.5%

Table 5.18: Frequency and distribution of modal - infinitive constructions
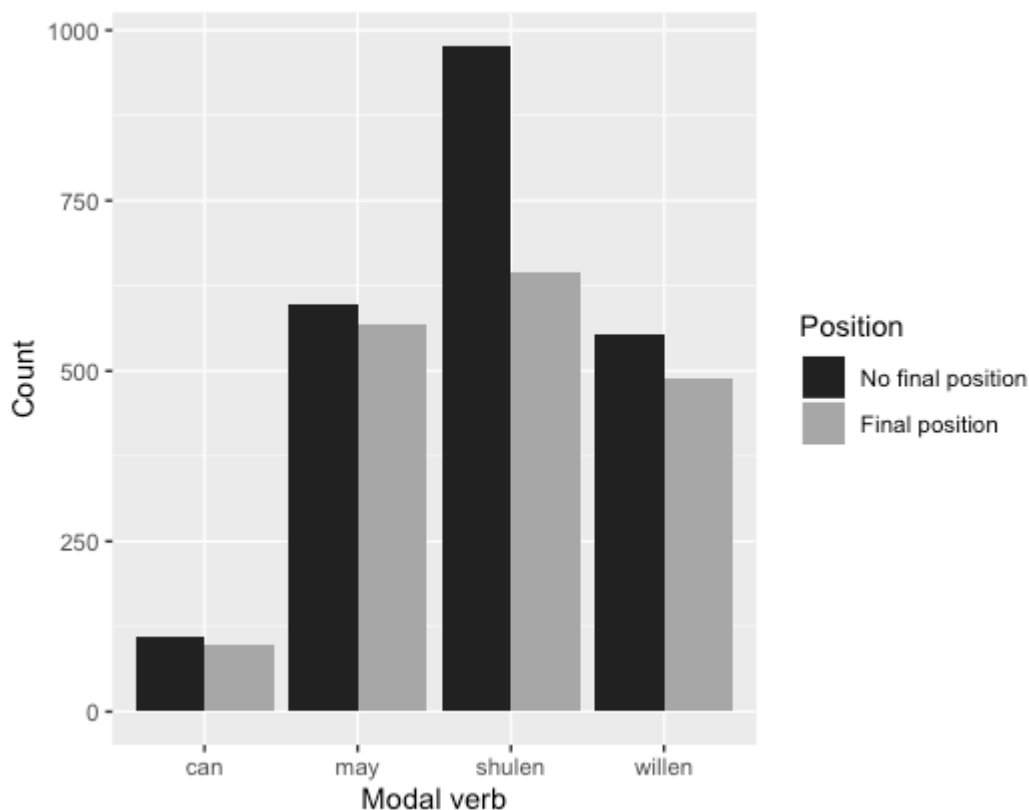with respect to the position of the infinitive in the PCMEP.

Figure 5.8: Distribution of the construction modal - infinitive with respect to the position of the infinitive in the PCMEP.

In order to test the statistical significance of the relation between constructions formed by the pattern modal verb - infinitive and the position in the line of the infinitive, a chi-square test has been performed on each construction. The results are the following. The position occupied in the line by the infinitive does not affect the use of any of the modal verbs considered, as the difference between final and non-final position is not statistically significant: *can* ($\chi^2 = 0.57895$, df $= 1$, $p = 0.4467$), *may* ($\chi^2 = 0.82348$, df $= 1$, $p = 0.3642$), *willen* ($\chi^2 = 4.0508$, df $= 1$, $p = 0.04415$). The result concerning *shulen* ($\chi^2 = 67.956$, df $= 1$, $p < 0.001$) indicates that the difference between the number of occurrences in final vs. non-final position is statistically significant; this means that the construction is more likely to appear with the infinitive in non-final position, given the higher frequency of examples occurring not at the end of the verse. Thus, as was the case for causative *do*, the modals too were not used to place the infinitive in the final position of the verse, meaning that they were employed for their semantic

188

content.

5.7.3 *gan* - infinitive: a parallel construction?

The development of the construction formed by *gan* - infinitive shares several similarities with auxiliary *do*, as both *gan* - infinitive and auxiliary *do* fell out of use in declarative sentences during the course of the Modern English period (Ogura 2018). The OED points out that in Middle and early Modern English *gan* was used as an auxiliary in periphrastic constructions expressing tense (OED: *gin*, v.1, 1b), as in (43).

(43)   and þa   six swin   he gon   æten   alle ær   he arise of selde
       and then six swines he gan.PST eat.INF all before he arose of seat
       'and he ate all six swines before he arose from his seat' (Brut: 12971. From
       OED: *gin*, v.1, 1b)

The relation between *gan* and *do* has been addressed in several studies and it has been shown that initially the two verbs were in competition, but *gan* was ultimately ousted by *do* and fell out of use (Smyser 1967; Tajima 1975; Brinton 1990). The OED points out the similarities between *gan* and *do* as auxiliaries expressing tense, indicating that *gan* occurs preferably with 'verbs expressing action at a particular point in time and with adverbial expressions denoting duration or repetition' (OED: *gin*, v.1, 1b).

Gan - infinitive has been widely studied, especially in light of its extensive presence in the works of late Middle English authors such as Chaucer and Gower (Tajima 1975; Iyeiri 1996). The origins of this construction lie in the Old English construction *onginnan* 'start, begin' - infinitive, which in early Middle English developed into the shortened form *ginnen*, past tense *gan*; I use the term *gan* - infinitive to refer not only to the past tense but also to the present *gin* and to the dialectal variants *con*, *can* and *cun*.

The connection between *gan* and poetry was initially observed by Funke (1922) and was later supported by the findings in Visser (1963-1973), Mustanoja (1960), Smyser (1967) and Brinton (1990) among others. Smyser (1967), in particular, analysed the distribution of *gan* in Chaucer and found that in his poetic works there are nearly 700 examples, while in prose it is only found 3 times.

An issue that is widely discussed in the literature is whether *gan* was used as a mere poetical strategy to place the infinitive at the end of the line in rhyming position or, along with its role as a poetical device, it also had descriptive or discourse functions related to the original meaning of 'beginning' (for an extensive summary see Fischer 1992b). With respect to the latter hypothesis, it has been argued that *gan* was used as an ingressive marker with a descriptive and intensive function (Funke 1922; Homann 1954; Mustanoja 1960; Brinton 1990).

An interesting study focusing on which metrical purposes *gan* may have served has been conducted by Putter and Stokes (2000), who investigated the role of the construction *gan* - infinitive[18] in several works which are attributed to an unidentified author, referred to as the *Gawain*-poet: *Patience, Cleaness, Pearl, Sir Gawain and the Green Knight*. The metre of these poems is diverse: *Patience* and *Cleaness* are written in unrhymed alliterative verse, *Sir Gawain and the Green Knight* is a mix of alliteration and rhyme while *Pearl* is in rhymed iambic tetrameter. The use of *gan* - infinitive is not uniform among these texts: it is frequently found in *Pearl*, while it is rare in *Sir Gawain and the Green Knight* and is almost absent in *Patience* and *Cleaness* (Putter and Stokes 2000; Tajima 1975). The results of the investigation conducted by Putter and Stokes brought to light that *gan* - infinitive is used in *Pearl* for metrical purposes; the construction 'yields an instant iambic foot' (2000: 79), where the non-stressed foot is *gan* and the stressed foot is the first syllable of the infinitive. In addition, Putter and Stokes show that even in the hybrid *Sir Gawain and the Green Knight*, the construction is largely found in the part of the text written in rhyme (20 out of 22 instances). In the remaining two alliterative texts, *Patience* and *Cleaness*, *gan* - infinitive is found only 6 times (Tajima 1975).

5.7.3.1 Logistic regression results

In order to compare and analyse the factors that underlie the use of auxiliary *do* and auxiliary *gan*, I ran a logistic regression model whose results are presented in this section. The model below includes as predictors the position of the infinitive in the line, the person of the verb, the origin of the infinitive, the dialect of the manuscript, the type of meter and the period in which the texts were composed.

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[18]Putter and Stokes use the term *con* - infinitive (2000: 78).

190

The outcome is illustrated below, with *gan* being the baseline value.

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formula = Construction ~ Position + Ending + Inf_Origin + Dialect + Verse + Period

family = binomial, data = gando

Coefficients	Estimate	Std. Error	z value	*p*-value
(Intercept)	-1.087	0.346	-3.137	<0.001 **
Position	-0.016	0.273	-0.060	0.952
Dialect Northern	0.167	0.345	0.484	0.628
Dialect Southern	-0.877	0.220	-3.987	<0.001 ***
Dialect West Midlands	-4.457	1.018	-4.377	<0.001 ***
Inf_Origin Germanic	-0.278	0.279	-0.994	0.320
Ending Other	0.077	0.250	0.309	0.756
Period M2	0.254	0.288	0.408	0.256
Period M3	0.168	0.115	-0.879	0.890
Verse No rhyme	-0.101	0.237	0.280	0.24
Verse Rhyme	0.056	0.196	-0.119	0.38

Null deviance 776.09 on 1221 degrees of freedom

Residual deviance 664.11 on 1213 degrees of freedom

AIC 680.11

Table 5.19: Logistic Regression model 1: auxiliary *gan* vs. auxiliary *do* by position in the line, origin of the infinitive, person of *gan* and *do*, dialect of the manuscript, period, type of verse.

Model 1 shows that the only statistically significant factor for the occurrence of auxiliary *do* over *gan* is the dialect variable, which indicates that *gan* was much more likely to occur in the Western Midlands and in the Southern dialects than in the Eastern Midlands one, while the difference between the Northern dialect and the Eastern Midlands one is not statistically significant. The fact that

the other predictors included are not statistically significant means that the two constructions were used to perform similar functions. Therefore, we can conclude that, like auxiliary *do*, *gan* was mainly used to place the infinitive at the end of the line.

