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The rise of the *to*-dative: a language-contact approach to a phenomenon of structural language change

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Abstract

Most research concerned with the diachronic development of the variants of the dative alternation (McFadden, 2002; Allen, 2006; De Cuypere, 2015; Zehentner, 2018; among others) attributes the emergence of the *to*-dative to mark RECIPIENT arguments to processes of internally caused structural change. Rethinking this historical change from a language contact perspective and following Johanson's (2002) code-copying framework, this work investigates the rise of the *to*-dative marking of RECIPIENT arguments of ditransitive verbs lexicalising caused possession as the possible result of language contact with Old French between the 11th and 15th century. The quantitative corpus analysis of all double objects and *to*PPs used with Middle English and copied Old French verbs of the semantic classes of giving and future having (Levin, 1993) in the PPCME2 (Kroch & Taylor, 2000) provides insights into the diachronic progression of the rise of the *to*-dative with the verbs of these classes. If the *to*-dative were to be licensed in English by French loans carrying over their native prepositional marking of RECIPIENT arguments, these verbs would show this pattern before native English verbs do. However, *to*PPs denoting animate RECIPIENTS of transfer of possession events with native English verbs occur regularly already before the first attestations of copied Old French verbs of the same semantic classes in the data. This suggests that the initial source of the *to*-dative cannot be the global copying of Old French verbs of giving or future having including their native argument realisation pattern of prepositional marking of RECIPIENT objects into Middle English. The distribution

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of the alternation's variants across time, texts and verb origin provide new insights into the diachronic progression of the emergence of the dative alternation in English.

Keywords: dative alternation; argument structure; Middle English; ditransitive, contact; code-copying

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1 Introduction and Motivation

In the project *Borrowing of Argument Structure in Contact Situations* (BASICS) headed by principle investigating researchers Prof. Dr. Carola Trips and Prof. Dr. Achim Stein "massive borrowing of lexical items with a predicate-argument structure is hypothesised to have favoured and produced grammatical changes" (dfgbasics/home) in the syntax of the English language. In the course of this project data on "the borrowing into medieval English of French verbs and the question of how their argument structure has influenced its grammar" (dfgbasiscs/home) has inspired a new line of research investigating the rise of the *to*-dative and its supposed causes. This thesis investigates if the copying[1] of Old French[2] verbs lexicalising caused possession with their native argument structure into the semantic classes of verbs of giving and future having in Middle English might have effected the rise of the *to*-dative during ME, thus leading to the emergence of the phenomenon known as the dative alternation, which is ob-

[1] See section 5.1 for the terminology and framework used in this thesis.

[2] This thesis uses the label OF to refer to all French varieties in contact with ME including the continental OF of Paris, the Norman variety of OF and the contact-variety AN for simplification purposes, as the possibility of a general influence of any of the French varieties is the main focus of this work and specification is not relevant or profitable to the present corpus study. See section 5.2 for an account of the contact situation.

servable in Present-day English. This is achieved by the quantitative analysis of corpus data for the investigated structures and verb classes from the relevant time period, namely the PPCME2, 3rd release (Kroch & Taylor, 2000).

Footing on the formal basis of works from Pinker (1989), Jackendoff (1990), Levin (1993, 2008) and Rappaport Hovav and Levin (2008) among many others and accounts on the diachronic development of the dative alternation from De Cuypere (2015), McFadden (2002), Allen (1995, 2006) and Zehentner (2018) this thesis provides a new perspective on the dative alternation drawing on recent work of Trips and Stein (2019) and Trips (forthcoming).

The diachronic pattern of the rise of the *to*-dative and the concomitant emergence of the dative alternation is investigated from a perspective of language contact to account for differences in the diachronic argument realisation of native and copied verbs and French influences on texts written in English during a prolonged phase of intense language contact. This work focusses on the possibility of contact-induced structural language change in the realms of case and argument structure, instantiated in the copying of argument structure from OF into ME and a resulting licensing of structural 'dative' case marking of RECIPIENT[3] arguments for verbs originally assigning lexical dative (Trips & Stein, 2019; Trips, forthcoming; Allen, 1995).

Transcending the scope of this work, wider implications of this study with regard to the formal syntactic and semantic analysis of the dative alternation may arise, depending on the possibility to abstract from the quantitative results of the corpus study and the implications of the analysis of the corpus data. Alternations like the dative alternation are one of the main challenges to theories of semantic roles, lexical semantic representations of verbs and theories of argument realisation. Theories of argument realisation aim to account for these phenomena of multiple possible argument realisation options for verbs with seemingly one specific meaning across verb classes. However, such deductions and theoretical considerations cannot be the aim for this work, as they far exceed the scope and time scale of this project. Possible theoretical implications of this work's results may serve as the foundation for further research on the topic.

This chapter has laid out the incentive impulse and motivation for this work as well as stating the relevance of this research for the diachronic study of English argument structure and language contact research. Chapter 2 provides a brief descriptive account of the PDE phenomenon at the root of this thesis: the dative alternation. While section 2.1 focusses on a description of the dative alternation's constraints pertaining to the object in present day English (PDE), section 2.2 provides an account of the considerations pertaining to the verb that constrain the dative alternation. Chapter 3 briefly describes the theoretical and formal foundation this work is based on and introduces relevant concepts and termini. It provides the basic conceptualisation of argument structure and the lexical decompositional approach to lexical semantics adopted by this work and provides a theoretical base for some issues crucial to the presented corpus study, such as the assumed thematic roles and the definition of semantic verb classes. A brief account of the current verb meaning-driven theoretical approaches to the dative alternation will be given in chapter 4 and theoretical assumptions pertaining to the investigated verb classes will be made and motivated. Chapter 5 provides the framework in

[3]See section 3.3 for the definition and distinction of thematic roles assumed in this thesis.

which language contact and contact-induced language change are described in section 5.1 and section 5.2 gives an account of the specific language contact situation of ME and OF between 1066 and the 15th century. Chapter 6 provides an overview of some diachronic accounts on the emergence of this alternation during late Old English and Middle English, distinguishing them by their analyses of the emerging dative alternation as being either language internally motivated or caused language externally by contact with OF.

Chapter 7 presents the empirical part of this thesis: Section 7.1 motivates and compiles the set of investigated verbs and section 7.2 outlines the research questions and proposes a working hypothesis. Sections 7.3 to 7.5 describe the data, method, procedures and tools implemented in the analysis as well as documenting the process of querying for the structures under investigation. Section 7.6 presents the quantitative results of the corpus study. Chapter 8 provides a deeper analysis and discussion of the empirical data concerning the approaches presented in chapter 6, touches on issues raised in the preceding chapters, and evaluates some possibilities for further research into the emergence of the dative alternation during ME. Chapter 9 briefly summarises the conclusion drawn from this work and presents a possible way ahead.

2 The Dative Alternation in PDE

What is commonly called the dative alternation or Baker's Paradox (Baker, 1979) in linguistic research on argument realisation are the multiple options of argument realisation for Recipient arguments shown by a subset of ditransitive verbs in PDE. The verbs showing this alternation take two internal arguments and select for these the thematic roles Theme and Recipient (Rappaport Hovav & Levin, 2008). The dative alternation does not have an intransitive counterpart (Levin, 1993: 47). The two syntactic realisation variants of this alternation in PDE are illustrated in (1) and (2)[4].

(1) Emily gave Peter the book. - double object construction (DOC)

(2) Emily gave the book to Peter. - *to*-dative construction

While the Recipient argument is expressed as a bare noun phrase (NP) or determiner phrase (DP)[5] in the objective case in the DOC (1), it is expressed as a preposition phrase (PP) headed by the preposition *to* in the *to*-dative construction (2). In (1) the Recipient argument is morphosyntactically realised as an indirect object NP in postverbal right-adjacent position preceding the Theme argument NP, whereas the Recipient is expressed as an oblique in (2) and is positioned following the verb adjacent direct object NP expressing the Theme argument. The case of the Recipient argument is assigned differently for these two variants. Since the dative case assigned to the Recipient objects of ditransitive verbs in the DOC variant is regular and

[4]The sources for all examples in this thesis cited from other research are given in parentheses. ME examples mostly stem from the PPCME2, 3rd release (Kroch & Taylor, 2000), in which case the source code of the sentence is provided in parentheses. PDE examples, if not otherwise indicated, were invented by the author.

[5]The NP-DP debate is not directly relevant for this work and henceforth the label NP will be used consistently for ease of reading.

strongly associated with the thematic role, it is considered to be an instance of inherent case assigned to the RECIPIENT argument in a specifier position outside the VP proper but under little v inside the vP structure (Woolford, 2006: 6). The dative case assigned to the RECIPIENT in the *to*-dative construction is structural case licensed by the governing preposition *to* inside the VP structure (Woolford, 2006; Baker, 1979).

Inverted order of the two internal arguments is acceptable for the *to*-dative variant if the THEME object is heavy and thus subject to heavy-NP shift (De Cuypere, 2015: 10; Baker, 1997: 15f). The ordering of the direct object and indirect object is not of primary interest to this thesis, as the shift towards a more fixed word order in ME is not taken to be a causing factor in the emergence of the dative alternation, but is seen as a development in line with general tendencies of language change shifting from synthetic to more analytic forms of argument structure and manifesting a fixed word order to compensate for eroding synthetic categories, that results from other changes in the grammar of ME (Denison, 1993). Diachronic accounts of the dative alternations do focus on the order of DO and IO as it is still variable in OE and is taken to be relevant in the emergence of the *to*-dative (see section 6.1; De Cuypere, 2015; McFadden, 2002).

Factors like object weight, the syntactic status of the IO as a pronoun or a full NP as well as information structure considerations that affected the object ordering in the DOC in OE (De Cuypere, 2015) have been postulated to affect the choice of argument realisation variant for alternating verbs in PDE by structural single meaning approaches (Levin & Rappaport Hovav, 2005: 194, 216–219; Rappaport Hovav & Levin, 2008: 156; Gerwin, 2014). The facts that light objects tend to precede heavy ones, pronominal objects tend to precede full NPs, and known entities tend to precede unknown entities can be accounted for as being general linguistic tendencies, and these effects are not uniquely limited to the dative alternation (Levin & Rappaport Hovav, 2005). None of these influencing factors alone however poses a necessary or sufficient condition for a specific variant choice in PDE (Levin & Rappaport Hovav, 2005), but they can affect the choice of variant in the dative alternation for alternating verbs if the context and pragmatics allow for both variants equally. For example the DOC could be generally preferred for expressing events of possessional transfer to a known human RECIPIENT expressed as a bare pronoun with verbs associated with both the caused possession and caused motion meaning because known and animate entities are pronominalised more often than unknown and inanimate entities (Levin & Rappaport Hovav, 2005).

The passivisation of sentences denoting events of transfer of possession lexicalised by alternating verbs presents itself also as a twofold and what has often been named the indirect passive or RECIPIENT passive has been subject to investigation into its emergence, underlying structure and possible syntactic derivation or construction (Allen, 1995; Trips & Stein, 2019). Not all ditransitive verbs can realise the RECIPIENT passive (Trips & Stein, 2019; Kaltenbach, 2020, this issue). While in (3) the THEME argument is mapped onto the subject of the passivised structure, in (4) the RECIPIENT argument is the subject of the indirect passive sentence.

(3) The book$_{\text{THEME}}$ was given to Peter$_{\text{RECIPIENT}}$ (by Emily$_{\text{AGENT}}$). - direct passive

(4) Peter$_{\text{RECIPIENT}}$ was given the book$_{\text{THEME}}$ (by Emily$_{\text{AGENT}}$). - recipient passive

This thesis does not concern itself with passive structures involving ditransitive verbs and their ability to show the RECIPIENT passive[6], but suffice to say that an association of the two respective passive forms with the respective underlying event structures proposed of the dative alternation has been suggested as well (Trips & Stein, 2019; Kaltenbach, 2020, this issue).

The dative alternation shows a specific pattern of distribution across ditransitive verbs in PDE and some verbs of the same semantic classes alternate while others only show one of the argument realisation variants. The distribution and behavior of the dative alternation is constrained by various factors. Some constraints on the dative alternation pertaining to the semantic specifications of the nominals that can fill the RECIPIENT argument position will be addressed in section 2.1 and constraints pertaining to semantic as well as phonological and morphological properties of the verb will be addressed in section 2.2.

2.1 The Animacy Constraint on the Dative Alternation

A semantic constraint on the dative alternation is the restriction of the DOC to use with animate NP complements. Inanimate NPs cannot be construed as RECIPIENTS capable of possession, but only as spatial goals. Spatial goals can only occur with the *to*-dative variant (5) and not with the DOC (6).