The performance of the model is acceptable: Likelihood Ratio Test, $\chi^2 = 111.98$, df = 8, p < 0.0001, Nagelkerke Pseudo-$R^2 = 0.186$, C-index = 0.764. The analysis of the AIC value indicates that only the inclusion of the variable dialect of the manuscript is justified; as shown below, the omission of all the other predictors would provide a model with a smaller AIC value, and hence more adequate to analyse the data.

	Df	Deviance	AIC	LRT	*p*-value
		664.11	680.11		
Position	1	664.11	668.11	0.094	<0.001 ***
Dialect	3	765.20	769.20	101.97	0.642
Inf_Origin	1	665.00	681.00	0.958	0.327
Ending	1	664.20	668.20	0.095	0.540
Verse	2	666.40	670.40	0.876	0.569
Period	2	664.50	668.50	0.914	0.671

Table 5.20: AIC values concerning model 1.

Therefore, I ran a logistic regression model with only one predictor, the dialect of the manuscript, since it seems to be better suited to describe the variation found in the data. The result is presented below.

formula = Construction ∼ Dialect, family = binomial, data = gando

Coefficients	Estimate	Std. Error	z value	*p*-value
(Intercept)	-1.304	0.153	-8.501	<0.001 **
Dialect Northern	0.159	0.345	0.464	0.642
Dialect Southern	-0.915	0.220	-4.241	<0.001 ***
Dialect West Midlands	-4.500	1.018	-4.42	<0.001 ***

Null deviance 776.09 on 1221 degrees of freedom

Residual deviance 665.20 on 1213 degrees of freedom

AIC 675.2

Table 5.21: Logistic Regression model 2: auxiliary *gan* vs. auxiliary *do* by dialect of the manuscript.

The performance of model 2 is similar to the previous one: Likelihood Ratio Test, $\chi^2 = 110.89$, df = 4, p < 0.0001, Nagelkerke Pseudo-R^2 = 0.184, C-index = 0.755, while the AIC value is smaller (675.2) compared to the previous model (680.11). As such, I chose the model with the lowest AIC value as the final model to investigate the differences between auxiliary *do* and auxiliary *gan.*

The model shows that the dialectal areas in which *gan* was more frequent compared to auxiliary *do* are the Western Midlands and the Southern dialects, while between the Northern and the Eastern Midlands dialects there is no statistically significant difference in the use of the two constructions. The computation of the odds ratio in model 2 is the following: the odds of finding auxiliary *do* vs. *gan* are 0.4 times higher in the Southern than in the Eastern Midlands dialect and 0.01 times higher in the Western Midlands than in the Eastern Midlands one. Or, changing the perspective, we can say that the odds of finding *gan* vs. auxiliary *do* are 2.50 times higher in the Southern than in the Eastern Midlands dialect and 90 times higher in the Western Midlands dialect than in the Eastern

Midlands dialect. These results become particularly relevant in light of the fact that the southwestern area of England is where auxiliary *do* is first attested in written texts and where it was more extensively used. Thus, the question arises as to whether the extensive use of *gan* influenced the introduction of auxiliary *do* in southwestern poems. Perhaps, southwestern poets were less reluctant to use auxiliary *do* because they already employed a metrical device like *gan*. If this suggestion is correct, there is another issues that arises, namely why did poets begin to use auxiliary *do* when *gan* was already available. One possible explanation is that auxiliary *do* and *gan* were somewhat different. In the following section, I investigate whether this difference involves the semantics of the infinitives that occur in combination with *gan* and *do*.

5.7.3.2 Distinctive collexeme analysis results

Let us start this analysis with *gan*. Table 5.22 presents the 20 most distinctive collexemes of *gan* that are attracted to the construction at a statistically significant level.

Verb	Gloss	CollStr	Verb	Gloss	CollStr
wenden	walk	281.91	*drauen*	draw	49.91
gan	go	255.25	*abiden*	wait	47.34
reden	read	199.29	*tellen*	speak	46.78
leren	learn	110.30	*leden*	lead	46.61
crien	cry	101.62	*atstonden*	stay	44.42
seien	say	100.24	*flien*	fly	39.35
lighten	light	81.56	*bivien*	shake	39.31
greten	greet	58.15	*faren*	travel	38.54
senden	send	54.97	*maken*	make	38.23
wepen	weep	53.19	*callen*	call	36.46

Table 5.22: Most distinctive collexemes of auxiliary *gan* in Middle English.

Table 5.22 above shows a large group of distinctive collexemes expressing movement. The type of action conveyed by the verbs *wenden* 'walk', *gan* 'go', *lede* 'lead', *flien* 'fly', *faren* 'travel' imply an ongoing, atelic movement which is extended in time. The absence of other verbs of movement such as *come* and *arrive*, which denote a telic event, may be explained recalling the original meaning of *gan* 'start, begin'. There are several distinctive collexemes that express an activity and can be grouped in specific semantic spheres: *leren* 'learn' and *riden* 'read'; *crien* and *wepen* 'cry, weep'; *seien* 'say', *tellen* 'speak' and *callen* 'call'. The common trait among those verbs is that they all indicate an activity which requires an agentive subject. Another group is formed by collexemes that denote a state as *atstonden* 'stay' and *abide* 'wait', while *bivien* 'shake' denotes an activity where the subject is non-agentive. Despite the preference for atelic verbs, there are also some distinctive collexemes in the list that do express telic events, as *seien* 'say', *lighten* 'light'.

Before turning to auxiliary *do*, a further remark concerning *gan* is in order. It can be seen from table 5.22 that several infinitives (see for instance the collocates *wenden*, *crien* and *reden*) are compatible with an ingressive interpretation of *gan*. It cannot be excluded, therefore, that *gan* was also used also because it was an ingressive marker, particularly in early Middle English texts, as suggested by Brinton (1996: 80).

Table 5.23 illustrates the 20 collexemes that are most attracted to auxiliary *do* in Middle English. All the infinitives are statistically significant.

Verb	Gloss	CS	Verb	Gloss	CS
callen	call	48.69	*tellen*	tell	14.66
bifallen	befall	25.46	*reden*	read	14.27
wenden	walk	24.78	*bileven*	believe	12.56
crien	cry	21.71	*baptisen*	baptise	12.43
fallen	fall	19.98	*sweren*	swear	10.69
maken	make	19.93	*gan*	go	10.62
senden	send	18.69	*leien*	lay	9.37
springen	spring	18.55	*curen*	cure	8.66
ofsenden	send for	15.55	*despisen*	despise	8.66
fleon	flee	15.00	*nombren*	count	8.66

Table 5.23: Most distinctive collexemes of auxiliary *do* in Middle English.

The list of collexemes attracted to auxiliary *do* shows a certain degree of overlap with that of *gan*. There are collexemes expressing an ongoing movement as *wenden* 'walk', *gan* 'go' and *fleon* 'flee' and other activity verbs which require an agentive subject, like *maken* 'make' and *senden* 'send'. However, unlike *gan*, among the top 5 most distinctive collexemes there are also unaccusative verbs that express a telic event like *bifallen* 'befall' and *fallen* 'fall'. Similarly, telic events

are conveyed by *baptisen* 'baptise' and *sweren* 'swear', while verbs like *wenden* 'walk' and *reden* 'read' express atelic events. Lastly, there are collexemes such as *bileven* 'believe' that do not require an agentive subject. The nature of the subject that some infinitives take varies in different contexts. Look at *springen* 'spring' in example (44); typically, the subject is agentive, but in this case it is and inanimate and non-agentive entity.

(44) To-morow when þe dey do   spryng,   ȝe   schall to cardyff to þe
      Tomorrow when the day do.PRS spring.INF, you shall to Cardiff to the
      kyng
      king
      'Tomorrow when the day springs, you shall [go] to Cardiff to the king' (Sir

      Cleges: 46.234.128)

Compared to *gan*, auxiliary *do* appears to be more versatile, since it occurred with a greater variety of infinitives. The semantic class of the infinitives that occur with auxiliary *do* ranges from transitive verbs with agentive subjects to unaccusative verbs, while *gan* shows a marked preference for infinitives that require an agentive subject. In addition, a further feature that characterises auxiliary *do* is that it is frequently attested in combination with low frequency verbs. Some infinitives occurring with auxiliary *do* are verbs like *curen* 'cure', which including both finite and non-finite forms is attested 37 times in the MED corpus, while *ofsenden* 'send for' appears 28 times; the verbs *outbidden* 'muster' and *onfresten* 'delay a journey', not present in table 5.23, have a collostructional strength of 8.66 like *curen*, *despisen* and *nombren* and appear only once in the Middle English Dictionary. One possible reason why auxiliary *do* was used with low frequency infinitives is that it served as a facilitator device to employ such verbs. There is a large body of studies in usage-based literature that has shown how frequency affects the cognitive organisation of grammar (e.g. Bybee and Hopper 2001; Diessel and Hilpert 2016; Diessel 2019). In these studies, it is widely assumed that the more a construction is used the stronger the representation in the grammar is, while less frequent constructions have a weaker representation in the speakers' grammar. This implies that the accessibility of infrequent verbs is more complicated, while frequent verbs are more easily accessed (Diessel 2019). In this respect, the occurrence of auxiliary *do* with infrequent verbs may be a strategy that speakers

resorted to to facilitate their use, given their low frequency and the consequent weak status they had in the grammar.

To summarise, *gan* and auxiliary *do* show some overlapping features in the type of infinitives they occur with. However, there are also some remarkable differences. While *gan* exhibits a stronger preference for agentive verbs, auxiliary *do* is more versatile and attracts a wider range of infinitives, including also unaccusative verbs. Furthermore, several distinctive collexemes occurring with *gan* denote an atelic event, whereas amongst the most distinctive collexemes of auxiliary *do* there are both verbs that express telic and atelic actions. Based on these findings, we can say that auxiliary *do* was more semantically neutral than *gan*, possibly because *gan* preserved hints of its original meaning. Lastly, the results of the distinctive collexeme analysis brought to light that both auxiliary *do* and *gan* occur in combination with low frequency verbs, maybe to facilitate their use.

5.8   What does this mean for auxiliary *do*?

This chapter has shown that poetry is a valuable resource for the investigation of a crucial period in the history of auxiliary *do*. In this section, I discuss what the findings of this chapter mean for auxiliary *do*. As discussed in the review of his account, Ellegård (1953) argued that auxiliary *do* originated in the Western dialect in the first half of the 13th century (see section 3.2.2.2). The analysis laid out in this chapter confirms this hypothesis (see section 5.6). Furthermore, the data set built for this study allows us to zoom in on the period when auxiliary *do* developed. There are three poems that are of particular interest for this purpose: the *Brut* (c. 1200, Western Midlands dialect), the *King Horn* (c. 1225, Southern dialect) and the *South English Legendary* (c. 1270, Southern dialect). Let us take a closer a look at each of these texts, taking into account dialectal variation and poetical features. The *South English Legendary* stands out from the other poems in my data set in that it exhibits an extensive use of auxiliary *do*. Ellegård (1953: 62) argues that the high frequency of the auxiliary construction is not expected and, based on the data he collected, such a use 'cannot be fully elucidated'. Ellegård suggests a number of possible explanatory factors, such as the influence from the Southern dialect or from French, and it cannot even be excluded that the high

frequency of auxiliary *do* is the result of a metrical exercise. Regardless of the reasons why it is so extensively used in this poem, the crucial point is that, by the time the *South English Legendary* was written, auxiliary *do* had already emerged. Moreover, a further feature of the *South English Legendary* that is seldom taken into account is that *gan* is robustly attested. The *King Horn* and the *Brut* are relatively close to the *South English Legendary* in terms of dialect, since they have been written in the South West. In such texts, however, auxiliary *do* is rare, as there is only one ambiguous example in the *Brut*, while one unambiguous instance of auxiliary *do* occurs in the *King Horn*.[19] *Gan*, on the other hand, is extensively used, particularly in the sections where rhyme prevails. If we extend our discussion to earlier poems written in roughly the same dialectal area like *The Proverbs of Alfred* (c. 1180, Western Midlands), which alternates rhyme and alliteration, and *Lord as Thou art one God* (c. 1195, Western Midlands), composed principally in rhyme, we find a frequent use of *gan*, but no cases of auxiliary *do*. These results indicate that auxiliary *do* is likely to have developed in the first half of the 13th century. We can safely rule out the possibility that the absence of auxiliary *do* in *The Proverbs of Alfred*, *Lord as Thou art one God*, *King Horn* and *Brut* is due to a deliberate choice of the authors. In fact, it seems unlikely that, if *do* had developed into an auxiliary verb by the time these texts were written, none of the authors of these four poems would use it, particularly in light of the fact that they all extensively employ *gan*.

The second point concerns why auxiliary *do* appeared two centuries earlier in poetry than in prose. The hypothesis formulated by Ellegård that auxiliary *do* was a metrical device used to place the infinitive at the end of the verse is supported by the quantitative analysis carried out in section 5.6. However, the conditional inference tree revealed that auxiliary *do* did not have this function in every Middle English dialect. In the Eastern Midlands, the data show that auxiliary *do* was solely used to place the infinitive in rhyme position, since it occurred only at the end of the verse. In the Western Midlands dialect, auxiliary *do* occurs both in final and in non-final position, while in the Southern the model did not detect the Position factor as being statistically significant. The discussion revolves around how the non-significance of the Position predictor in the Southern dialect should

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[19]Note that manuscripts L and H have *gan* in place of auxiliary *do*.

be interpreted. In section 5.6, I suggested that the use of auxiliary *do* regardless of the position in the verse may be due to the fact that the auxiliary construction was not a mere metrical tool. In other words, this result can be taken as an indication that auxiliary *do* was already an established feature of the Southern dialect and its use was not conditioned by the genre of the type. Unfortunately, there are no Southern dialect prose texts that can support this observation.

Perhaps the most relevant result of the statistical investigation presented in section 5.6 is that it has shown that poetry played a role in the development of auxiliary *do*. Specifically, the fact that poets used auxiliary *do* in their composition may have facilitated the preservation and the spread of the construction, particularly towards the Eastern Midlands area. A point that will be discussed in more detail in section 6.3.3 is that Middle English poems were composed to be delivered orally (Pearsall 1977; Minkova 2004; Putter 2012). The access to written texts was restricted in early Middle English and, before the invention of the printing press, their distribution was also very limited. Nevertheless, the thematic content of such early poems suggests that they were composed in clerical environments and, importantly, their goal was to educate the population. Thus, it is reasonable to assume that these texts were read aloud and, therefore, that this played a role in the preservation and the spread of auxiliary *do*.

Lastly, the comparison between auxiliary *do* and *gan* carried out in the second part of the chapter provided a fuller insight into the contexts in which auxiliary *do* was used. The distinctive collexeme analysis has shown that among the most attracted collexemes of auxiliary *do* there is a wide range of infinitives, from unaccusative to unergative and transitive infinitives, as well as infinitives expressing telic and atelic events. This variety suggests that auxiliary *do* was semantically empty and does not seem to have any aspectual functions, contrary to what has been argued by Denison (1985) and Garrett (1998). In addition, the distinctive collexeme analysis has shown that auxiliary *do* and *gan* share several similarities in terms of their use as poetical devices, being both employed to place the infinitive in rhyming position. The construction involving *gan* was rather frequent in the Western Midlands and in the Southern dialects, the same areas where auxiliary *do* was more common than causative *do* and where auxiliary *do* is assumed to have originated. The higher frequency of both constructions in the dialects of

the South West may imply that the introduction of auxiliary *do* in poetic texts is somehow connected to the use of *gan* in this type of texts. Perhaps Middle English poets from that dialectal area began to employ auxiliary *do* because they already used *gan*. The findings of the distinctive collexeme analysis indicate that one of the reasons why auxiliary *do* was introduced was to cover some functions that *gan* did not fulfil, since *gan* did not appear in combination with unaccusative verbs. This may be due to the fact that *gan* preserved hints of its original meaning, while *do* was more semantically neutral and imposed no restrictions on the infinitives it occurred with. The last result to be discussed is the occurrence of auxiliary *do* in combination with low frequency infinitives, as shown by the distinctive collemexe analysis in section 5.7.3.2. This may suggest that *do* was employed as a 'facilitator device', more specifically to facilitate the use of uncommon verbs.

5.9   Summary

This chapter was concerned with the role of auxiliary *do* in poetry during the Middle English period. In the literature, this issue has been addressed in two different ways. While some linguists have argued that *do* appeared first in poetry because it was used as a metrical device to place the infinitive in rhyming position (Ellegård 1953), others have overlooked the presence of auxiliary *do* in poetry and did not investigate this issue any further, focusing instead on prose texts, which are less restricted than poems by literary conventions (e.g. Denison 1985).

In section 5.6, I analysed the distribution of every analytic construction involving *do* in poetry using a conditional inference tree and random forests. The output of the model showed that auxiliary *do* was mainly employed to place the infinitive at the end of the line, with some differences across different dialects. It was shown that auxiliary *do* was a metrical tool used by poets in the Eastern and, to a lesser extent, in the Western Midlands. In the Southern dialect, auxiliary *do* was used regardless of the position in the line. It was suggested that the non-significance of the position in which the auxiliary construction occurred is due to the fact that *do* was an established feature of the language spoken in that area. Moreover, the inference conditional tree indicated that auxiliary *do* began to appear in the Eastern Midlands dialect later than in other dialects, particularly

the Southern and the Western Midlands dialects, suggesting that poetry may have played a role in the spread of the auxiliary construction.

In section 5.7, I examined the behaviour of other analytic constructions in Middle English poetical texts. It was observed that *gan* had a similar use as a poetical device. While the two constructions display some semantic differences, auxiliary *do* had less semantic restrictions and, to a certain degree, it was used to cover a functional gap, since *gan* did not occur with unaccusative verbs. More generally, the distinctive collexeme analysis has shown that *do* occurred in combination with a great variety of verbs and, interestingly, with low frequency verbs.

These findings, which have been discussed in section 5.8, serve to provide a more exhaustive account concerning the development of auxiliary *do*, which will be presented in the following chapter.

Chapter 6

The development of auxiliary *do*: a multiple-source explanation

6.1 Introduction

In this chapter, I focus on the emergence of auxiliary *do* and investigate the factors that led to its development in early Middle English. Section 6.2 discusses the type of approach adopted here, which I call 'multiple-source explanation', and serves to introduce the notions of system-internal and system-external factors in language change. Section 6.3 outlines in detail the multiple-source account, discussing first the contribution of multiple constructions, see section 6.3.1, then other system-internal factors, see section 6.3.2, and lastly system-external factors in section 6.3.3. Section 6.4 deals with the development of causative *hatan*, while section 6.5 summarises the chapter.

6.2 Multiple sources in language change

The identification of more than one factor behind the occurrence of some state of affairs is certainly not new and not strictly limited to the field of linguistics. Let us consider, for instance, the progressive decline of the Roman Empire. We could liken the fall of the Roman Empire to the development of a linguistic construction

and ask how and why did the Roman Empire fall? Over the years, historians have come to the conclusion that the decline of the Roman Empire can be ascribed to a series of causes, both internal, such as economic issues, the corruption of the government, the division between the Western and the Eastern Empire, and external factors, such as the invasions of German tribes and, possibly, the spread of Christianity (Heather 2005). A similar approach can be adopted in linguistics as well, in this case to address the development of auxiliary *do*. How and why did auxiliary *do* develop? In order to answer this question, the approach I propose in this chapter is one that combines both multiple constructions and multiple factors, both internal and external to the language system, which will be referred to as 'multiple-source explanation'.