(5) Jim sent a book to London.

(6) * Jim sent London a book.

(Gerwin, 2014: 34; examples (27) a,b)

The notion of animacy, however, can be shifted by metonymy to include organisations and corporate bodies located at spatial, geographical locations (Gerwin, 2014: 43), thus making the DOC in (6) acceptable in contexts where *London* is used to metonymically refer to a person or persons representing a company based in *London* or to a known and salient referent like institutions or companies associated with the geographical location filling the RECIPIENT argument position (Levin, 1993: 48; Levin & Rappaport Hovav, 2005; Rappaport Hovav & Levin, 2008: 138). This constraint on the dative alternation is relevant to this thesis, as the animacy of *to*PPs was restricted in OE to the use with verbs lexicalising transfer of possession in quite inverse fashion to the way the DOC is constrained in PDE. While *to*PPs with animate complement NPs were already commonly used with communication verbs in OE, uses of animate *to*PPs with transfer of possession verbs are extremely scarce in OE (De Cuypere, 2015: 20f.). The thematic roles of the non-THEME object of ditransitives assumed in this thesis and the relevance of their distinction on the base of animacy for the diachronic analysis of the rise of the *to*-dative will be addressed in section 3.3.

2.2 The Set of Ditransitive Verbs Showing the Dative Alternation

The set of verbs that are posited to alternate in the dative alternation is, though often debated, not always agreed upon in research on this alternation (Levin, 1993: 47; Levin & Rappaport

[6] See Allen (1995) for a comprehensive study on the emergence of the RECIPIENT passive in ME; also see Trips & Stein (2018) for a language contact approach.

Hovav, 2005: 230). Constraints pertaining to the semantics of the alternating verbs themselves as well as morphological and phonological constraints restricting the set of alternating verbs are addressed in the following sections.

2.2.1 Semantic Considerations Restricting the Set of Alternating Ditransitive Verbs

Attempts at the identification of semantic verb classes and their participation in alternations as done by Levin (1993) class alternating verbs as typically corresponding to events of transfer of possession (see: verbs of giving, future having and transfer of message, Levin, 1993), or to events of caused motion (see: verbs of sending, verbs of throwing, slide verbs, carry verbs, drive verbs and *bring* and *take*). The notion of possession for some subclasses of the former is abstract (see: verbs of transfer of message, Levin, 1993: 46) and in some cases possession is only intended (see: verbs of future having, Levin, 1993: 46) and the lexical meaning poses pragmatic constraints "restrict[ing] the possible worlds in which the change holds" (Rappaport Hovav & Levin, 2008: 135). These classifications construe the concept of possession very broadly (Levin, 1993: 48) and are dependent on the theory of event conceptualisation taken as a base (see Levin & Rappaport Hovav, 2005 for review)[7].

The respective ability of ditransitive verbs to alternate between the DOC and the *to*-dative variant, as formalised in semantic classes like the ones proposed by Levin (1993), Pinker (1989) and Gropen, Pinker, Hollander, Goldberg, and Wilson (1989) among others, is further constrained by morphonological or etymological restrictions on the verb itself.

Different semantic approaches to how the multiple argument realisations of the non-argument, non-Theme argument and the distribution of ditransitive verbs across this alternation and its variants can be accounted for, propose differing event structures, different associated roles and different mapping mechanisms. The association of a single verb with multiple meanings is the most commonly accepted approach to account for alternating verbs. Verbs belonging to related semantic classes that only show one of the variants are taken to be constrained from alternating by the Latinate Constraint, their incompatibility with one of the event schemes or some idiosyncratic meaning components entailed by their lexical root (Rappaport Hovav & Levin, 2008).

The arguments made by such accounts, that seek to formalise the dative alternation and to identify the elemental argument structure of these verbs which is responsible for the alternating syntactic realisation of the non-Agent, non-Theme argument of these verbs, will be briefly sketched and illustrated on the current *verb-sensitive approach* by Rappaport Hovav & Levin (2008) in section 4.

[7] This work is not concerned with the complete description of all verb-specific constraints in the set of investigated verbs and only addresses this issue for the sake of diligence and overview (see Rappaport Hovav & Levin, 2008 for a detailed account).

2.2.2 Constraints on the Dative Alternation Pertaining to the Verb's Phonological and Morphological Properties

One constraint on the dative alternation has been formulated in terms of phonological and morphological properties of the verb and reformulated by Pinker (1989) in terms of etymological source of the verbs (Gerwin, 2014). Pinker (1989) proposes the so-called Latinate Constraint, which poses that verbs of Latinate and Romance origin cannot alternate in the dative alternation and only show the *to*-dative construction due to their inherited morphonological properties. Green (1974: 78ff.) and Storm (1977: 110) among others have formulated this constraint in terms of monosyllabicity and monomorphematicity, constraining polysyllabic and polymorphemic verbs, respectively, from the dative alternation (Gerwin, 2014). However, all these posed constraints show exceptions and fail to describe the set of alternating verbs correctly. For example the verbs *promise*, *allot*, *lease* and *pay* alternate in PDE despite being of Romance origin (Gerwin, 2014).

Concerning this insufficiency of explanation of the formulation of this constraint Pinker argues that "the [Latinate] constraint is real but does not apply to certain [semantic] subclasses" (Pinker 1989: 119), like verbs of future having and verbs of instrument of communication (cf. Gropen et al., 1989: 247f.).

Considering these arguments, we assume that a copied verb of Romance origin belonging to the semantic classes typically alternating in English, that are affected by the Latinate Constraint, can only possibly start alternating after its stress pattern has assimilated to that of the basic code it is copied into. By shifting stress to the initial syllable these copied lexemes are not perceivable as foreign lexemes to speakers any longer and they are used with all argument realisations available for use with native lexemes (cf. Trips & Stein, 2019; Pinker, 1989: 46). The participation of copied OF verbs in the dative alternation in ME will be relevant in the corpus study in chapter 7. The exceptions to the Latinate Constraint as formulated by Pinker (1989) might be explained by locating the onset of its effect relative to the rise of the *to*-dative in the historical development of English. The possible effect of language contact with French and its end on this particular constraint on the dative alternation should also not be neglected, but cannot be subject of this thesis.

3 Argument Structure

The term *argument structure* is used to refer to the lexical representation of argument-taking lexical items, most typically verbs (Levin, 2013). Argument structure is understood in this work to comprise information on the number and semantic properties of the core arguments of a lexical verb and on the specific morphosyntactic realisation of those arguments as permitted by the verb's semantics (Levin, 2013). The conceptualisation of how the argument structure of a verb is modelled in the language faculty and how semantic representation and syntactic representation interact at the interface of mapping semantic meaning to morphosyntactic argument realisation varies widely with the theoretical frameworks to which it is made subject (Levin, 2013; Levin & Rappaport Hovav, 2005). Working theories of argument realisation

must propose compatible representations of a verb's meaning and its syntactic behaviour and associate these with each other by a linking mechanism that allows for the preservation of the lexicalised meaning of the verb in the mapping to syntactic structure (Levin & Rappaport Hovav, 2005).

Two currently dominant approaches to argument structure are the lexicalist approach (e.g. Rappaport Hovav & Levin, 1998; Pinker, 1989; Levin & Pinker, 1992; Jackendoff, 1983; 1990; 2002; Levin, 2008) and the constructivist approach (e.g. Goldberg, 1995; 1997; 1998; Kay, 2000). Lexicalists propose that syntax reflects the lexical semantic properties of the verb, which are often conceptualised as a structural lexical semantic representation, commonly referred to as event structure (Levin & Rappaport Hovav, 2005). Opposing this view, constructivists persist in saying that syntax is not represented lexically, but arises from the interaction of the frame semantic meaning of the lexical item with the meaning of the syntactic frame in which it appears (Levin & Rappaport Hovav, 2005; cf. Ingham, 2018).

This thesis takes a lexicalist approach to argument structure and associates argument structure with lexical conceptual structures of verbs (LCS) following Jackendoff's (1983; 1990) predicate decomposition approach, as many have done before (e.g. Rappaport Hovava & Levin, 1998; Pinker, 1989; Levin and Pinker, 1992; Rappaport Hovav & Levin, 2008). LCSs formalise the event structure of verbs in their nature as construals of events in the world by decomposing them into basic unanalysable underlying events represented by primitive predicates of LCS and their participants. Event structure and thus internally structured lexical semantic representations of verbs foot on the concepts taken to be basic and grammatically relevant for conceptualising events (Levin & Rappaport Hovav, 2005).

3.1 Event Conceptualisation

Theories of event conceptualisation trying to determine the relevant concepts and factors at play in event structure differ widely on the postulated relevant basic concepts (Levin & Rappaport Hovav, 2005; for an overview). Three major ways of conceptualising events have been proposed to be grammatically relevant: The localist, the causal and the aspectual approaches, which all focus on a distinct salient facet of events (Levin & Rappaport Hovav, 2005: 78).

The localist approach assumes all events to be decomposable into and derivable from concepts of motion and location (e.g. Gruber, 1965; Jackendoff, 1972; 1976; 1983; 1987; 1990; Anderson, 1971; 1977). Additionally some instantiations recognise the existence of causative events that can embed basic locative events of location (BE, STAY) and motion (GO) while others analyse the causal dimension of events purely localist (Levin & Rappaport Hovav, 2005: 80, 85; cf. Jackendoff, 1983; 1990 and Anderson, 1971; 1977). Abstract semantic fields like the possessional, identificational and temporal field are assumed to accommodate events not obviously describing motion or location by interpreting them as abstract motion in a semantic field (Levin & Rappaport Hovav, 2005: 80f).

The aspectual approach highlights the centrality of temporal and mereological properties of events for the structure of verbal decomposition (e.g. Tenny 1987, 1994; Dowty 1979, 1991; Kiparsky 1998, 2001; Verkuyl 1972; Krifka 1986, 1992, 1998). The binary notions of stativity,

telicity and durativity are the core concepts of aspectual event conceptualisation accounting for the proposed basic subevents BE, ACT, BECOME, and causativity is also recognised as a relevant albeit distinct concept in the form of CAUSE (Levin & Rappaport Hovav, 2005: 88ff., 92).

The causal approach focuses on the overriding importance of 'causal chains' and 'transmission of force' between event participants for event conceptualisation (Levin & Rappaport Hovav, 2005: 117ff.; e.g. Croft 1991, 1998, 2012; Langacker 1987, 1990, 1991, 1993; Jackendoff 1990). Jackendoff (2002) states:

> [c]onceptual structure is not part of language per se—it is part of thought. It is the locus for the understanding of linguistic utterances in context, incorporating pragmatic considerations and 'world knowledge'; it is the cognitive structure in terms of which reasoning and planning take place. (Jackendoff, 2002: 123; quotation signs adapted by the author)

Therefore, the conceptualisation of events as being governed by basic cognitive concepts of either location, aspect or causation is fundamental to what kind of relations between participants and processes can be assumed when decomposing the lexical semantics of verbs denoting events and modeling these as intricately structured and possibly complex combinations of argument taking primitives associated with a root.

In his book *Semantic Structures* Jackendoff (1990) moves away from earlier strictly localist conceptualisations and includes an array of primitive predicates that are not basic in nature as well as encoding causal relations between arguments on the action tier (Levin & Rappaport Hovav, 2005: 84f). Generally, aspectual and causal notions as well as event complexity and notions like sentience, animacy and volitionality are semantic factors relevant to argument realisation and must be reflected in some way in the event structure of verbs in lexicalist approaches (cf. Levin & Rappaort Hovav, 2005: 128). The lexical decompositional approach and the event structure as modelled in LCS are described in the following.