While multiple sources are commonly identified in cases of phonological and lexical semantic changes, they are less frequently recognised when addressing changes in morphology and syntax. An important contribution in this respect is the volume edited by De Smet et al. (2015), which presents a number of case studies that show how different constructions may act in concert in the development of a linguistic construction. Focusing on syntactic change, the development of the *way*-construction in Present-day English is an example of how the origin of a single construction can be traced back to multiple source constructions (Israël 1996; Mondorf 2011; Traugott and Trousdale 2013; De Smet et al. 2015). In Present-day English, *way* appears in constructions formed by a verb, a noun phrase which includes *way*, and an adverbial phrase, as in *we were actually kicking our way through rubbish on the stairs* (De Smet et al. 2015: 13). According to Traugott and Trousdale (2013: 91), the emergence of *way* in this type of construction is the product of two source constructions, one involving *way* used as the direct object of transitive verbs denoting creation, see (1), the other with *way* used as an adverbial in intransitive constructions, see (2), that merged together.

(1)   þe next Marche folowand he suld   take þat way
        the next March following he should take that way
        'the following March he should take that way' (1338, OED, from De Smet
        et al. 2015: 13)

(2)   Whoso   myghte by þe grace of Godd go þis way he sulde   noghte
        Whoever might   by the grace of God   go this way he should not

204

erre.

go.

'Whoever can by the grace of God go this way will not wander.' (1340, OED, from De Smet et al. 2015: 13)

In a similar vein, the development of auxiliary *do* too seems to have involved multiple source constructions. Yet, in the case of auxiliary *do* recognising multiple source constructions is not sufficient. The review of previous accounts presented in chapter 3 suggest that in addition to multiple source constructions, the development of auxiliary *do* was also influenced by a multiplicity of factors. In that regard, Joseph (2015: 207) argues that single cases of change can be influenced and shaped by 'multiple pressures on some part of a language system'. These pressures may involve system-internal factors as well as system-external factors. One example of a system-internal factor promoting a syntactic change is the loss of subjunctive mood on the development of the modal auxiliaries. In several studies (e.g. Plank 1984; Fischer 1992b; Warner 1993; Bybee et al. 1994; Ogawa 1994) it has been argued that during the Middle English period the subjunctive mood became indistinguishable from the indicative mood. In Old English, the subjunctive was used to express intention, potentiality or unreality (Traugott 1992). In the course of Middle English, the verbal inflection system collapsed, causing indicative forms and subjunctive forms to overlap to such an extent that the inflectional differences became unnoticeable (Fischer 1992b). As the subjunctive disappeared, its functions were taken up by different analytic constructions that developed in that period, one of them being the modals. The acquisition of these functions is by no means the only factor that led to their emergence, but it played a decisive role and promoted the grammaticalisation of the modals as a separate verb class from lexical verbs.

System-external factors may involve situations of language contact, borrowing, sociolinguistic or stylistic features and more generally any extra-linguistic phenomenon that affects the language system. System-external factors are of course identified as important causes of change, but are rarely combined with each other and/or with system-internal factors and different source constructions. Notable exceptions are Joseph (2015) and Breban and De Smet (2019). Joseph (2015) provides a series of cases in different fields (i.e. phonology, semantics

and morphology) in which system-internal factors, different source constructions and system-external factors combine together. Breban and De Smet (2019) focus on the development of proper noun modifiers like *the Bush administration*. They conclude that proper noun modifiers in Present-day English are the result of two source constructions, namely morphologically unmarked genitive modifiers, such as *Gallia cyning* 'king of Gallia' and lexical compounds, like *Easterdæg* 'Easter day', and multiple internal and external factors, such as the collapse of the nominal inflectional system, the incorporation of foreign names, the ambiguous morphosyntactic status of compounds and genre-restrictions (2019: 895-896).

Before turning to the development of auxiliary *do*, it is worth emphasising that an approach that combines a multiplicity of factors, rather than focusing on only one explanation, seems to be the most beneficial and comprehensive when addressing language change. There are instances of change in which it is possible to provide a single cause explanation when reconstructing the development of a construction. Nevertheless, when multiple factors and constructions can be recognised, an account that includes them all may be more exhaustive, rather than arbitrarily choosing one explanation. As discussed in chapter 3, this is what happened in several studies addressing the origin of auxiliary *do*. In this chapter, I try to show how multiple constructions and factors acted in concert in the development of auxiliary *do*.

6.3 Multiple-source explanation of auxiliary *do*

In chapter 3, I discussed in detail all the suggestions put forward so far to address the development of auxiliary *do* — anticipative hypothesis (see 3.2.1), causative hypothesis (see 3.2.2), aspectual marker hypothesis (see 3.2.3), spoken language account (see 3.2.4) and the Celtic hypothesis (see 3.2.5) and showed that each proposal individually fails to fully account for the data available.

There are scholars that have tentatively put forward the possibility that auxiliary *do* generated from multiple constructions. These studies, however, are part of works that do not exclusively address the origin of auxiliary *do* and, thus, they do not aim to provide a detailed description of the development. For this reason,

I did not include them in chapter 3. Stein (1990) has suggested that multiple causes played a role in the development of auxiliary *do*. The investigation carried out by Stein focuses on the syntactic and semantic properties of *do* in the period of its spread between the 15th and 16th century. However, he briefly discusses the possible origins of auxiliary *do* in the introductory chapter, in which he concludes that 'there is no *a priori* obligation to insist on a monocausal origin' (1990: 19), particularly in light of the fact that none of the hypotheses put forward, according to Stein, is without weaknesses. However, given the focus of his work, Stein does not provide a detailed proposal in which he identifies the factors that contributed to the emergence of *do*. Another account that considers the possibility of multiple sources behind the development of auxiliary *do* is Fischer and van der Wurff (2006). In the description of the major features of the English language, Fischer and van der Wurff (2006) briefly address the rise of auxiliary *do* and argue that, though 'we are still somewhat in the dark as to what constructions provided the origin or what factors were most crucial to the development', it is highly possible that all the factors investigated so far have 'played some role' (2006: 155). First, Fischer and van der Wurff argue that 'general' verbs with light semantic content like *do* have been a source of several grammaticalisation processes in several languages. One of these processes, according to Fischer and van der Wurff, is the development of causative *do*-verbs into perfective markers in many languages, including English. Secondly, they suggest that the acquisition of French loanwords during the Middle English period may have influenced the development of auxiliary *do*. In this case, *do* was used to avoid mixed forms where a native ending was attached to a foreign stem. Moreover, they argue that the use of *do* as a strategy to integrate foreign words would also prevent consonant clusters as *thou imaginedst* (from Fischer and van der Wurff 2006: 155). Fischer and van der Wurff say that further factors promoting the presence of auxiliary *do* in poetical texts would be facilitating end-verse rhyme, emphasis and ultimately clarity, as *do* would help to disambiguate between present and past tense of verbs like *set* and *put* (2006: 155). I investigated most of these factors in the quantitative analysis presented in chapter 5, where I showed that in some dialects auxiliary *do* was used to facilitate rhyme.

6.3.1 The interaction of multiple constructions

The two constructions that I claim are relevant to the development of auxiliary *do* are causative *(ge)don* and pro-verb *(ge)don*, as they played a role in shaping the syntactic structure and the semantic content of auxiliary *do*. The Old English data analysed in section 4.3.1 show that starting from the 11th century, there are examples in which causative *(ge)don* appears in contexts where the prototypical causative reading 'NP1 makes NP2 do something' is not the only possible interpretation. Such constructions are characterised by the fact that (i) the causee is absent and (ii) the infinitival complement is a verb that requires an agentive subject. Examples of this type are rare; in my data set, there are only three late Old English instances, which are analysed in detail in chapter 4. One of them is repeated here in (3).

(3)   and genam þæt husel þe   se   hælend gebletsode   tobrælic on þreo
        and took   the housel that the Saviour consecrated, broke   in three
        and onbyrgede anes dæles. Þone oðerne dæl he dyde   gehealden mid
        and ate   one part. The other part he do.PST keep.INF   with
        him to bebyrgenne æfter his forðsiðe.
        him to bury   after his departure
        'and took the housel that the Saviour had blessed, broke it in three parts
        and ate one part. He (a) made someone keep - (b) kept the other part to
        bury with him after his departure' (ÆLS: 123.531)

In these examples in which the agentive causee is unexpressed rather than explicitly identified, the ambiguity arises as to who the performer of the action expressed by the verb phrase in the lower clause is. As discussed in section 4.3.1.1, there are two different readings available. One is the prototypical causative interpretation, which is given in (a) in the idiomatic translation; in this reading, the causee is understood to be an arbitrary agentive entity that performs the action expressed in the caused situation. In the alternative reading provided in (b), the presence of an arbitrary agent is not implied and, crucially, the performer of the situation brought about by the subject of *do* is identified with the subject of *do*. In this interpretation, I hypothesise that *do* has no semantic content but performs grammatical functions only, while the infinitive verb is the sole lexical verb in the clause and provides both the lexical content and the argument structure. In other

words, *do* can be interpreted as an auxiliary verb, as defined in section 2.4.