3.2 Structural Lexical Semantic Representations of Verbs: LCS

In the predicate decomposition approach (Jackendoff, 1990) verb meanings are taken to determine argument realisation. Verb meanings are formalised as LCS, which are internally structured argument taking functions. The basic LCS is taken to be bipartite (cf. Levin, 2008: 3). Following this approach, verb meanings are decomposed into two primitive elements. First, argument taking primitive predicates the basic set of which can combine to form a limited inventory of event schemas. Second, a root representing a verb's core lexicalised meaning (Jackendoff, 1983, 1990). The assumed set of primitive predicates includes at the minimum ACT/DO, CAUSE, BECOME, GO, BE, STAY and LET, but multiple expansions of this set to include more predicates have been proposed by Jackendoff (1983, 1990; cf. Levin & Rappaport Hovav, 2005: 74). The root encodes those meaning components of a verb that are entailed in all uses of a verb, regardless of context (Levin, 2008; Rappaport Hovav & Levin, 2008). The idiosyncratic root element of the verb is composed with the compositional event structure of

the verb at LCS level. The set of possible roots is not limited but all roots are specified for their ontological type (Levin & Rappaport Hovav, 2005: 71). The ontological type or types specified for any root largely determine with which types of event structure it will be associated. The set of ontological types is limited and includes basic notions like STATE, THING, MANNER, PLACE and INSTRUMENT (Levin & Rappaport Hovav, 2005: 71f). A lexical verb like *clean* can be represented by the decompositional structure [[x ACT] CAUSE [y BECOME <*CLEAN*>]]. The idiosyncratic root *CLEAN* of the ontological type STATE is inserted into the basic causative event scheme common to causative verbs like *dry* or *open*, which differ only in the idiosyncratic STATE root which is inserted into the argument slot for the primitive BECOME (Levin & Rappaport Hovav, 2005: 71).

The argument slots of the argument taking primitive predicates can be filled by participants consistent with the semantic properties determined for that argument slot by the event structure (Jackendoff, 1990). The types of semantic roles that can be taken as arguments into specific slots in the LCS are semantically specified by the primitive predicate governing the argument slot. AGENTS are associated with the argument slot for the primitive predicate CAUSE and the NP filling this slot is specified to be animate, sentient and volitional, or in other words compatible with the semantic restrictions on the argument position as specified by the governing primitive (Levin & Rappaport Hovav, 2005; Jackendoff, 1990). Likewise, a GOAL is taken as argument of GO if the filler-NP is inanimate, while animate filler-NPs might associate the same slot with the RECIPIENTS, if the primitive governing this argument slot specifies semantic properties that are compatible with both roles, or in other words underspecified for some semantic properties (Levin & Rappaport Hovav, 2005).

3.3 Thematic Roles

The definition of a finite set of discrete thematic roles to represent all possible participants across event types, alternations and languages is problematic, as roles cannot be taken to be unanalysable discrete concepts, but must be seen as sets of basic semantic properties like sentience, volition, causation, movement and affectedness among others, that overlap partly for some roles (see Levin & Rappaport Hovav, 2005 for a review). This thesis assumes a notion of thematic roles as proposed by Primus (1999), which is compatible with the assignment of roles to argument positions in LCS. These semantic labels are used in this work to describe an argument's semantic properties and its event structural position in a proposed LCS, or more generally its semantic relation to its verb (cf. Levin & Rappaport Hovav, 2005: 35). The thematic roles GOAL and RECIPIENT[8] are used in this work as distinct but closely related thematic roles. While the notion of GOAL is restricted to inanimate locations that are the (intended) end points of transfer of a THEME by means of spatial movement, the thematic role RECIPIENT is associated with animate entities, which are capable of possession and are the (intended) RECIPIENTS of possessional transfer of a THEME. This distinction serves well to model the underlying event structures associated with the variants of the dative alternation

[8]This section differentiates between the label of thematic role and the basic concept by use of small capital letters and basic lower case, to define the use of the role labels for the rest of this thesis.

in multiple-meaning and *verb-sensitive approach*es to the dative alternation in chapter 4.

For the use in this thesis a finer analysis of the animacy of the non-Theme objects of ditransitive verbs is needed to account for cases of metonymic transfer as described in section 2.1. Several studies on the dative alternation consider the role assigned to the IO of ditransitive verbs on an 'animacy scale' to account for such uses (Gerwin, 2014: 43; Bresnan, Cueni, Nikitina & Baayen, 2007). For the purpose of this thesis, a scale distinguishing between *human, organisation/community, animal/abstract animate entity* and *inanimate entity* is adopted preliminarily to account for all shades of animacy in the corpus data presented in chapter 7. While the end points of this scale are respectively classed as representing the thematic roles Recipient and Goal, NPs filling the non-Theme object argument position that can be assigned to the two intermediate types on this scale, can be interpreted as realising Recipients if they provide context that suggests an extension to an animate, in most cases human, referent by metonymy. For example, uses of nouns like *heart*, *mind*, and *body* refering *pars pro toto* to a human referent illustrate the category of *abstract animate entity*, as these nouns specifically are not inherently animate, but refer to specific parts, properties or faculties of the sum of what is the human experience. Uses of nouns like *church* or *university* may refer to either a physical building or the organisation of a specific religious community or scholastic institution. The abstract animate nature of the latter meaning with these entities being made up of an organised group of human entities often refer not to the actions of the abstract organisation itself, but to actions of human entities acting on behalf and in the name of the institution or group they are part of.

This distinct classification is made in the corpus study to account for possible diachronic shifts in the felicity of uses of both DOC and *to*-datives with Recipient-like arguments of varying animacy. This will enable the analysis to correctly identify spatial goals, Recipients and the bridging category of metonymic extensions from inanimate NPs to animate referents in the IOs of ME DOC and *to*-dative uses. The classification of these arguments concerning the animacy of their filler NPs is crucial to a meaningful quantitative analysis of the corpus data, as only uses with animate NPs capable of possession can be interpreted as the verb truly selecting for Recipients and variably realising them as bare NPs and *to*PPs.

3.4 Verb Meaning-Driven Argument Realisation and Semantic Verb Classes

The modelling of complex, compositional verb meanings as argument taking functions composed of basic elements like primitive predicates, idiosyncratic roots and argument slots that are governed for semantic role specifications by the primitive predicates provides a structured semantic representation of argument structure. The syntactic realisation of arguments is derived by mapping from these semantic structures and preserves semantic relations in the syntax.

Based on this conceptualisation of verbs as conceptualisation of events, semantic classes of verbs can be defined over shared event structures: "[P]redicate decompositions are constructed so that verbs belonging to the same semantic class have decompositions with common substructures, with roots of the same ontological type filling the same position in these

substructures“ (Levin & Rappaport Hovav, 2005: 72). Levin's (1993) seminal work on English verbs and their argument realisation reflects this and groups verbs into semantic classes based on the semantic roles they select and their specific syntactic behaviour. Verbs exhibiting similar patterns and roles are grouped together into semantic classes (Levin, 1993).

Consequently verbs that show the same systematic variation in the syntactic realisation of their arguments are also classed together in alternations like the dative alternation described in chapter 2. Based on the lexical decompositional semantics described in this chapter such alternations in the argument realisation of lexical verbs can be analysed as stemming from variation in its underlying event structure, be it a difference in composition or type of primitive predicates involved, in the specific meaning component of the root, or in the semantic properties of the roles compatible with the argument slots in the event structure (Levin, 2008). Thus a single verb showing an alternation is associated with some form of variation in its semantic structure. Determining the nature of the semantic variation responsible for alternations like the dative alternation is one of the primary research areas of argument realisation theories (Levin & Rappaport Hovav, 2005). The dominant approaches are addressed in the following chapter.

4 Semantic Approaches to the Dative Alternation

Many different approaches to the analysis of the underlying semantic event structure of the variants of this alternation have been taken over the last decades. This section briefly summarises the main points of the currently dominant approaches relevant to this work.

Approaches to the lexical semantics and event structure of ditransitive verbs alternating in the dative alternation, apart from general theoretical differences on the conceptualisation of events and the modelling of semantic representations, mainly differ on the postulation of either one common (*single-meaning approaches* e.g. Baker, 1988; Bresnan, 1982; Larson, 1988; Wechsler, 1995) or two distinct underlying event structures (*multiple-meaning-approaches* e.g. Goldberg, 1992, 1995; Harley, 2002; Krifka, 1999; Pinker, 1989) associated with the verbs' root for the two variants of the dative alternation.

The single meaning approaches to the dative alternation analyse the two variants as being variants of argument realisation of one single underlying semantic structure. The structures underlying the DOC and *to*-dative variants have differingly been analysed as being derivationally related (e.g., Aoun & Li, 1989; Baker, 1988; Bresnan, 1982; den Dikken, 1995; Dryer, 1986; Emonds, 1972; Larson, 1988; Ura, 2000) or independent (e.g., Butt, Dalrymple & Frank, 1997; Wechsler, 1995) (cf. Rappaport Hovav & Levin, 2008: 130 fn2). These approaches, however, have so far not been able to fully account for the observable diachronic change or distribution of the alternation's variants.

In the current, dominant multiple-meaning approaches to the dative alternation the argument realisation variants for alternating verbs are determined by direct mapping from two distinct meanings which are modelled as different event schemes associated with the same root, namely the caused possession event scheme for the DOC (7) and the caused motion event scheme (8) for the *to*-dative (Levin & Rappaport Hovav, 2005: 206f.; Rappaport Hovav

& Levin, 2008; Levin, 2008).

(7) [NP_0 CAUSES NP_1 TO HAVE NP_2] Caused possession meaning

(8) [NP_0 CAUSES NP_2 TO GO TO NP_1] Caused motion meaning

(Pinker, 1989; as presented in Krifka, 1999: 263, ex. (24))

Both these event schemes lexicalise causative events, but while (7) involves a possession relation, (8) involves motion to a goal (Levin, 2008; Rappaport Hovav & Levin, 2008). The difference of these two proposed event structures is based on the primitive predicate lexicalising the inner event and consequently, as laid down in the description of the lexical decomposition of events in section 3.2, the respective roles governed by these primitive functions. The primitive HAVE governs an animate RECIPIENT, while the primitive GO governs a spatial GOAL (Levin, 2008). Abstracting from basic theoretical differences in the modelling of syntax and conceptualisation of events the consensus of multiple-meaning approaches to the dative alternation is that the caused possession meaning and caused motion meaning are taken to arise from distinct event schemes. Furthermore it is assumed that for a single alternating lexical verb that verb's idiosyncratic core meaning or root "is associated with both variants; [and] that only one verb is shared by the two variants of the alternation" (Rappaport Hovav & Levin, 2008: 134).

Departing from uniform multiple-meaning approaches, Rappaport Hovav and Levin (2008) build on the core assumptions of multiple-meaning approaches and argue for what they phrase as a *verb-sensitive approach* to the dative alternation. These approaches differ in the way in which the root is assumed to be associated with the two underlying event structures (Rappaport Hovav& Levin, 2008: 134), but agree on the existence of multiple underlying meanings for alternating verbs. While multiple-meaning approaches assume that the roots of all alternating ditransitive verbs are associated with both event schemes (Harley, 2002; Krifka, 1999; Oehrle, 1976; Pinker, 1989), Rappaport Hovav and Levin (2008) propose that the DOC realisation is associated only with the caused possession scheme for *give* verbs as well as *send-* and *throw*-type verbs, while the *to*-dative realisation is associated with both event schemes i.e. with the caused possession meaning for *give*-type verbs and with the caused motion meaning for *send-* and *throw*-type verbs (Rappaport Hovav & Levin, 2008: 132). In summary, the mapping from semantics to syntax is forked for *give*-verbs mapping from one meaning onto two possible syntactic realisations. For *send-* and *throw*-verbs mapping is direct but double-stranded with the two distinct meanings each mapping directly on one syntactic realisation.

Rappaport Hovav and Levin (2008) support their analysis by drawing on the contrasting behaviour of *give*-type verbs and *send-* and *throw*-type verbs. While *give*-type verbs entail change of possession but not change of location, the *send-* and *throw*-type verbs entail change of location but not change of possession (Rappaport Hovav & Levin, 2008: 135). They argue that the differences in the *to*-phrases found with *give*-type verbs relative to the *to*-phrases found with *send-* and *throw*-type verbs can be explained by an analysis where *give*-type verbs cannot take spatial goals, but only possessional goals, with motion being understood as being in the possessional field, following the Localist Hypothesis (Rappaport Hovav & Levin, 2008: 137; Jackendoff, 1990), and cannot take path arguments. This is supported by the fact that the

to-phrase with *give*-type verbs cannot be *wh*-questioned by the locative *where*, but only with the dative animate interrogative *whom*, while *to*-phrases with *send*- and *throw*-type verbs can (Rappaport Hovav & Levin, 2008: 137).

(9) * Where did you give the ball?

(10) Where did you throw the ball? - To third base

(11) Where did you send the bicycle? - To Rome.

(Rappaport Hovav & Levin, 2008: 137; ex. (14))

The preposition *to* with *give*-type verbs takes only animate complements, as mentioned in section 2.1. Inanimate complements designating places are acceptable only if they refer to animate referents by metonymy (Rappaport Hovav & Levin, 2008: 138; Gerwin, 2014: 43).