The argument structure of the causative interpretation and the auxiliary construction have a different make-up. The two structures can be represented in the following way. Figure 6.1 describes the causative interpretation with the presence of an implicit causee that has been introduced in section 4.5. In this interpretation, the causee is an arbitrary entity that is expressed with 'someone' in (a) of the idiomatic translation in example (3), and is an argument of the argument structure of both causative *do* and the infinitive complement.
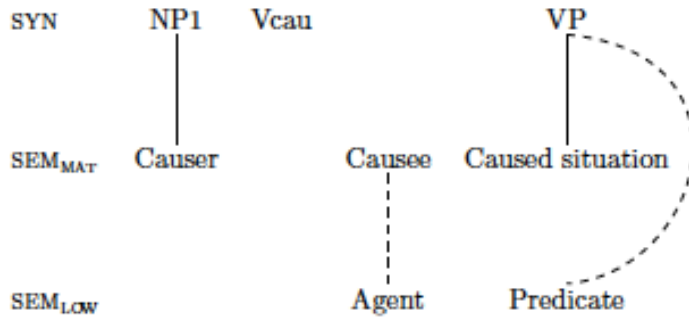

Figure 6.1: Graphic representation of three-argument structure with NP2 non-expressed.

Figure 6.2 below illustrates the auxiliary interpretation. As can be seen, the auxiliary reading differs greatly from the the causative reading described in figure 6.1. The crucial difference concerns the shift from the two-layer structure of figure 6.1 to a structure in which there is only one semantic layer. In this auxiliary reading, the semantic structure of the construction is determined by the infinitive verb in the VP, which is the lexical verb, while *do* has been demoted to a grammatical operator that expresses tense. The semantic role of the NP1 is determined by the lexical verb heading the VP.
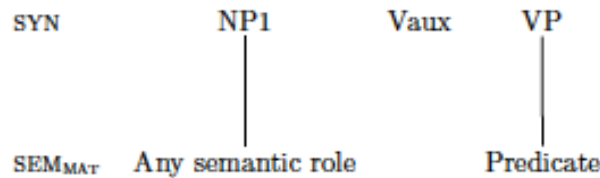

Figure 6.2: Graphic representation of the new auxiliary interpretation.

In order to explain how the auxiliary reading described above came about, it is necessary to address two main issues. The first concerns the argument structure of the auxiliary construction and, in particular, how causative *(ge)don* developed into a one-layer structure. The second question regards the semantic content of *do*, which lost its causative meaning and developed into an auxiliary expressing grammatical functions only.

The factors that made the change into a one-layer structure possible are (i) the type of causation brought about by *(ge)don* and (ii) the argument structure of causative *(ge)don*. In the analysis of the Old English data in section 4.3, I argued that a key difference that set *(ge)don* apart from other causatives like *hatan* is that *(ge)don* could be used to express both direct and indirect causation, i.e. it did not imply the presence of a causee. This means that while the subject of *hatan* cannot be understood to be the performer of the caused situation, the semantic content of *(ge)don* did not prevent such an interpretation (see section 4.5). Thus, we can hypothesise that when the causee was left implied, as in example (3), an interpretation in which the NP1 was understood to be the agent of the infinitive verb could arise. This possibility is presented below in 6.3.
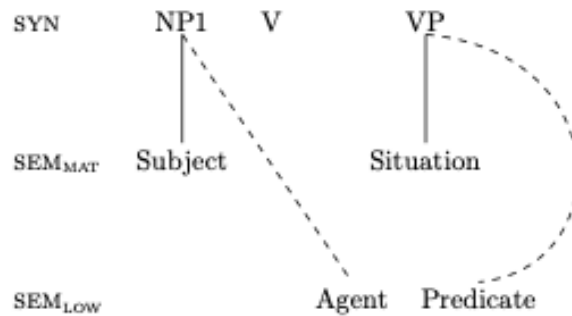

Figure 6.3: Graphic representation of the structure in which the subject of the infinitive is understood to be the subject of *do*.

The interpretation illustrated in figure 6.3 is the foundation for the emergence of auxiliary *do* given in 6.2. In addition, I argue that the possibility to interpret the subject of *do* as the performer of the situation brought about by the NP1 developed under the influence of causative *(ge)don* used in two-argument structures, which are already attested in Old English, as discussed in section 4.3.1, and continued to

exist in Middle English. The data show that two-argument structures occur only when the NP2 is a non-agentive entity, an example of which is provided in (12) and repeated here in (4). The thematic configuration of such two-argument structures is illustrated in figure 6.4, where the two arguments of *do* are the causer and the verb phrase expressing the caused situation, while the non-agentive NP2, in this case *treowa* 'the trees', is only part of the argument structure of the infinitive verb.

(4)   And treowa he deð   færlice   blowan
        And trees   he do.PRS suddenly flourish.INF
        'And he makes the trees suddenly flourish' (Vercelli Homilies: 109)
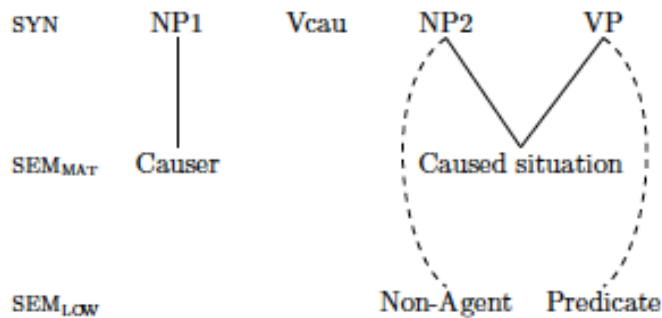

Figure 6.4: Graphic representation of two-argument structure with NP2 expressed.

In sum, I suggest that an alternative reading in which the subject of *(ge)don* is understood as the subject of the infinitive arose due to the fact that causative *(ge)don* did not require the presence of an implied causee and under the influence of the two-argument structure with a non-agentive NP2.

Next, we have to explain how causative *do* lost its semantic specificity and developed into the semantically empty verb attested in early Middle English texts. That auxiliary *do* is semantically empty can be understood from the context. Consider the first attested instance of unambiguous auxiliary *do* in (29), which is repeated in (5). In this example, we can safely exclude that *do* has any causative implication. Looking at the surrounding context, there is no indication that an arbitrary agent could have performed the action of 'laying down' the cloak; the only possible interpretation is that *he*, the subject of *do*, is the subject of the

infinitive *dun legge* as well. Thus, in this construction *do* contributes to the meaning of the construction by providing grammatical content, while the meaning is given by the infinitive *dun legge*.

(5)   His sclauyn he dude   dun   legge,   And tok   hit on his rigge,
        His cloak   he do.PST down lay.INF, And took it   on his back,
        'He laid down his cloak and put it on his back' (King Horn: 1067-1068)

As discussed in section 2.3.4, in grammaticalisation studies the loss of semantic content is described as a gradual process whereby the meaning of the grammaticalising item progressively becomes less specific. In this process, a crucial role is played by the frequency of use; typically, the grammaticalising item increases in frequency as the number and types of contexts in which it can occur increases and, consequently, gradually loses its semantic content (see Bybee 2007). The data we have available, however, show that there is no evidence for a gradual semantic change in the verb *do* from expressing causation to becoming a semantically empty verb through an extension of contexts in which it could occur. It has to be noted, however, that as a causative verb *(ge)don* did not put any semantic restrictions on the other participants of the causative event and occurred in a variety of contexts in Old English already, as has been discussed in section 4.3.1. Thus, it appears that causative *(ge)don* already had a generalised meaning and the further development into an auxiliary may be described in terms of 'secondary grammaticalisation', as in Traugott (2002) and Breban (2015).

An issue in the causative > auxiliary development is that there are only few instances in which *do* is ambiguous. Such ambiguous instances were rare in Old English, with only three examples in the data set used for this investigation, and remained infrequent in early Middle English. This is shown in table 6.1; as it appears, there is only a handful of ambiguous instances in the two centuries that mark the end of Old English and the beginning of Middle English.

Period	Occurrences in prose[1]	Occurrences in poetry	Total
OE4 (1050-1150)	4	0	4
ME1 (1150-1250)	6	12	18
Total	10	12	22

Table 6.1: Number of ambiguous *do* examples between 1050-1250 in my dataset.

Thus, the lack of gradualness that characterises the loss of causative meaning of causative *do* remains a problem; to put it in the words of Hopper and Traugott, such a 'sudden emptying of meaning is not expected' (2003: 95). The hypothesis I put forward to account for the loss of semantic content is the following. Based on the investigation of the Old English data carried out in chapter 4, I suggest that the loss of semantic specificity that causative *do* underwent was promoted by the presence of a semantically empty form of *do* in the language system, namely pro-verb *(ge)don.* More specifically, I argue that in the examples in which the interpretation of *do* was ambiguous, a reading in which *do* was reanalysed as a semantically empty element arose due to the presence of pro-verb *(ge)don*, which was a form of *(ge)don* that had no semantic content and no argument structure. This construction can be found in contexts of postverbal ellipsis, as shown in example (6).

(6) & sæden ðat micel þing sculde cumen herefter: sua dide,   for
     and say.PST that major thing should come   hereafter: as do.PST, for
     þat ilc gær warth þe king ded
     that very year became the king dead
     'and said that a major event should follow, which it did, for that very year
     the king died' (CMPETERB: 54.383-384)

It is important to clarify that I do not argue that auxiliary *do* is an 'extension' of pro-verb *do*, as suggested by Garrett (1998: 314), who claims that the string *do* - infinitive was interpreted as a case of pro-verb *do* followed by an overt infinitive. Instead, I suggest that in constructions in which the causative meaning of *do* was

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[1]The Middle English data have been collected from the PPCME2.

uncertain (see example (3)), speakers associated the function of *do* to the one of pro-verb *do*. The association between these two different uses of *do* was possible because language knowledge is stored in a network in which the constructions are interconnected and influence each other (cf. section 2.3.1). The result is that causative *do* lost both its semantic content and its argument structure and began to function as an operator that only contributes with grammatical content, i.e. tense, to the meaning of the construction, while the infinitive verb, which was the only lexical verb present in the clause, was the element that provided both the semantic content and the argument structure to the construction. The final product is the auxiliary construction illustrated in figure 6.2 above, which is characterised by one semantic layer only, and in which the NP1 is the subject of the clause, while no hint of *do* as a causative verb remains.

6.3.2 The contribution of system-internal factors

In the previous section, I proposed that causative *do* and pro-verb *(ge)don* were instrumental in shaping the syntactic form and the semantic meaning of auxiliary *do*. However, this development did not occur in isolation. In accordance with the assumptions discussed in section 2.3.1 that the language system is a network in which the constructions interact with each other, the development of *do* might have been influenced and supported by already existing constructions and other changes that took place in the language system at the time (Noël 2012 and De Smet and Fischer 2017). In particular, I argue that in the emergence of auxiliary *do* an important role was played by analogy, since the final auxiliary construction resembles other analytic constructions that had already developed towards the end of the Old English period. Structurally, constructions formed by V - INF patterns that may have served as analogical patterns are well-attested in Old English and early Middle English, see for instance the constructions involving *hatan*, *lætan* and the pre-modals. In addition, I argue that there were constructions that may have supported the semantic development of auxiliary *do* as well. Previous studies (e.g. Warner 1993 and Lowrey 2012) have shown that V - INF constructions in which V had a bleached semantic content and expressed grammatical functions had already developed by the end of the Old English period. In particular, it seems that some pre-modal verbs had already acquired auxiliary-like functions in specific

contexts. According to Warner (1993) and Lowrey (2012), the first pre-modals to grammaticalise were *sculan* and *willan*. This claim is confirmed by Diewald and Wischer (2013: 206), who argue that '[i]n our OE corpus, 84% of all *willan* and 96% of *sculan* function unambiguously as auxiliary'. Focusing on *willan*, these scholars have shown that examples in which *willan* was used as an epistemic or deontic marker began to be attested rather early in the Old English period. An example is provided in (7). Here, *willan* seems to convey epistemic modality, since the speaker expresses his belief in the truth or the likelihood regarding the event that some men had already seen an elephant before; that *willan* expresses any notion of volition, which is its original meaning, can be safely excluded.

(7)   Sumum menn wile   þincan   syllic   þis to gehyrenne, forðan
       Some   men   will.PRS seem.INF wonderful this to hear,   because
       þe ylpas   ne comon næfre on engla   lande.
       that elephants not come   never on England land.
       'To some men this will seem wonderful to hear, since elephants have never

       come to England.' (ÆLS: 564.5198) (from Warner 1993: 168)

The *will*-construction in example (7) is contemporary to the example of ambiguous *do* given in (3) above and precedes the first unambiguous attestations of auxiliary *do* in early Middle English. Thus, it is perhaps not a coincidence that the first attestations of auxiliary *do* follow the appearance of the first examples in which some pre-modal verbs are used as modality operators. Therefore, there seems to be good reasons to assume that the presence of such V - INF constructions, in which V was not a lexical verb but an auxiliary verb as defined in section 2.4, served as analogical patterns that supported the development of auxiliary *do*.

Another system-internal factor concerns the several changes that the causative verb system went through during the Middle English period. In several studies it has been shown that the most frequent causative verbs in Old English were *hatan*, *lætan* and *(ge)don*; while *hatan* is attested in combination with agentive causees only, *(ge)don* and *lætan* could also take non-agentive NP2s (Fischer 1989). In Middle English, this situation changed. Firstly, the frequency of usage of causative *hatan* rapidly declined and, by the beginning of the Middle English period, it had already become obsolete. According to Lowrey (2013), the demise of *hatan* is connected to the increase in frequency of usage of *lætan* in agentive

contexts. The raise in frequency of *lætan* has been noted by Fischer (1989) and Denison (1993) as well, who argue that *lætan* became the central element of the causative system in Middle English, particularly in the Western and Southern dialects (see also Ellegård 1953). Secondly, new causative verbs as *gar* 'do, perform' and *maken* 'make', entered the language. The verb *gar*, a borrowing from Norse, started to appear in written texts between the the end of the 13th and the beginning of the 14th century (see OED *gar*, v. 2). *Gar* occurred in both agentive and non-agentive contexts and became the most frequent causative verb in Northern and northeastern dialects, where it replaced *hatan* (see Ellegård 1953; Hollmann 2003; Lowrey 2013). As Denison (1985: 54) says, Middle English is a period in which the causative 'subsystem expands and flourishes'. In the development of *do*, the introduction in the causative system of *maken*, which had a similar meaning, was crucial. As shown by Royster (1922), *maken* was a very infrequent verb in Old English altogether and began to appear in causative constructions only during the 12th century. From the first attestations, causative *maken* is found in the same contexts as causative *do*; the data show that since the first Middle English sub-period (1150-1250), *maken* appears in combination with non-agentive causees, e.g. (8), and agentive causees, e.g (9) (see also Hollmann 2003).

(8) hu   ha   þt   balefule wurm &   þt   bittre beast makede   to
     how they that baleful snake and that cruel beast make.PST to
     bersten.
     burst.INF
     'how they made that baleful snake and that cruel beast burst' (CMMARGA-
     M1,72.270, from Hollmann 2003: 62)

(9) þt   makede   caym þe acursede acwalde his broðer   abel
     that make.PST Cain the cursed   kill.INF his brother Abel
     'that made Cain the cursed kill his brother Abel' (CMJULIA-M1, 109.226)

It is therefore likely that causative *do* and causative *maken* were in competition. What we can observe in the data is that causative *maken* coexisted with causative *do*, but *maken* gradually gained ground until it became more frequent than *do* already during the second Middle English sub-period (1250-1350).[2] The emergence and the establishment of causative *maken* demoted the position of causative *do*

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[2]The data presented in table 6.2 regard both constructions with and without the NP2 expressed.

in the causative system, which further decreased in frequency of usage and began to be used mainly in fixed expressions; towards the end of the Middle English period, causative *do* is almost exclusively attested in combination with verbs like *make*, *understand* or *know* and *die* (Ellegård 1953: 115-116; OED: *do*, v. 29), while the last occurrence of causative *do* recorded by the OED dates back to 1886 (see OED *do*, 29 II).

Period	Causative *do*	Causative *maken*
ME1 (1150-1250)	32.35	23.56
ME2 (1250-1350)	21.15	27.28
ME3 (1350-1420)	12.82	35.40
ME4 (1420-1500)	6.98	10.67

Table 6.2: Normalised frequency per 100,000 words for causative *do* and causative *maken* in PPCME2.

Thus, it is reasonable to assume that, due to the semantic competition with *maken*, the position of causative *do* became weaker in the language system in the period ranging from the end of the 12th and the end of the 13th century. In light of these developments, the correlation of *do* with causation became less strong, and it is possible that it contributed to the establishment of auxiliary *do*. That is, the verb *do* became less associated with the notion of causation and, consequently, the causative reading was less readily available or perhaps no longer available at all for the constructions formed by the pattern *do* - infinitive. The dialect in which the position of causative *do* was less strong and where causative *make* was rather frequent is the dialect of the South West, which is where both Ellegård (1953) and I (see section 5.6) place the development of auxiliary *do*.

Lastly, possible evidence for another system-internal factor comes from the distinctive collexeme analysis carried out in section 5.7.3.2, in which it was shown that auxiliary *do* occurred in combination with low frequency verbs. It is possible that the occurrence with low frequency verbs means that auxiliary *do* was used as a facilitator device to simplify the use of infrequent verbs.

6.3.3 The role of system-external factors

Having considered the contribution of multiple construction sources and system-internal factors, I will now move on to introduce the system-external factors that may have played a role in the development of auxiliary *do*. As discussed above, system-external factors refer to all those factors that do not pertain to the language system, but that still affect how speakers use language. With respect to the development of auxiliary *do*, we can see these factors at work particularly in the domain of poetry. Poetry is seldom taken into account when addressing syntactic change, as it is generally assumed that poetic language is manipulated to accommodate poetical needs and, therefore, that it does not necessarily reflect the actual use of the language. While, to a certain extent, this is true, it can also happen that poetry shows more use of an existing construction, as poets can choose to employ a particular syntactic construction because it suits their poetical needs. I argue that this is indeed the case for auxiliary *do* and, more specifically, that its frequency of usage was boosted because it had specific poetical functions. The functions of auxiliary *do* in poetry have been examined in chapter 5, where I showed that it was used to place the infinitive at the end of the line. The necessity to use a device that aided in the realisation of rhyme is due to the emergence of the rhyme as the central feature of Middle English poetry, while in Old English the poetical tradition relied on alliteration.

In the literature, the role of written language in change has been discussed by Biber (2003) and Biber and Gray (2011). Biber (2003) investigated the development of constructions in which nouns are used as nominal premodifiers, as for instance *correlation* in the noun phrase *correlation coefficients*. While nominal premodifiers existed in earlier periods of the English language, Biber and Gray (2011) argue that they acquired new functions and became more productive in the last two centuries due to their frequent use in newspapers and academic writing. Thus, although prenominal modifiers are also attested in spoken language, Biber and Gray (2011) suggest that the changes that this type of construction underwent represent a case in which writing has influenced spoken register (see also Leech et al. 2009). Looking at the data, it seems that the influence of written language, in this case poetry, can be called upon for the development of auxiliary *do* as well, particularly in relation to its establishment. It is important to note

that the case study analysed in Biber (2003) and Biber and Gray (2011) presents crucial differences with the development of auxiliary *do*. In fact, the data for the study of the nominal premodifiers are from Late Modern English, a period when the majority of the population was literate and used writing extensively. This contrasts with the Middle English situation, in which only few members of the society, such as nobles and churchmen, were able to read and write. At the same time, it has been put forward that the distribution of Middle English poems may not have been as limited. Scholars such as Pearsall (1977) and Minkova (2004) have suggested that given the content of some early poetic texts, it is likely that such pieces were composed with a didactic purpose. Specifically, Pearsall (1977: 89) argues that these poetic compositions are part of a clerical tradition which he calls 'poetry of the schools'. In other words, it is assumed that early Middle English poems were composed in clerical environments and were meant to be orally delivered to instruct people. In a similar vein, Putter (2012) argues that Middle English romances too were meant to be transmitted orally and musically. There are therefore no reasons to assume that the poems analysed in this study were not read aloud. If this is the case, then that poetry may have had a role both in the preservation of auxiliary *do* and in the establishment and in the spread of the construction cannot be ruled out. In that regard, the quantitative analysis carried out in chapter 5 provides further support to this line of argument. On the one hand, the extensive use of auxiliary *do*, particularly in the Southern and in the Western Midlands dialects, may have played a role in the preservation and in the spread of the construction in the language system. On the other hand, the development in the Eastern Midlands dialect highlighted by the conditional inference tree (see section 5.6) may be an indication that poetry aided the spread of auxiliary *do*.