Ultimately Rappaport Hovav and Levin (2008) argue that the seemingly same alternation between surface structures of core dative verbs lexicalising caused possession like verbs of giving and future having (Rappaport Hovav & Levin, 2008; Goldberg, 1995) and non-core dative verbs lexicalising caused motion like *send*- and *throw*-type verbs does not originate in an identical underlying pattern of multiple associated event structures associated with all these verb classes and does not share a common diachronic genesis (Rappaport Hovav & Levin, 2008).

In line with the *verb-sensitive approach* (Rappaport Hovava & Levin, 2008) the empirical base of this work presented in chapter 7 investigates ditransitive core-dative verbs that lexicalise events of transfer of possession as instantiated in the caused possession event scheme which must necessarily involve a Recipient capable of possession and lack a conceptual path constituent (Rappaport Hovav & Levin, 2008: 133f., 137f., 149; Rappaport Hovav & Levin, 2011). The corpus study therefore focuses on native and copied verbs of giving and verbs of future having. The analysis focuses on the main research objective and circumnavigate the multiple-meaning versus single-meaning debate by analysing the investigated verb classes to be singularly associated with the caused possession event scheme for both argument realisation variants in line with the *verb-sensitive approach* (Rappaport Hovav & Levin, 2008).

5 Language Contact and Contact-induced Change

This chapter describes both the theoretical and historical basis of language contact for this work. Section 5.1 bases the terminology used in the proposed work and the possible analysis of the dative alternation as a case of contact-induced structural language change of the English language in a framework of code-copying as proposed by Johanson (2002). Section 5.2 briefly describes the contact situation between OF and ME.

5.1 Johanson's *Code-copying Framework*

The terms and concepts used to describe and classify phenomena and processes of language contact and resulting language change in this work originate in Johanson's *code-copying framework* (2002). This descriptive framework departs from traditional classifications and terms of

language contact phenomena (Haugen, 1950; Weinreich, 1953), as they often employ misleading metaphors in their terminology (Johanson, 2002: 287f.). It provides an unambiguous unifying set of terms to describe phenomena of language contact. Prior attempts at eliminating misleading terminology from language contact theories have often identified the problems, but have seldom managed to solve them. A valuable framework describing the degree of integration of copied material and its assimilation into a basic code is Eisenberg's (2012) gradual integration model for copied material based on the comprehensive description of all linguistic tiers of a copied element, its native properties and uses and the properties of the language code it is inserted into. Integration of copied material is not taken to mean movement towards a system, but the formation of subsystems for this material showing both foreign model code and basic code properties in the basic code (Eisenberg, 2012). Eisenberg's (2012) framework makes a thorough assessment of an element's differences and similarities to the basic code on all linguistic tiers and at any given point in time following its first insertion possible and this diagnostic value will be drawn upon in the analysis of corpus data.

In Johanson's (2002) framework code-copying can be briefly described as processes of interaction between language codes in which "copies of elements from a foreign model code are inserted into a basic code" (Johanson, 2002: 289). As is traditional for language contact terminologies, the languages in contact will be classified in relation to the nature of the language contact and the influence relationship between these. The language in which a copied unit is originally established and which serves as the model for this copy will be referred to as the model code, while the language into which the copy is inserted and adopted will be referred to as the basic code.

To avoid distorting the conceptualisation of language contact and of what has traditionally often been called "borrowing", the terms coined by Johanson (2002) aim to be more neutral and oppose the framing of borrowing as transfer of a linguistic element from a donor to a Recipient, depriving the donor language of the transferred element (Eisenberg, 2012: 37; Johanson, 2002: 288). Moreover, these terms do not suggest any form of identicality of original and copied elements (Johanson, 2002: 288), but instead the central term code-copying only implies the insertion of a copy of a unit from a model code into a basic code (Johanson, 2002: 288).

The processes of code-copying classically often called "borrowing", "calquing" and "substratum influence" respectively are rephrased unidirectionally in relation to the dominance relations between languages in a specific contact situation as "adoption" and "imposition". "Adoption" describes the integration of a unit copied from a socially-dominant model code into a socially dominated basic code. "Imposition" describes the integration of a unit copied from a socially-dominated model code into a variety of the socially-dominant basic code. A third process, classified by Johanson (2002: 291) as "code shift", describes the process of a socially-dominant code gaining more and more dominance over a socially-dominated code until finally ousting this code from most usage contexts and situations. The variety of the socially-dominant foreign code thus becomes the new native code for the affected speaker group's next generation (Johanson, 2002: 291, 308). Again, these terms do not imply any form of transfer of elements or identicality of original and copied elements, but seek to clarify the

importance of social dominance relations between the speaker groups of languages in contact when analysing instances of code-copying. It's important to point out that throughout any contact situation this relationship of social dominance is not rigid, but must be seen as a dynamic system prone to change due to shifts in political, social and economic power between the speaker groups (Johanson, 2002). Consequently the processes of contact-induced language change going on in both languages might be intensified, weakened or even reversed by a significant shift in the social dominance relation.

Johanson (2002) further describes processes of copying as operating on different levels of a language code. All units of language code, however complex or simple, are segmental and are comprised of their material form, their semantic content, combinational properties and frequential properties. Correspondingly, copying of units from one code to another can affect the whole block of properties of a unit being copied as a whole, including its form and function, or only selected properties of that unit as extrapolated features. The former is referred to as global copying and the latter as selective copying. Mixed copying combines these techniques and results in selective copies that comprise at least one global copy (Johanson, 2002: 292). While Haugen (1972: 85) calls these mixed copying types "loanblends" when occurring in the lexicon and excludes larger phrase structures from this classification, Johanson's *code-copying framework* recognises these types as possibly encompassing phrases, clauses and sentences among other formats (Johanson, 2002: 292). Resulting from the specification of the set of properties comprising linguistic elements and the possible types of copying Johanson (2002: 292) describes refined forms of selective copying of each segment of properties: material copying, semantic copying, combinational copying and frequential copying. Frequential copying means that the frequency pattern of an element is copied selectively. This may result in an increase or decrease of an existing element of the basic code, due to its model code equivalent being more or less frequent in said model code.

As a prerequisite for the insertion of copied units Johanson (2002: 294) postulates the necessity of some basis of equivalence between the codes in contact. This equivalence is assessed subjectively by speakers and does not necessarily correspond to actual typological equivalence of any kind (Johanson, 2002: 294). Copies from the model code are integrated into so-called equivalence positions in the basic code (Johanson, 2002: 294). Johanson suggests that small typological distance eases copying (Johanson, 2002: 306), as extensive overlap in essential structures and ordering principles and low structural resistance provides a plethora of possible equivalence positions available for insertion of copies (Johanson, 2002: 306). Additionally, elements representing a type which is already present as an alternative in the basic code are copied more easily (Johanson, 2002: 306).

Johanson's *code-copying framework* (2002) and work on the integration of copied material by Holler and Scherer (2010) suggests that the global copying of verbs with their argument structure and their integration and adaption into a native syntax might only be possible if structures parallel to the model language code exist or are at least possible in the basic code. Indeed, elements with a structure and properties matching the native code, for elements of the same or closely related semantic class or even for semantically unrelated elements of the same category, can easily be inserted into the basic code. For elements that show structures or

properties not matching the basic code at their semantic and structural equivalence position this resulting insertion conflict must be resolved. Conflicts can be resolved by adopting the model code's structure or properties into the basic code, if they are not restricted from being inserted by basic code constraints, or by the assimilation of the copied element to the basic code's properties and the assignment of the basic code structures shown by native elements of the same class and category. Which of these two integration scenarios is the case for di-transitive verbs of giving and future having copied from OF to ME will ideally be discernible from the results of this thesis.

5.2 The Contact Situation: Language Contact with French in Later Medieval England

The Norman Conquest of England in 1066 CE symbolically marks the transition from OE to ME. The Norman Conquest sprung from the conflict arising from multiple claims to the throne for the succession of Edward the Confessor (1042 – 1066 CE) by Harold Godwinson, Harald III of Norway and William I (the Conqueror) Duke of Normandy. The following Norman reign over England entailed intense and prolonged language contact between English and French that lasted more than 300 years (Trips & Stein, 2019: 236f; Schneider, 2017: 342f). The contact situation between ME and contemporaneous varieties of OF[9], can be divided into two stages considering the asymmetric dominance relations between the languages following Johanson (2002).

From the Norman Conquest to the early 13th century OF was spoken as the mother tongue by the ruling class and their descendants. People associated with the ruling class, which were not L1 speakers of OF, learned it post-childhood as a second language (Ingham, 2012a, 2012b). French was the language of court and law, church and education, but by the beginning of the 12th century clerics, educators, and administrators were expected to also have a command of English, as the people who were in contact with people of both the ruling and the lower classes needed to effectively communicate in both languages (Ingham, 2012a: 26). At this point the French varieties spoken in England are sociolinguistically prestigious and dominant. They serve as the dominant model code in this phase of the contact situation and influence ME, which in turn is the less prestigious dominated code (Trips & Stein, 2019). From the beginning of the 12th century until the late 14th century basic education for boys aged five and six was provided by song schools run by the Church, where the language of instruction was AN, before they started learning Latin grammar in grammar school from age 7 onwards, also instructed in AN (Ingham, 2012a: 33–36). This first exposure to AN in mid-childhood is taken to be the basis for the successful transmission of AN. For those whose lives involved literacy, like the clergy, clerks and administrators sufficient competence in English and French, as well as in Latin, was a prerequisite during this time. Following the idea that language contact occurs in the bilingual

[9]This chapter differentiates between OF as it is used in the previous and following sections (see foot note 2) and the specific variety of AN, which is the variety most bilingual individuals during ME would have acquired (see Ingham, 2012a; 2012b for a current account) for the sake of descriptive accuracy in this brief account of the contact situation.

individual, Ingham (2012b) proposes that "the period of greatest contact influence with English occurred when fluent bilingualism would have been commonplace among educated speakers, in the C13 and the first half of the C14" (Ingham, 2012b: 9). Contact-induced changes to the basic code are the final result of the habitualisation of momentary instances of copying by individual speakers and their conventionalisation in code of a speech community (Johanson, 2008: 65).

Ingham (2012a: 29) identifies the Black Death in the middle of the 14th century as the turning point in this contact situation that effected the shift in sociolinguistic dominance, rather than associating this development solely with the loss of the Normandy to the English crown in 1204 CE. He attributes the growing sociolinguistic prestige and dominance of ME and the concomitantly lessened influence of OF on ME to the aftermath of the disruptive effect the Black Death had on the institutional transmission of AN in the school system (Ingham, 2012a: 29, 35). The Black Death hit the school system and the clergy hard, and after it subsided the Church had to resort to ordain aspirants into the clergy who were insufficiently proficient in AN (Ingham, 2012a: 35). These clergy teaching at song and grammar schools provided only insufficient input for children to acquire AN fully and naturally. The transmission of AN as a second language acquired in mid-childhood collapsed fully when it fell out of use as the language of instruction in schools (Ingham, 2012a, 2012b). The next generations of AN speakers acquired AN not by naturalistic exposure in childhood that made a native-like proficiency possible, but as a foreign language, never achieving native-like command of it, and it fell out of common use soon after (Ingham, 2012a, 2012b). In this later stage ME is the socially dominant code, expanding its domains of use to functions previously reserved for French or Latin as it gains prestige (Gramley, 2012: 99; Stenroos, 2017: 308f.). The influence of the now socially-dominated OF code on ME is expected to be subsiding during in the late 14th century and the insular French variety of AN being now influenced by the dominant model code ME.

6 The Diachronic Development of the Variants of the Dative Alternation

While much research on the dative alternation has been done over the last decades, most of it focuses on the synchronic syntactic status of this phenomenon and its constraints, on the acquisition of the alternation in L1 and L2 and foreign language learning as well as on the cross-linguistic and typological study of the dative alternation. Most research concerned with the diachronic development of the variants of the dative alternation (McFadden, 2002; Allen, 2006; De Cuypere, 2015; Zehentner, 2018; among others) attributes the emergence of the *to*-dative to mark Recipient arguments to processes of internally caused structural change, but Trips and Stein (2019) suggest language contact with Old French following the Norman Conquest as a possible cause for the rise of the *to*-dative in ME. After the point of departure for the OE DOC is defined, some analyses of the rise of the *to*-dative construction will be sketched briefly in the following sections and language internal causes as well as language external causes for the rise of the *to*-dative will be considered.