6.3.4 Conclusion

To sum up, the account proposed in this chapter postulates the contribution of (i) multiple source constructions, (ii) multiple system-internal factors and (iii) system-external factors in the development of auxiliary *do*. Based on the poetical data analysed in chapter 5, I place the emergence of auxiliary *do* in the first half of the 13th century. The first source construction considered is causative *do* in Old

and early Middle English, which is argued to have provided the syntactic pattern *do* - infinitive. The loss of semantic specificity that causative *do* underwent was promoted by the presence of a second source construction, pro-verb *(ge)don*. The result is a construction formed by *do* - infinitive, in which *do* has grammatical functions and the infinitive verb is the lexical verb that determines the meaning and the argument structure of the construction. Internal factors that influenced and supported the emergence of auxiliary *do* are connected with the synchronic situation of the language in the period when the change took place. A first internal factor concerns the changes that the causative verbal system went through in early Middle English, which affected the status of causative *do*. Such developments weakened the position of causative *do*, which decreased in frequency of usage and was gradually replaced by causative *maken*. Thus, the constructions with the pattern *do* - infinitive became to be less associated with causation, pushing in turn the grammaticalisation of auxiliary *do*. Another factor is the presence in the language system of a number of constructions, in particular the pre-modals, that served as analogical patterns for the syntactic structure and the semantic content of the new auxiliary *do* construction. A further internal factor that can be observed in poetical texts is the use of auxiliary *do* as a facilitator device to simplify the use of low frequency infinitives. Finally, there are system-external factors that might have also played a role. Auxiliary *do* was adopted and frequently used by poets as a metrical device due to the necessity to place the infinitive in rhyme position. The extensive presence of auxiliary *do* in early Middle English poems, which were intended to be read aloud and educate the population, served to maintain and spread the auxiliary construction.

To conclude, I argue that the combination of these factors contributed to the development of auxiliary *do* and supported its establishment and preservation in the language. The subsequent trajectory of the construction at hand is well-known. While the use of auxiliary *do* in affirmative declarative sentences remained very sporadic throughout the Middle English period, it started to appear in negative sentences and in questions during the 15th century, until it became mandatory in the course of the 18th century, as shown by the famous graph of Ellegård (1953: 162), reproduced in figure 1.1.

6.4 The development of other causative constructions

One of the questions set out at the beginning of this work was why *do* and not another causative verb developed into an auxiliary. In this section, I address this issue by considering the development of the other Old English causative verb that has been investigated in this dissertation, namely *hatan*. The features of causative *hatan* have been laid out in section 4.4.1, where I compared the uses of causative *hatan* with *(ge)don*, and in section 6.4.1 I will only focus on the uses of *hatan* in Middle English and the factors that led to its demise.

6.4.1 The decline of causative *hatan*

The development of causative *hatan* strikingly diverges from that of causative *(ge)don*. In Old English, *hatan* was the most frequent causative verb, though it only occurred in combination with agentive causees, as shown in section 4.4.1. In the transition between Old and Middle English, *hatan* lost its status as the most used causative verb and underwent a rapid decline; although the last occurrence of causative *hatan* recorded in the OED dates back to 1872 (see OED, v. 2.a), it had already become infrequent between the 12th and the 13th century (Lowrey 2013). According to Lowrey, one of the reasons behind the demise of *hatan* lies in the semantic competition with causative *lætan*, which began to appear more frequently in combination with explicit and implicit agentive causees, see also section 4.4.1. The demise of *hatan* occurred quite rapidly. Starting from the first half of the 11th century, *lætan* and *hatan* started to appear in the same environments, see (10)-(11), and by the end of the 12th century, *let* had replaced *hatan* (Lowrey 2013: 37-38).

(10) & het   nimon   Sigeferðes lafe &   gebringon binnon
      and hatan.PST take.INF Siegferth widow and bring   into
      Mealdelmes byrig.
      Mealmedes city.
      'and made Siegferth's widow to be taken and brought to Malmsbury'

(ChronE: 1015.4.1913; from Lowrey 2013: 36)

(11)　And se　cyng sona æfter þam be þære ræde　　þe　him abutan wæran.
　　　　And the king soon after that by the　 counsel that him about　was.
　　　　þone biscop Rannulf of Dunholme let　　 niman.　&　 into þam ture
　　　　the　 bishop Rannulf of Durham　 let.PST take.INF and into the　 tower
　　　　on Lundene let　　 gebringon. &　þær　healdan.
　　　　in London　let.PST bring.INF　 and there hold.
　　　　'And the king soon after that, because of the counsel that concerned him,

　　　　made [someone] take the bishop of Durham and made [someone] bring him

　　　　to the tower of London to hold him there' (ChronE: 1100.40.3340-33241;

　　　　from Lowrey 2013: 36)

Along with semantic competition with *lætan*, there are other factors that caused
the decline of causative *hatan*. As discussed in section 4.5, every example of
causative *hatan* in my data set occurred in three-argument structures. This means
that when the causee was left implicit and the structural pattern was *hatan* - INF,
there was no ambiguity as to who performed the caused event. The meaning of
hatan and its thematic structure imply the presence of an agentive entity, which
means that the subject of the infinitive verb cannot be understood as being co-
referential with the subject of *hatan*. Thus, in the same context where causative
(ge)don displays the ambiguity between 'NP1 makes NP2 do something' and 'NP1
does something', the interpretation of *hatan* is unambiguously 'NP1 makes NP2
do something'. In that regard, see example (12) below.

(12)　þa　 æfter twælf monðu gemunde　　 se　casere　 hwæt him gesæd
　　　　then after twelve months remembered the emperor what him told
　　　　wæs and sænde fram Rome oðerne　gerefan mid　reðum bebode, swa
　　　　was and send　 from Rome another reeve　 with right　 order,　 so
　　　　þæt he het　　　 acwellan þone cristenan Philippum
　　　　that he hatan.PST kill.INF　 the　 christian Philip
　　　　'then the emperor remembered after twelve months what had been said to

　　　　him and sent another governor with the right order from Rome so that he

　　　　had the christian Philip killed' (ÆLS: 295.368)

The causative construction describes a situation where *he*, in this case the em-
peror, orders and causes the death of Philip. Despite the absence of the performer
of the action of killing, it is implied that it is not the subject of *hatan*, the em-
peror, but an arbitrary agent whose identity is not relevant. Moreover, causative
hatan remained restricted to contexts in which the causee was an agent. In other

words, we do not see the usual processes that are associated with grammaticalisation at work and *hatan* did not expand the range of contexts in which it could occur, as there are no instances in my corpus in which *hatan* takes non-agentive entities. Therefore, as shown by Lowrey (2013), the construction with the pattern *hatan* - infinitive preserved its causative meaning and, once *lætan* started to appear more frequently in agentive contexts, *hatan* became a peripheral element of the causative system and gradually disappeared (see Timofeeva 2010 and Lowrey 2013).[3] Therefore, there are good reasons to believe that both the semantic competition with *lætan* that threatened its position in the causative system, and its semantic features as a causative verb prevented *hatan* from developing into an auxiliary, leading ultimately to its disappearance.

6.5 Summary

In this chapter, I presented an account for the development of auxiliary *do* in Middle English. In section 6.2, I introduced the notion of multiple sources in language change, presenting previous accounts in which it was assumed that multiple source constructions, system-internal and system-external factors acted in concert and contributed to the emergence of a linguistic construction. In section 6.3, I argued that the data we have available suggest that in order to account for the emergence of auxiliary *do*, it is necessary to consider the contributions of different constructions, system-internal and system-external factors. In section 6.3.1 it was shown that auxiliary *do* combined the syntactic structure from causative *do* and the semantic content of pro-verb *(ge)don*. A great deal of attention was paid to the changes that affected the argument structure of causative *do*, which allowed *do* to develop into an auxiliary. In section 6.3.2, I examined the role of system-internal factors in the grammaticalisation of auxiliary *do*, such as the changes of the causative system and the presence of V - INF constructions in which V had auxiliary properties that served as analogical patterns. To conclude the account on *do*, I argued that the use of auxiliary *do* in poetry helped its preservation and spread. The contribution of such system-external factors draws on the results of

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[3] Only causative *hatan* fell out of use; ordering *hatan* (see section 4.4) continued to function until the late 19th century, as reported by the OED (*hight*, v. 2) and so did naming *hatan*, which is an archaic construction in Present-day English.

the statistical analyses carried out in chapter 5.

In section 6.4, I investigated the development of causative *hatan*. It was discussed that *hatan* was in competition with *lætan* in early Middle English, with the latter that gradually gained ground and became the favourite choice in combination with agentive causees. Causative *hatan* preserved its original meaning and remained confined to contexts in which it took agentive causees. It was suggested that because of the semantic competition with causative *lætan* and its semantic features, causative *hatan* became a peripheral element of the causative system and ultimately fell out of use.