Sentences formed with ditransitive verbs specifying possessional transfer realise a subject, direct object and indirect object, which are mapped onto the semantic roles of AGENT, THEME and RECIPIENT. As described in chapter 2 on the English dative alternation, multiple morphosyntactic realisations of the RECIPIENT argument indirect object of a ditransitive verb are possible in PDE. However, in OE the *to*-dative was not yet an option for the argument realisation of ditransitive verbs.

In OE, verbs involving double objects showed a range of 6 morphologically case marked argument realisation patterns, but for the majority of OE ditransitive verbs the THEME direct object mapped to accusative case and the RECIPIENT indirect object to dative case (Allen, 1995: 28f). The ordering of the direct and indirect object was variable in OE and affected by object weight and pronominality as well as information structure (De Cuypere, 2015). While De Cuypere (2015) sees the two basic object orders as being determined by these factors from one underlying basic structure in a system of freer word order, McFadden (2002) assumes two base-generated syntactic structures as the underlying cause for the variable object orders in OE already, even though these are more often than not at least partly obscured by the mentioned factors. The syntactic relation of arguments to a verb was expressed by a four way case system (nominate, accusative, genitive and dative) in OE, which was overtly marked by inflectional endings on nominals. Dative case regularly marked possessors, indirect objects and objects of prepositions (Denison, 1993: 16). The OE morphologically overt dative marking of indirect objects of ditransitive verbs can be taken to be instances of lexical case (Allen, 1995), but as English changed the case system changed.

The ME stage of the English language is often described as a transition stage from OE to PDE in terms of basic linguistic structures. The loss of inflection on verbs, adjectives and nominals, the development of an increasingly fixed word order and the increasing importance and functional diversity of prepositions are the most notable changes (Mossé, 1975). English gradually developed from a language in which verbs assigned case lexically to their arguments to a language marking case syntactically during ME. As the inflectional endings on nominals eroded during ME, the overt case distinction between accusative DOs and dative IOs was lost. The date by which morphologically marked dative case disappeared varies strongly between regional dialects. The accusative/dative distinction was retained longer for 3rd person pronouns referring to humans in many dialects before the dative form won out over the accusative form (Allen, 1995; Denison, 1993: 20f.), but by the latter half of the 14th century the loss of the accusative/dative case distinction can be assumed complete in most dialects (Allen, 1995: 213–217). The formal distinction collapsed to only two forms for nominal case marking: common or unmarked for the former nominative, accusative and dative and marked genitive case. Accusative and dative are then classed together as objective case, which marks indirect objects, objects of prepositions and direct objects (Denison, 1993: 20f.). This syncretism of dative and accusative resulted in the loss of ability of lexical verbs to assign dative case, as consequently inambiguous input for the case distinction of multiple objects from which to abstract separate lexically assigned categories of accusative and dative case was no longer available as input for language learners (Allen, 1995: 159, 213). As a consequence, structural renewal of dative case as a syntactic relation of an argument to a verb was necessary to clearly mark RECIPIENTS. In

the majority of cases of predicates denoting events of possessional transfer the direct object refers to an inanimate entity that is transferred and the indirect object refers to a person and the loss of inflectional marking is immaterial to correctly interpret which object is the Recipient. However, events of transfer where both objects refer to a person pose a problem for case impoverished eME DOCs, but this is later resolved by the fixed word order and structural case marking taking on the function of discerning DO Themes and IO Recipients for bare NP DOCs.

The expression of Recipient objects as *to*PP emerged during ME and can be analysed as instantiating structural case. Preposition use expands strongly from OE to ME and partly replaces the eroded morphological case marking (Denison, 1993: 21). Mustanoja (1960: 348) describes the prepositions *to* and *for* taking on the marking of previous 'dative' functions.

Identifying the origin of the prepositional marking of dative case as a *to*PP is the main objective of this thesis. The following sections recount some analyses of the variable OE double object construction and the emergence of the *to*-dative. Distancing themselves from strictly language internal analyses of the diachronic development of the dative alternation like the ones reviewed in section 6.1, Trips and Stein (2019) suggest a possible language external cause for the rise of the *to*-dative, namely the intense language contact with Old French following the Norman Conquest. This analysis will be briefly reviewed in section 6.2.

6.1 The Rise of the *to*-Dative as a Case of Language-internally Motivated Structural Change

There are two main assumptions common to the analyses of the rise of the *to*-dative as representing a case of internally motivated language change: that the loss of case morphology was the main cause for this change, and that locative *to*PPs were the source for the renewal of dative marking. However, analyses differ on how this change can be modeled syntactically and semantically and how it proceeded.

On the one hand, McFadden (2002) argues for a semantic reanalysis of the preposition *to* from marking spatial goals to marking Recipients. After morphological case marking is lost in ME (Allen, 1995; McFadden, 2002) the ordering variants of the DOC are ambiguous and a renewal of the expression of the case-marking function is necessary to resolve this ambiguity (McFadden, 2002: 17f). De Cuypere (2015), on the other hand, argues that this functional and semantic extension of the preposition *to* was not a saltational reanalysis, but a gradual extension of the already varied functional domain of the OE preposition (De Cuypere, 2015). Their analyses differ in the basic analysis of the OE DOC structure as well as in the manner the change from ordering variable DOC to the specific picture of the dative alternation is supposed to have taken place.

McFadden (2002) analyses the two ordering variants of the DOC in OE as representing two distinct underlying syntactic d-structures, footing on Harley's modelling (2002) of these structures in adaptation of the models of Larson (1988) and Pesetsky (1995). These two proposed d-structures differ in the c-commanding relations of the DO and IO and are not derivationally related. McFadden (2002) hypothesises that the *to*-dative construction found in PDE is a di-

rect continuation of the underlying structure of the DO-IO order of the OE DOC and only the marking of case on the IO has undergone change. He analyses the difference in case marking of the lower base-generated object of the two OE ordering variants as depending on the categorical status of the predicate it is complement to. While Harley (2002) analyses these as an abstract predicate morpheme HAVE for the DOC and as an abstract preposition LOC for the *to*-dative, McFadden (2002) analyses both as predicate morphemes, with verbal predicate HAVE taking a DP complement in the DOC and non-verbal predicate LOC taking a PP complement parallel to other two-place local adjectives like *close*. He proposes that the rise of the *to*-dative construction reflects a change in overt realisation of the oblique case assigned to the IO by the abstract non-verbal LOC in the DO-IO order during eME. When inflectional case marking eroded and was lost during ME, the complement PP of LOC did no longer subcategorise for a morphologically marked DP for marking oblique case, but for a PP headed by *to* (McFadden, 2002: 18). Double complement constructions with allative *to*PPs used with verbs of caused motion are analysed as the possible source for such a renewal (McFadden, 2002) due to the semantic overlap of the event structure of the verb classes involved and the parallel surface structures of the DO-IO-ditransitive construction and the allative *to*PP double complement construction. Only after reanalysis in analogy with these *to*PP uses was the underlying case marker overtly expressed analytically as the preposition *to*.

De Cuypere (2015) opposes the view presented by McFadden (2002) and argues for a gradual semantic and functional extension of the double complement construction with *to*PPs expressing various functions in OE, ranging from marking a variety of concrete and abstract direction arguments to marking addressee, source, comparison and purpose (De Cuypere, 2015: 16–19) to also marking RECIPIENT arguments of possessional transfer events. In OE *to*PPs were already commonly found with verbs like *sendan* "send", *lætan* "let", *niman* "take", *bringan* "bring", *cweðan* "say/speak", *sprecan* "speak/say/utter", *cleopian* "call/cry out" (De Cuypere, 2015: 2, 16f, 22; Allen, 2006: 206, 214; Cassidy, 1938). De Cuypere investigates whether these diverse uses of *to*PPs with a morphologically dative marked complement NP are the source for the *to*-dative RECIPIENT marking.

De Cuypere (2015: 20) identifies extension from spatial goals to animate RECIPIENTS by metonymic transfer in uses of *sellan* with *to*-dative referring to a location in OE Charters documenting donations to churches or towns like in (12) and refers to Visser's (1963: 624, fn1) identification of similar instances with *agiefan* in lOE (De Cuypere, 2015: 20). The context in these uses prompt an interpretation of the inanimate IO NP as a community or institution represented by animate entities rather than a physical place (De Cuypere, 2015: 20).

(12) *Ic oswulf ond Beornðryð min gemecca sellað to cantuarabyrg to cristes cirican*
I Oswulf and Beornthryth my wife give to Canterbury to Christ's church
ðæt land æt stanhamstede.
the land at Stanstead.
'I, Oswulf and my wife Beornthryth give to Christ's church at Canterbury the land at Stanstead.'
(codocu1.o1: charter 37.2 as cited in De Cuypere, 2015: 20)

De Cuypere further identifies *to*-datives with animate Recipients in uses of *lettan* and *niman* denoting events of possessional transfer between two human individuals (De Cuypere, 2015: 20f). To him uses of *to*-PP expressing the addressee of communication verbs as well as the occasional uses with the verbs *giefan* (give) *sellan* (sell), *lettan* (lease, lend), *niman* (take) denoting events of transfer of possession are embryonic to the rise of the *to*-dative expressing Recipients (De Cuypere, 2015: 20–22).

De Cuypere (2015) argues that this precursor of the modern *to*-dative was to a degree already in competition with the bare NP marking of Recipient in OE, as they share the pragmatic function of realising the Recipient argument in sentence-final focus position (cf. Allen, 2006: 206). De Cuypere (2015: 22) concludes, in agreement with Allen (2006: 214), that the loss of morphological dative marking in the DOC correlates with the emerging use of *to*-dative with verbs of possessional transfer. He reasons that the pragmatic association of the DOC with the possessional transfer event type was weakened by the loss of the dative/accusative category distinction (De Cuypere, 2015: 22). Consequently the pragmatic similarity of the OE DO-IO DOC order and the *to*-dative order lessened the need to maintain this surface ordering of the ambiguous ME DOC (Allen, 2006: 214; De Cuypere, 2015:15). However, there is "no necessity to assume that the *to*-dative only became available once the morphological dative was not available" (Allen, 2006: 214). This means that henceforth a unifying syntactic analysis of the DO-IO DOC and the *to*-dative as proposed by McFadden (2002) is of no higher value than assuming two differing syntactic structures for the DO-IO DOC and the *to*PP.

Yet another approach is taken by the constructivist analysis by Zehentner (2018), who investigates whether the rise of the *to*-dative and the narrowing of the DOC from expressing a broad range of events resulting in 'indirect affectedness' of the non-Agent, non-Theme argument to expressing possessional transfer and closely related events correlate or even show a causal relationship (Zehentner, 2018: 51). Zehentner (2018: 153f) does not discuss whether the loss of morphological case marking and the fixation of word order are indeed the language internal changes causing the rise of the *to*-dative and the emergence of the dative alternation, but she assumes that the erosion of morphological case marking rendered the OE DOC, which originally occurred with the dominant pattern {$\textsc{theme}_{\textsc{acc}}$, $\textsc{Recipient}_{\textsc{dat}}$} and five other case patterns (Allen, 1995: 28f), structurally underspecified for the broad range of senses it was used with in OE (Zehentner, 2018: 167, 171) and consequently open to semantic narrowing from the broad sense of 'indirect affectedness'.

Zehentner (2018: 162) detects a significant increase of transfer senses in the uses of the DOC during ME in a corpus study on the PPCME2 and concludes that this proportional increase of transfer-related verbs in the use of DOCs in ME and the decreasing use and subsequent loss

of the DOC as an argument realisation pattern for some verbs of the classes of dispossession and benefaction/malefaction represents the semantic narrowing or specialisation of the DOC "towards more basic giving-semantics" (Zehentner, 2018: 155, 163f). She shows that the emergence of the *to*-dative and the semantic narrowing of the DOC to events of transfer, especially possessional transfer, correlate diachronically in ME. She proposes a scenario in which the association of the case-impoverished and structurally underspecified DOC and the *to*PPs used with the same verbs got stronger over time and the two constructions influenced each other's usage space eventually leading to the perception of the DOC as being the less analytic variant of an abstract ditransitive construction and an 'allostruction' to the *to*PP. According to Zehentner (2018: 168f) the DOC entered into a cooperative relationship with the *to*PP used with transfer verbs and subsequently both variants developed specific pragmatic and semantic properties and associations partitioning their respective semantic and pragmatic space in their superordinate construction. However, Zehentner (2018: 171) concludes that a final assessment on which of the two constructions started this chain of mutually influencing changes might well be impossible and that both causal impact of one of these constructions on the other and a co-evolutionary adaptive scenario of change are plausible.