Chapter 7

Conclusion

This dissertation set out to investigate the factors that led to the origin of auxiliary *do* in Middle English. Although few topics have attracted more attention among linguists than the development of auxiliary *do*, it is surprising to see that many existing accounts have approached the origin of this construction in a similar fashion. Most scholars in fact have attempted to draw straight lines between auxiliary *do* and a single ancestor, and have considered the different possible source constructions as being independent of each other. However, none of the proposals put forward on the origin of the auxiliary construction has been agreed upon so far. Yet, while we still lack a fully accepted account, there is no doubt that over a century of research has increased our understanding of the factors that underlie the origin of this construction. Hence, the aim of the present work was to contribute to this discussion by combining the results of previous research with new insights.

At the outset of this dissertation, I identified three main questions which, if answered, may get us closer to understanding the origin of auxiliary *do*. One of these questions concerned the role of causative *do* in the development of auxiliary *do*. After Ellegård's seminal work in 1953, the hypothesis whereby causative *do* lost its causative meaning and was reanalysed as an auxiliary verb has become the predominant one. Alternative accounts, reviewed in chapter 3, have also been put forward, but none of them has been able to convincingly show how auxiliary *do* came about. The analysis of the Old English data (see chapter 4) indicates that, taken in isolation, none of the uses of *(ge)don* in Old English can

account for the emergence of auxiliary *do*. At the same time, the data suggest that some of the features that characterise auxiliary *do* in Middle English were already part of *(ge)don* in Old English. In fact, if we look at the different uses of *(ge)don*, we see that (i) a semantically empty form of *do* and (ii) a construction formed by *do* - infinitive already existed in Old English. Thus, it seems likely that both constructions contributed to the development of auxiliary *do*. The possibility that a number of constructions and factors played a role in shaping the development of auxiliary *do* has been tentatively explored, but a detailed account has not been proposed yet (e.g. Stein 1990; Fischer and van der Wurff 2006). The diachronic account proposed in this dissertation has been discussed in chapter 6, where it has been argued that causative *(ge)don* contributed to shape the auxiliary construction on the syntactic level, while the semantic content was influenced by the presence of pro-verb *(ge)don*.

A fundamental aspect of the diachronic account put forward in the present study is that the development of auxiliary *do* was aided by a series of factors that occurred inside and outside the language system between the end of the Old English and the beginning of the Middle English period. The terms that have been used to refer to such factors are system-internal and system-external factors. For one, an important system-internal factor concerns the developments within the causative verb system, particularly the emergence of causative *maken*, which undermined the position of causative *do*. As it appears from the data, causative *maken* was frequently used in the same contexts as causative *do* and soon replaced it; this weakened the position of *do* in the causative system and, therefore, it is possible that *do* became to be less associated with causation. Consequently, a causative interpretation of *do* in *do* - infinitive patterns was less likely, pushing in turn the grammaticalisation of the auxiliary interpretation. A further system-internal factor which may have contributed to preserve the auxiliary construction in the language was its use in combination with low frequency infinitives, as shown by the distinctive collexeme analysis carried out in chapter 5. This may suggest that auxiliary *do* was employed as a facilitator device to use infrequent infinitives, perhaps to simplify their inflection. Lastly, another system-internal factor regards the presence in the language of constructions with a pattern V - INF in which V had grammatical content and INF was the lexical verb. As shown by previous

226

studies (e.g. Warner 1993; Lowrey 2012; Diewald and Wischer 2013), verbs like *willan* and *sculan* had already acquired auxiliary-like features at the end of the Old English period and there are several examples in which they are used as auxiliaries in affirmative declarative sentences. It is reasonable to assume that the presence of such constructions may have served as analogical pattern which favoured the development of auxiliary *do*.

The second objective of this dissertation was to investigate why only causative *(ge)don* and not another Old English causative verb developed into an auxiliary. In the present study, I zoomed in on *hatan*, which is the most frequent causative verb in the Old English texts we have available. The analysis carried out in chapter 4 showed that throughout the Old English period, causative *hatan* occurred in one context only, i.e. when both the causer and the causee were animate and agentive entities. This scenario did not change in early Middle English. There is no textual evidence that *hatan* expanded the range of contexts in which it could occur, as its use in early Middle English remained restricted to contexts in which the infinitive complement took an agentive subject. In addition, causative *lætan* emerged as the main causative verb in agentive contexts already in early Middle English. There is evidence that *hatan* and *lætan* were in competition and, ultimately, *lætan* won out and *hatan* fell out of use. As discussed in 6.4.1, I hypothesise that *hatan* did not undergo a similar development like *do* due to its semantic features and the limited contexts in which it could occur.

The third goal of the present work focused on the role of poetry in the development of auxiliary *do*. The analysis carried out in chapter 5 offers a novel contribution in that it provides a quantitative examination of the factors that underlie the use of auxiliary *do* in Middle English poems. It was shown that the distribution of auxiliary *do* varied across the different dialects and, more importantly, that auxiliary *do* was used as a metrical device to place the infinitive in rhyme position. This function is initially attested particularly in the Western Midlands dialects only, but it was introduced in a later period in the Eastern Midlands dialect too. In the Southern dialect, the position in the verse was not a significant factor, which indicates that auxiliary *do* was used because it was an established factor of the language spoken in the South, and not a metrical device only. Thus, the question arises as to whether this function played a role

in the development of auxiliary *do*. In chapter 6, it was argued that the use of auxiliary *do* in poetry was a system-external factor that may have contributed to the preservation and the spread of the auxiliary construction in the language. This argument is open to discussion, since to what extent these poems were accessible to people is a thorny issue. Undoubtedly, the amount of literate people that could read and write and had access to written texts in Middle English, particularly in earlier periods, was rather limited. Nevertheless, scholars like Pearsall (1977) and Minkova (2004) argue that some early Middle English compositions had a didactic function and were meant to educate people, as discussed in section 6.3.3. Moreover, Minkova (2004) argues that such educational texts were likely to be read aloud and delivered orally and, therefore, their accessibility may have not been as limited as it is assumed. If such texts in which auxiliary *do* was rather common were read aloud, it is not unreasonable to assume that they facilitated the conservation and the spread of the auxiliary construction.

On a theoretical level, the account proposed in this study on the origin of auxiliary *do* has highlighted the benefits of including multiple factors when studying the development of a linguistic construction. This runs against the general tendency in historical linguistics to provide elegant and neat accounts, following the principle exemplified by the Occam's razor *Entia non sunt multiplicanda praeter necessitatem* 'things are not to be multiplied beyond necessity'. In that regard, I particularly agree with Joseph (2015: 207), who claimed that

> if multiple causal pressures on some part of a language system can be recognized, then rather than having to simply choose one, arbitrarily, as the single cause explaining why a change happened as it did, we can perhaps come closer to a true understanding of the developments in question by considering multiple causes acting in concert or even independently.

The development of auxiliary *do* perfectly exemplifies the notion expressed by Joseph. It is striking that while multiple causes have been acknowledged in the study of a number of linguistic constructions, as documented in De Smet et al. (2015), this possibility has been seldom explored in detail for a phenomenon as extensively studied as auxiliary *do*. In fact, what we see in the literature is that each study on the origin of auxiliary *do* has focused on a single explanation

and ruled out the others. For example, subscribing to the causative hypothesis implied excluding *a priori* that pro-verb *(ge)don*, or language contact, had any role in the development of auxiliary *do*, as discussed in chapter 3. The result is that this type of approach has only returned a partial picture of the development. As I hope to have shown in this dissertation, accounts that take into consideration every possible cause that may have played a role in the development of a linguistic construction, rather than arbitrarily choosing one, are more beneficial for a better understanding of language change.

A further contribution which I hope to have provided concerns the quantitative study carried out in chapter 6. The innovative methodology of the study, the data and the variables included in the conditional inference tree and in the random forests represent in many respects a new contribution. Firstly, it was shown that poetry can be a valuable resource in studies that address syntactic change. There is little doubt that prose is more suitable to investigate syntactic change, since it provides a more realistic picture of the language spoken in a particular period. However, the historical data we have available are in the vast majority of the cases fragmentary, incomplete and more generally make the task of the historical linguist quite difficult; early Middle English, unfortunately, is no exception. In particular, there is a substantial gap in the transmission of prose texts that range between the beginning of the 13th and the beginning of the 14th century, which makes the work of the researcher more difficult. One possibility that would help to bridge this gap in prose texts is resorting to poetical texts, which are the only textual witnesses of that period. Indeed, poetry has proved to be a rich source of data, at least for the present study, as it has allowed us to trace the earlier stage of the development of auxiliary *do*. Secondly, in terms of the variables involved in the quantitative investigation, I included some factors that are usually excluded from statistical models. In quantitative studies focusing on Middle English data, dialect is very rarely considered (for a discussion see Zimmermann 2020). This is due to a number of reasons, including that (i) Middle English dialects were not sharply distinct, (ii) in most cases we do not have definite information about which dialect a certain text represents and (iii) not every dialect is evenly represented. Thus, a dialectal variable is particularly difficult to operationalise in studies that aim to statistically analyse this type of data,

although some studies have started to include it (e.g. Willis 2017). Nevertheless, I believe that a variable investigating dialectal features can be incorporated in quantitative studies, if supported by an accurate methodology.

Throughout this study the goal has been to answer a number of questions concerning the development of auxiliary *do*. In answering these questions, other issues that warrant further study have emerged. For instance, the development of causative *lætan* has been only touched upon. Fischer (1989) argues that causative *lætan* and causative *(ge)don* shared the same semantic properties in Old English, and the data from Latin translations show that, to a certain extent, the two verbs were interchangeable. Causative *lætan*, however, did not follow the same trajectory of *(ge)don*, and the reasons why causative *lætan* progressed along a different path call for a detailed investigation. While this question must remain unanswered for now, it seems that the findings of this dissertation have taken us a step closer to understanding the circumstances that led to the emergence of auxiliary *do*. It is hoped that the diachronic account presented and the quantitative analysis of Middle English data will provide others with similar interests with a place to start their investigations.

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