The common assumption of these approaches to the emergence of the dative alternation is that structural changes like the rise of the *to*-dative are caused by language internal factors. While these analyses all support their claims using quantitative analyses of corpus data for OE or ME respectively, they mostly ignore the extra-linguistic factors influencing ME during the critical time period in which the most significant increase of *to*PPs used to express Recipients occurs. Solely Allen (2006: 214f) notes that in the *Ayenbite of Inwit*, a text written in 1340 in the Kentish dialect, the dative/accusative distinction is still frequently marked, *to*-datives occur particularly often, against all expectations, and that this could be explained by the text being based on an OF original and the translator most likely orienting his use of grammar very closely to the original. The possible influence of language contact with OF on structural changes in ME, especially on the argument structure of dative verbs and ditransitives, is the focal point of the analysis proposed by Trips and Stein (2019).

6.2 A Language Contact Approach to the Rise of the *to*-Dative

Distancing themselves from strictly language internal analyses of the diachronic development of the dative alternation Trips and Stein (2019) suggest a possible language external cause for the rise of the *to*-dative, namely the intense language contact with Old French following the Norman Conquest.

In a study on contact-induced changes in the argument structure of ME on the model of OF, Trips and Stein (2019) investigate changes in the argument structures of psych verbs in native OE psych verbs and verbs of the same semantic class copied from OF. They suggest that the global copying of dative experiencer verbs like transitive *plesen* "please" from OF *plaire* into ME, which, like in the French model structure, express their indirect non-Theme objects using prepositional 'dative'[10] marking, had lasting effects on the argument structure

[10]OF lacks inherent dative case and regularly expresses allatives as well as Recipient arguments of transfer

of ME. To illustrate this they conduct a global quantitative analysis of corpus data for the ditransitive ME verb *yēven*, which increasingly expresses its RECIPIENT argument as a *to*PP during ME (Trips & Stein, 2019: 258ff.). Trips and Stein (2019) propose that this emerging pattern of prepositional dative marking of non-THEME arguments of verbs subcategorising for morphologically expressed inherent dative in OE is an extension of the argument realisation pattern first adopted into eME by the global copying of dative experiencer verbs like *plesen* to structurally and semantically related verb classes like the verbs of caused possession.

They corroborate this proposed scenario using quantitative corpus data from the PPCME2 for ME *yēven.* The proportional distribution of the DOC and *to*-dative variants across the Helsinki periods of ME shows frequency peaks for the use of the prepositional dative with *yēven* coinciding with times of intense language contact and bilingualism in the ME period M3 after a significant increase of this variant between M1 and M3 (Trips & Stein, 2019: 259). Especially in texts translated from OF or otherwise strongly influenced by French the prepositional dative marking is significantly higher than in other texts. This highlights the influence of contact with OF on the rise of the *to*-dative as Allen (2006: 214f.) already notes.

The frequency patterns of the presented data are typical for contact phenomena (Trips & Stein, 2019: 256f., 260), but would be atypical if the rise of structural dative marked by *to*PP with native OE dative verbs were a case of gradual language internal change due to a need for innovation after the erosion of case morphology in lOE. If prepositional *to*-dative were a case of gradual change, one would typically expect more of an S-curve pattern for the relative frequency of occurrence of *to*PPs (Trips & Stein, 2019: 256f.; see for example Kroch, 1989; Yang, 2000:239f.).

Trips and Stein's (2019) analysis takes the decline of bilingualism during later ME (M4) to be a stunting force in the spread of the prepositional *to*-dative to further native verbs and other verb classes (Trips & Stein, 2019: 260, 262) and attributes the slightly decreasing frequency of *to*-datives in the M4 subperiod to the waning bilingualism and the loss of the *to*-dative as RECIPIENT marking for some native verbs, "because native verbs do not provide any phonetic clues allowing monolinguals to perceive them as [...]" (Trips & Stein, 2019: 262) of French origin, while, contrastingly, phonological perceivably French verbs did not develop the DOC option. This quite possibly marks the beginning effects of the Latinate Constraint in line with Pinker (1989).

Trips and Stein conclude for their findings, that "a language that gave up formal case distinctions (Middle English) copied the pronominal and nominal 'dative' arguments of the foreign model code (Old French)" (Trips & Stein, 2019: 263). Trips and Stein (2019) take the adoption of the copied prepositional dative marking in form of the ME *to*PP to be a case of adoption by adaption of an existing basic code structure (Johanson, 2002; Trips & Stein, 2019). Considering Trips and Stein's (2019) findings in line with Johanson's (2002) *code-copying framework* the OF verbs copied into ME expressing their non-THEME objects as *to*PPs can be assumed to be cases

events as *à*PPs. After dative case morphology was lost in OE the lexical dative was no longer detectable and transparent to language learners (Allen, 1995: 159, 213), and the labelling of these objects as 'dative' objects at this point serves the transparency of the argument, but classifying the abstract category of Case as well as realisation of (morphological) case is a much debated issue in itself (see for example Allen, 1995; Woolford, 2006; Allen, 2006).

of global copies including the verbs material form, semantic meaning, argument structure and combinational properties, as well as frequential properties. The OF model code's argument expression of these verbs, specifically the structural *à*PP marking of 'dative' case function, is copied and substituted, or rather materially adapted and realised, in ME by an existing basic code structure, that matched the model code's copied combinational properties.

In the case presented by Trips and Stein (2019) the *to*PP is the structure perfectly lending itself to this adaption to an adopted element, as it already occurs expressing goals of spatial movement as well as addressees of communication events in OE (De Cuypere, 2015; Allen, 2006). The adaption of the *to*PP to the copied OF properties results in a proportional increase of its use amounting to what might seem like frequential copying of the OF category of structurally marked 'dative' case into ME (cf Trips & Stein, 2019).

This analysis opposes the analyses (see section 6.1) of the rise of the *to*-dative as resulting from reanalysis of the ambiguous DOC as being parallel to the allative construction and the functional extension and grammaticalisation of the preposition *to* to additionally mark dative case (De Cuypere, 2012). If the grammaticalisation of a structural case marker from a functionally highly diversified preposition like *to*, marking semantically related concepts, were the result of a general language change tendency to shift from more synthetic structures to more analytic structures, similar structures could be expected to show up in genetically related languages at some point. However, crosslinguistic comparison with other Germanic languages suggests that the singular marking of the structural dative of indirect objects by a grammaticalised preposition is specific to English (Trips & Stein, 2019: 262f.; Abraham, 2006). This would seem unusual if this change had been purely internal and following general tendencies of language change (cf. Trips & Stein, 2019: 263). In the language contact approach taken by Trips and Stein (2019) the singularity of the English IO marking rather suggest that the marking of a former grammatical category like the English inherent dative case by a single, fully grammaticalised preposition instantiating structural case marking of both experiencers of psych verbs and Recipients of caused possession verbs might be an effect of ME-OF bilingualism and the copying of the OF structural 'dative' marking which does indeed show a structure matching the emerging *to*-dative: the *à*PP (Trips & Stein, 2019). In line with Heine's (2009) diagnostics, which indicate contact-induced change, and under application of Johanson's *code-copying framework* Trips and Stein (2019: 262ff.) analyse the rise of the *to*-dative as a case of contact-induced change effected by the copying of the French *à*PPs into Middle English.

One might argue that the complete copying of the model code argument structure of verbs of caused possession from OF into OE can be considered a possible source for the *to*-dative only because argument realisation options similar to the OF *à*PP expressing Recipient arguments and allative constructions were already present in English before contact with OF in the form of the OE *to*PP expressing spatial Goal arguments of verbs of caused motion as well as addressees of events of communication (De Cuypere, 2015; Allen, 2006; Zehentner, 2018). This certainly is a valid point and as laid out in section 5.1 Johanson (2002: 294) indeed postulates the necessity of some basis of equivalence between the codes in contact as prerequisite for integration of copied units and suggests that typological proximity of model and basic code as

well as the presence of elements of the same type in the basic code ease copying (Johanson, 2002: 306).

However the point of initiation of this change can only be determined by investigating the relative timing of the copying of *to*-dative marking of RECIPIENTS with verbs from OF and the semantic extension of OE *to*PP to express RECIPIENTS of transfer of possession events with native verbs. The picture resulting from the corpus study in the following chapter will be evaluated as to if *to* was grammaticalised to structurally mark RECIPIENT IOs before OF verbs of the same class were copied in a case of code-match global copying, or if the OF verbs were copied globally in cases of code-mismatch. The latter scenario would have resolved this integration conflict by mapping the copied OF argument realisation of RECIPIENT IOs as structurally case marked by a preposition onto the native material of the *to*PP.

7 The Corpus Study

To investigate the rise of the *to*-dative and its timing and progression relative to the copying of French verbs of the same semantic classes into English a corpus study is conducted. Section 7.1 motivates the limitation of the investigated verb classes and describes the compilation of the set of investigated verbs. Section 7.2 formalises the research questions and hypothesis of the corpus study. Section 7.3 describes the corpus serving as the empirical base and section 7.4 describes the formulation of queries for the investigation of the research questions on the data's base. Section 7.5 describes the method and procedure and names the implemented tools and resources. Section 7.6 provides a description of the quantitative results.

7.1 The Set of Lexical Ditransitive Verbs under Investigation

Following Trips and Stein's (2019) argument, this verb class oriented study investigates when verbs lexicalising caused possession native to English start showing the *to*-dative relative to when OF verbs of this class are copied into ME, as well as if and when verbs of this class copied from OF start showing the DOC. To gain insights into the possible entry of the *to*-dative into English via complete copying of French verbs of caused possession, this quantitative study investigates the distribution of the variants of the dative alternation across native English and copied French verbs of giving and future having in ME (see Levin, 1993: 45–47 for these verb classes in PDE) taking into account the animacy of the indirect object and *to*-complement respectively to identify allative uses of *to*PPs with goals. To gain data, the PPCME2, 3rd release (Kroch & Taylor, 2000) is queried for the variants of the dative alternation occurring with a specific set of verbs.

Following the accounts in chapters 2 to 4, the verbs under investigation are limited to classes that only lexicalise a caused possession meaning and not a caused motion meaning following the *verb-sensitive approach* by Rappaport Hovav and Levin (2008: 134). Further narrowing these classes, verbs of transfer of message (Levin, 1993, see also 'verbs of communication' as classed by Gropen et al. (1989), 'illocutionary verbs of communication' as classed by Pinker (1989: 110f)) are excluded as they lexicalise a very abstract form of transfer of possession

of an abstract entity–an idea or item of information–oftentimes implying initial creation of the Theme and not all of them inherently take three arguments (Rappaport Hovav & Levin, 2008: 133f). These verbs may be extended to uses describing the communication of a message and are then construed as having Recipients via the *Conduit Metaphor* following Goldberg (1992) (Rappaport Hovav & Levin, 2008: 134), but nonetheless this matter will be put aside for possibly extended work on the present issue in the future. Consequently this study only investigates verbs more or less basically lexicalising caused possession that can take concrete entities as Themes, with *give* being the most prototypical of these lexical items (Goldberg, 1997) and other *give*-verbs specifying further meaning components like the type of possession involved (temporary for *lend* and *rent*, but not *sell*) and conditions on its coming to be (involving payment and a legal contract for *rent* and *sell*, but not *lend*) (Rappaport Hovav & Levin, 2008). The lexemes of these two classes listed as alternating by Levin (1993) are listed in (13) and (14).

(13) give verbs: *feed, give, lease, lend, loan, pass, pay, peddle, refund, render, rent, repay, sell, serve, trade*

(14) verbs of future having: *advance, allocate, allot, assign, award, bequeath, cede, concede, extend, grant, guarantee, issue, leave, offer, owe, promise, vote, will, yield*

As Rappaport Hovav and Levin (2008: 146) discuss, verbs of future having fail to entail successful transfer in either realisation variant, because the idiosyncratic 'sublexical modality component' in their roots restrict the possible worlds in which successful transfer holds (see Koenig & Davis, 2001:85 for their analysis of *promise*). This study will not discuss the inference patterns across the alternating verb classes, but focuses on the emergence of the uses of *to*PPs to express Recipients with verbs lexicalising only caused possession regardless of any one verbs specific entailments and inferences across realisation variants or contexts.

The verbs of the classes under investigation alternating in PDE cannot directly be assumed to be present in ME with identical meaning and usage and the classes by Levin (1993) might also be missing ME verbs of giving and future having that are no longer in use in PDE. To construct the set of verbs to be queried for ME in the PPCME2, the verbs of giving and future having classed by Levin (1993) as alternating in the dative alternation in PDE are taken as the starting point. These lexemes are then traced back in terms of their ME forms and classed concerning their entry date into English and their language of origin according to the online version of the Oxford English Dictionary (OED, Proffitt, 2015) and the Middle English Dictionary (MED, McSparran, 2001). The uses listed for these lexemes in ME are checked for the presence of a caused possession meaning. The resulting list of lexemes is revised and verified using the MED Reverse Lookup tool from the BASICS Toolkit (Percillier, 2018) and the historical thesaurus function of the OED and ME lexemes with appropriate meanings fitting into the caused possession category are added to the set of verbs to be investigated. The set of lexemes is limited to verbs entering English during or before ME and 1500 CE is used as the cut off point for an acceptable entry date, yielding the following sets of ME verbs of giving and future having for the corpus study, shown in tables 1 and 2.

Table 1: ME predecessors of verbs of giving as classed in Levin (1993) and other ME verbs of this class

Lex_OED	OED_entry date	Lex_MED	MED_ID	Origin
feed	c950	fēden	15435	non-French
give	a855	yēven	53944	non-French
let v1	c893	lēten	25257	non-French
lend v2	a900	lēnen (v3)	25108	non-French
pass	c1225	passen	32556	French
pay v1	a1225	paien	32178	French
refund v1	1386	refŏunden	36424	French
render	1380	rendren	36770	French
rent v2	c1400	renten (v1)	36825	French
repay v1	1439	repaien	36841	French
sell	c950	sellen	39312	non-French
NA	*NA*	isellen	23435	non-French
serve	c1175	serven (v1)	39583	French
beset (obs.,7)	c1230	bisetten, 5a	4790	non-French
deal (obs., 6a)	a1250	delen, 3	10945	non-French
i-yeve (obs.)	c1275	ayēven	3354	non-French
yark (obs., c)	a1400	yarken, 4	53768	non-French
weve (obs., 4)	c1400	weven (v2)	52404	non-French
yate (obs., 3)	c1400	yeten	53933	non-French
administer (2a)	a1425	administren	513	French
minister (obs.)	1340	ministren	27842	French
bestow	c1315	bistouen	4899	non-French
quit	?c1225	quĭten	35686	French

The lexemes' entry identification numbers in the MED are used to query for all forms for these lexemes occurring with the alternations' variants in the lemmatised version of the PPCME2.

7.2 Research Questions and Hypothesis

The quantitative study aims to answer the following primary research question:

> RQ1: Do *to*-datives with native English verbs of giving and future having occur diachronically before, after or simultaneously with *to*-datives with copied French verbs of the same classes during ME?

The results drawn from the corpus data could be taken to suggest structural change caused language-internally, following the analyses by McFadden (2002) and De Cuypere (2015), only if native verbs occur in the *to*-dative construction before copied French verbs do. If copied French verbs of caused possession appear with the *to*-dative simultaneously or before native verbs of

Table 2: ME predecessors of verbs of future having as classed in Levin (1993) and other ME verbs of this class

Lex_OED	OED_entry date	Lex_MED	MED_ID	Origin
advance	a1250	avauncen	3110	French
allot	1473	alotten	1252	French
assign	1297	assīgnen	2618	French
award	c1386	awarden	3239	French
bequeath	OE (c1440)	biquethen	4703	non-French
extend	c1330	extenden	15020	non-French
grant	a1250	graunten	19274	French
issue	?a1400	issŭen	23507	French
leave	eOE	lēven (v1)	25339	non-French
offer	eOE	offren	30313	non-French
owe	OE	ouen	31051	non-French
forgive	c900	foryēven, 5a	17381	non-French
promise	1430	prŏmisen	34875	conversion from copied n.
will v2 (2b)	c825	willen (v1)	52797	non-French
yield	c825	yę̄lden	53804	non-French
proffer	c1300	profren	34832	French
shall	c700	shulen (v1)	40162	non-French
pledge	?a1439	pleğğen	33652	conversion from OF n.

the same class do, an analysis taking the *to*-dative to be a structure adopted into English via the complete copying of French verbs of caused possession including their argument structure and its subsequent extension to native English verbs must be considered when accounting for the emergence of the dative alternation during ME. A working hypothesis along these lines is phrased in (H).

> H: The *to*-dative marking of RECIPIENT arguments in English is the result of global copying of French verbs of caused possession into English during ME and the extension of their copied argument structure to native verbs of the same semantic class.

Some etymologically French verbs of transfer of possession like ME *paien* "pay" copied from OF *paier* during ME start alternating with the DOC some time after their integration and regularly alternate in PDE (Levin, 1993; Pinker, 1989). As stated in Section 2.2.2 Latinate verbs show the DOC variant only when the stress pattern is assimilated to the native stress pattern (Pinker, 1989). The nature of the data available for this time period renders any observations on the phonological assimilation of the copied verbs into ME nearly impossible and assumptions on the basis of spelling are mostly speculative. When exactly phonological adaption must have had occurred can only be tentatively assumed from the first uses of these copied verbs with the DOC in the data, as only verbs which are perceived as native or at least non-foreign lexical items by the speaker may occur in the DOC (Pinker, 1989).

The timing of the onset of copied French verbs of caused possession showing the DOC variant is only of secondary interest and not central to answering the research question RQ1, but may be taken to indicate a general point of adoption and sufficient assimilation of the copied elements to the native stress pattern and grammar of the ME basic code. To this end, a secondary research question that this study aims to answer is formulated in RQ 2.

> RQ2: When do copied French verbs of giving and future having start realising the DOC variant to express RECIPIENT arguments of ditransitive verbs lexicalising caused possession?

Findings on that score could corroborate the results from the investigation of the *to*-dative variant and underpin the importance of the ongoing process of adoption and assimilation copied elements undergo after their initial insertion into the basic code. In any case, they will provide insight into the general progression of the copying of French verbs into English and might also offer points of departure for further studies.

7.3 The Corpus

The PPCME2, 3rd release (Kroch & Taylor, 2000) is a syntactically annotated 1.2 million word corpus of 55 ME text samples of various genres, including documents of law, handbooks on various subjects, medical and philosophical texts, homilies, sermons, rules, religious treatises, historical accounts, a travelogue, biographies of saints lives, and fiction and romance texts as well as versions of the bible (PPCME2-Release4/info/texts-by-genre). The corpus contains metadata for date of composition and date of manuscript of each text and is chronologically subdivided into the following four subperiods: M1 (1150–1250 CE), M2 (1250–1350 CE), M3 (1350–1420 CE), and M4 (1420–1500 CE). Diachronic classification as well as other bibliographic information like foreign language influences are relevant factors in this study and sample sizes across these conditions will be taken into account in the quantitative analysis.

The present study is conducted on the lemmatised version of the PPCME2 created as part of the BASICS project. This version of the corpus is enriched with added metadata for verb lemma and language of origin and provides the basis for even more detailed computerised searches.

7.4 Formulation of Queries

To obtain ME data representing the structures under investigation, queries for active uses of specific ME lemmas co-occurring with the DOC and the *to*-dative construction respectively are compiled. All queries are posed using the query format compatible with CorpusSearch and run using the CorpusSearch programme (Randall, 2010).

The node specification for all queries is set as `IP*` to account for all clausal instances of the queried verbs. To query for the DOC variant of the dative alternation the query term `[(NP-OB1 hassister NP-OB2)]` is used as it is specific to this construction in the annotation

of the PPCME2. To query for the *to*-dative variant the query term [(NP-OB1 hassister PP)AND (PP idominates P)AND (P idoms to|two|tu|te|tho|ta|tol|onto|on-to|unto|un-to|vnto|vn-to)] is formulated. Spelling variants of the preposition *to* and combinations with *un/on* [11] are included. Both terms are combined with the query term for active uses of the lexical verbs under investigation. The lexical verbs are queried using their MED identification number as included in the metadata for lexical verbs in the lemmatised version of the PPCME2. In the following formulations of the basic queries (i) and (ii) this slot is kept blank and is indicated with an underscore.

i. ([1]VAG|VB* dominates *m=_____@*)AND ([1]VAG|VB* hassister [2]NP-OB1)AND ([2]NP-OB1 hassister [3]NP-OB2)

ii. ([1]VAG|VB* dominates *m=_____@*)AND ([1]VAG|VB* hassister [2]NP-OB1)AND ([2]NP-OB1 hassister [3]PP)AND ([3]PP idominates [4]P)AND ([4]P idominates to|two|tu|te|tho|ta|tol|onto|on-to|unto|un-to|vnto|vn-to)

The indices attached in square brackets to the syntactic tags in (i) and (ii) ensure that the elements satisfying these positions in the AND-coordinated query terms found by CorpusSearch are the same identical item in each instance marked with the same index in the query term and not two separate elements headed by the same POS-tag dominated (immediately or not) by the same IP* node.

7.5 Method and Procedure

Data for native English and copied OF verbs of the semantic verb classes specified in section 7.1 is gathered from the lemmatised version of the PPCME2 (Kroch & Taylor, 2000) for both variants of the dative alternation implementing the queries formulated in section 7.4. All queries are posed and run for each lemma implementing the CorpusSearch programme (Randall, 2010).

The returned hits yield a set of raw frequencies for both query conditions. The penn2svg tool from the BASIC Toolkit (Percillier, 2018) is used to generate syntactic tree diagrams in the SVG format from the CorpusSearch output files to prepare the output for manual annotation. Using an annotation tool[12] all hits are reviewed and manually annotated. False positives are identified and excluded and the remaining hits are coded manually for pronominality of the indirect object or *to*-complement respectively and the lemma filling this argument position as well as its animacy. Idiomatic and phrasal uses[13] of the queried verbs (e.g. *lēten blǭd* "to let bood"*; yēven batail(le)* "to give battle/war/armed combat, to fight"; *yēven/setten bĭsne/ensaumple* "give/provide a (good) example"), object complements (e.g. *yēven* THEME$_{\text{animate}}$ *to wīf*

[11] As the combinations *on-to* and *un-to* occur with the same verbs and in the same texts and contexts as the simple preposition *to*, they are assumed to be closely related to the simple preposition (Zehentner, 2018: 159)

[12] The tool annot.py was provided by courtesy of Michael Percillier.

[13] See Levin & Rappaport Hovav (2005) and specifically Larson (1988) and Bresnan and Nikitina (2003) for accounts of idiomatic evidence in dative alternation research. All phrasal or idiomatic uses found in the present study showed fixed THEMES, but variable RECIPIENTS.

(to) RECIPIENT$_{\text{animate}}$ "to give (to) someone as a wife") and resultative constructions (e.g. *yēven to dēth/quale* "to give to death/agony/torment") as well as uses of the queried lemmas which arguably do not lexicalise events of caused possession (e.g. *yēven* MED meaning 7b "devote"; *foryēven* MED meaning 1 "forgive", MED, McSparran, 2001) are excluded at this point (see also De Cuypere, 2015; Zehentner, 2018: 156).

In the next step, this manual annotation is enriched with metadata of the texts included in the PPCME2 (PPCME2-RELEASE-4/). This yields bibliographic information about the texts and Helsinki time period classification for each occurrence. Extra-linguistic factors like foreign language influences and translation from French might influence the distribution of prepositional datives and DOCs significantly (Trips & Stein, 2019) and gathering this information allows to control for possible effects of French influence on the texts. To achieve this, texts are classed as either "French-based" or "Other" using the metadata provided in the corpus documentation of the PPCME2, adopting the classification in Trips & Stein (2019)[14]. Texts are classified concerning their representation of the Helsinki subperiods of ME using the chronologic metadata for the manuscript date of the source texts provided for the PPCME2, following the classifications made in the lemmatised version of the PPCME2. These metadata provide the basis for the observation of diachronic patterns for each lemma in each text condition.

The sample sizes across the Helsinki periods are unevenly distributed and the sample for M3 has by far the highest word count. What is more, when classifying the texts for presence of French influence or translation it becomes obvious that the extent of "French-based" texts is far smaller than that of "Other" texts. The total word count of the PPCME2 is split according to the French-based text conditions and time periods into samples representing each time period in each text origin condition (see table 3).

Table 3: Word counts for sample sizes across text conditions (PPCME2-RELEASE-4/WORDCOUNT-PPCME2)

text origin / Helsinki periods	**M1**	**M2**	**M3**	**M4**	**total**
other texts	242,774	52,661	323,311	196,655	815,401
French-based texts	41,571	93,914	168,102	75,365	378,952
total	284,345	146,575	491,413	272,020	1,194353

These word counts serve as the basic reference point for all relativised frequencies calculated in this work to account for the difference in size of text samples across both the time periods and the origins of text. The revised total frequencies resulting from manual annotation are then put in relation to the total number of text words in each of the samples for the ME subperiods and text conditions of the PPCME2 data by the factor of occurrence per 10.000 text words. The resulting diachronic relative frequency patterns of the attestations of both variants in both text conditions are then compared across native and copied French verbs to answer

[14] See appendix A.1 for word counts of individual texts and classification by date and genre (`http://www.ling.upenn.edu/ppche/ppche-release-2016/PPCME2-RELEASE-4/`) as well as French language influence (Trips & Stein, 2019).

the research question RQ1 formulated in section 7.2.

To put the quantitative data into the appropriate context of language contact, the specific contact situation of medieval English and French during ME and its changing dynamics (Trips & Stein, 2019: 236f.) of social dominance and bilingualism is aligned with the ongoing processes of language change in accordance with Johanson's (2002) *code-copying framework* with the shift in dominance relations roughly lining up with the subdivision between Helsinki-subperiods M2 and M3. Finally the results are discussed in the context of previous diachronic research on the *to*-dative construction (De Cuypere , 2015; McFadden, 2002; Trips & Stein, 2019; among others) and interpreted in the context of language contact with OF using Johanson's (2002) *code-copying framework* and language contact accounts of structural change (Heine & Kuteva, 2005: 152f; Heine, 2009) to resolve the hypothesis H stated in section 7.2.

7.6 Results

The queries yielded hits for most queried lexemes in the class of *give*-type verbs. The queries for *administren*, *bisetten*, *bistouen*, *refounden*, *repaien*, *rendren*, *renten* and *isellen* returned no hits for either variant. While the copied French verb *administren* might not occur due to its entry into the lexicon late in the ME period (see tables 1 and 2 in 7.1), the copied French verbs *refounden, repaien, rendren* and *renten* are first attested in English between 1380 CE and 1439 CE (according to the OED, Proffitt, 2015), but do not occur with either variant in the data. Using the lemma search tool form the BASICS Toolkit (Percillier, 2018), identification of word forms for these lexemes occurring in the PPCME2 was attempted, but the queries returned no results. The non-existence of these four lexemes in the lemmatisation of the PPCME2 could be caused by two circumstances: Firstly, the verbs do not occur in the PPCME2 data in any word form, or secondly, these lexemes do occur in the PPCME2 data, but the word forms they present in the texts were not identified as corresponding to the lemmas during the lemmatisation process. Non-lemmatised queries using extensive word form lists to query for these lexemes could resolve this issue, but for this thesis the effort involved with creating these queries seems excessive to possibly gain a few hits for each lemma.

The queries for the native verbs *besetten*, *isellen* and *bistouen* returning without results is unexpected, but the lack of data seems plausible. While the forms of *isellen* are also lemmatised as *i-* prefixed word forms of *sellen*, the verbs *besetten* and *bistouen* might simply be not used frequently enough in ME or only occur in other constructions in the PPCME2, though this is not confirmed by simple queries for these lexemes. Another prefixed variant of a ME verb of giving is *ayēven*. Occurrences classed as this lemma could also be lemmatised as the verb *yēven*, as is the case for some wordforms[15]. Still *ayēven* as an independently lemmatised lexical verb yields 4 hits in the basic queries.

The queries for all verbs of future having returned no hits for the lexemes *alotten*, *awarden*, *extenden* and *issuen* and *pleğğen*. The lexeme *extenden*, which is copied from Latin, and the copied *awarden* are first attested in 1330 CE and 1386 CE respectively, according to the OED,

[15]This is suggested by comparing the listed word forms in the lemma search for both lemmas in the BASICS Toolkit, release 2 (Percillier, 2018).

but might not be used frequently enough in ME or only occur in other constructions in the PPCME2 and only develop the ability to occur in the DOC and *to*-dative in later periods of English. The verb *pleğğen* is a conversion of a copied OF noun and is first attested in 1439 CE, according to the OED, shortly before the end of the period covered by PPCME2 data.

Like the verbs of giving *refounden, repaien, rendren* and *renten* the copied French verbs of future having *alotten* and *issuen* do not occur in the data and are not linked to any occurring word forms in the lemmatised version of the PPCME2 according to the BASICS Toolkit lemma search tool (Percillier, 2018). They also are not queried again after the fact implementing word form lists.

What is more, note that all 6 original hits for the lexeme *passen* yielded by the basic queries were eliminated as false positives leaving the data set for this lexeme empty. Two instances of the form *paie* were ambiguously lemmatised as *passen* and *paien*, and actually represented *paien*, two occurrences lexicalise a caused motion meaning of movement along a path. One is a use of the participle *passyd* expressing the passing of time and one use is the gerund *passyng* modally modifying an NP.

In the following sections the quantitative results of the corpus study will be presented by verb class across native and copied French verbs for all queried lexemes that returned results. Generally absolute frequencies were very low for all lexemes but *yēven*, which was to be expected to some degree due to overall frequencies of use for the investigated lexemes and the overall corpus size. All results will be presented as relative frequencies of occurrence per 10.000 text words for each time period and origin of text sample[16].

7.6.1 Verbs of Giving

As can be seen from table 4,[17] *to*PPs used with native ME verbs of giving occur with animate *to*-complement NPs constituting Recipients as early as M1, well before uses of *to*PPs with animate *to*-complements occur with verbs of giving copied from OF[18]. Regardless of French language influences on the texts, the copied verbs of giving investigated here only show the *to*-dative use of *to*PPs with animate *to*-complements in M3 and M4.

*To*PPs expressing inanimate goals only occur with the lexeme *yēven* in the data. Some occurrences of inanimate *to*-complements can be understood to be cases of metonymic transfer, where an inanimate noun is used to refer to an animate entity associated with the inanimate noun (De Cuypere, 2015; see also section 6.1). The data for the group of verbs of giving show such uses of *to*PPs like the one in (15) only with the lexemes *yēven* and *paien* (see also section 8.1 for more examples).

[16] See appendices A.2 and A.3 for absolute frequency data.

[17] All tables in this chapter consistently use the labels *REC* for animate NPs, *MT* for cases of metonymic transfer from uses of inanimate NPs to animate Recipients, and *GOAL* for inanimate NPs without context pointing to metonymic transfer to an animate recipient.

[18] Copied verbs are presented in *italics* in all following tables, see also tables 1 and 2 in section 7.1 for verb origin.

Table 4: Relative frequencies of occurrence of *to*PPs second objects with verbs of giving across Helsinki periods and French-based and other texts by animacy of *to*-complement NP

Lexeme &	**toDat1_M1**			**toDat1_M2**			**toDat1_M3**			**toDat1_M4**		
text origin	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**
yēven_O	0.3295	0	0	5.2661	0	0	4.3611	0.1547	0.0309	2.2374	0.1017	0.0509
yēven_F	0	0	0	9.3914	0.6389	0	4.2236	0.3569	0	1.1942	0	0
fe̦den_O	0	0	0	0	0	0	0	0	0	0,0509	0	0
fe̦den_F	0	0	0	0	0	0	0	0	0	0	0	0
dēlen_O	0	0	0	0	0	0	0.1856	0	0	0	0	0
dēlen_F	0	0	0	0	0	0	0	0	0	0	0	0
lēnen_O	0	0	0	0	0	0	0	0	0	0	0	0
lēnen_F	0	0	0	0	0	0	0	0	0	0	0	0
lēten_O	0.0412	0	0	0	0	0	0	0	0	0	0	0
lēten_F	0	0	0	0.1065	0	0	0.1785	0	0	0	0	0
ayēven_O	0.0412	0	0	0	0	0	0	0	0	0	0	0
ayēven_F	0	0	0	0	0	0	0	0	0	0	0	0
yarken_O	0	0	0	0	0	0	0	0	0	0	0	0
yarken_F	0	0	0	0	0	0	0	0	0	0	0	0
sellen_O	0	0	0	0	0	0	0.0619	0	0	0.2543	0	0
sellen_F	0	0	0	0.1065	0	0	0.1785	0	0	0	0	0
wēven_O	0	0	0	0	0	0	0	0	0	0	0	0
wēven_F	0	0	0	0	0	0	0.0595	0	0	0	0	0
yēten_O	0	0	0	0	0	0	0.0309	0	0	0	0	0
yēten_F	0	0	0	0	0	0	0	0	0	0	0	0
ministren_O	0	0	0	0	0	0	0.0619	0	0	0.1017	0	0
ministren_F	0	0	0	0	0	0	0	0	0	0	0	0
paien_O	0	0	0	0	0	0	0.1237	0	0	0.2543	0.1526	0
paien_F	0	0	0	0	0	0	0.0595	0.1785	0	0	0	0
serven_O	0	0	0	0	0	0	0	0	0	0	0	0
serven_F	0	0	0	0	0	0	0	0	0	0	0	0
quĭten_O	0	0	0	0	0	0	0.0309	0	0	0	0	0
quĭten_F	0	0	0	0	0	0	0	0	0	0	0	0

(15) *and he ȝaf a sauyour* ***to Israel***.
and he gave a saviour to Israel.
'and he gave a saviour to Israel.'

(CMPURVEY,I,17.779)

Concerning the research question RQ1 posed in section 7.2, true *to*-datives constituted by *to*PPs taking animate NPs as complements occur with native ME verbs of giving before copied OF verbs of giving do. From this very limited data alone, an analysis of *to*-dative as being an argument realisation pattern copied from OF as part of complete copies of OF verbs of giving cannot be considered plausible.

The lexemes *serven, passen, paien* and *quĭten* are copied from OF in M1 (see table 1 in section 7.2), but only start showing the *to*-dative in M3. As can be seen from table 5 below, the earliest copied verb *serven* starts showing the DOC as early as M1, while *paien* starts showing the DOC in M2 and *quĭten* in M3. The verb *ministren*, which is first attested in the OED in 1340 CE and is obsolete in PDE, does not start alternating at all during ME and if the queries had yielded any results for *administren*, the same behaviour could be expected, as PDE *administer* does not alternate (Levin, 1993).

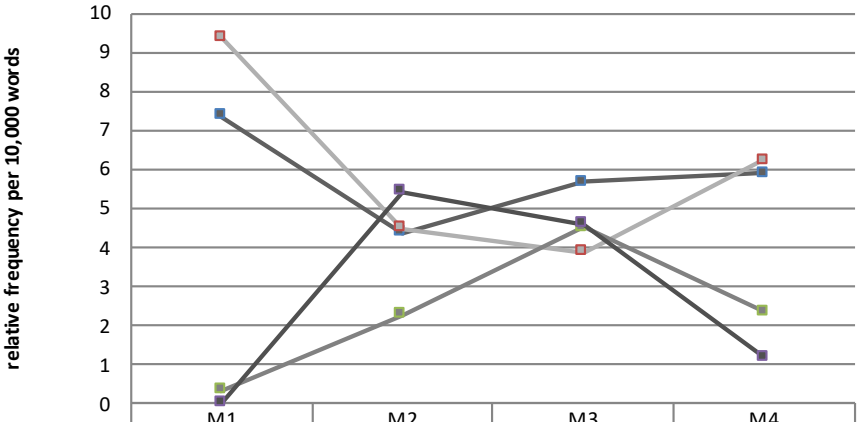
From this data on the use of some copied verbs of giving occurring with the native DOC argument realisation pattern of ditransitive verbs lexicalising caused possession the impression can be gleaned that these verbs were sufficiently integrated into the ME basic code in terms of assimilated pronunciation and stress pattern as well as available grammatical form and relation patterns to be used with a native argument realisation pattern. Note, however, that the four copied verbs showing the DOC in ME all have a monosyllabic base, eliminating the need to assimilate their native stress pattern to that of the ME basic code (cf. section 2.2.2). Recent work on the integration of copied argument structure by Trips (forthcoming) that suggests that no integration conflict occurred at the integration of some of the OF verbs of caused possession, will be taken into account in the discussion in chapter 8.

Results for *yēven* The frequency patterns of both variants of the dative alternation across all verbs and both text conditions across the Helsinki periods do not yield highly informative results except for the lexeme *yēven*, as for most lexemes data is too scarce and some queries yield hits for only one time period. Figure 1 shows the diachronic frequency pattern for both syntactic realisation variants of the dative alternation for *yēven* in both French-based and other texts. These relative frequencies reflect the combined occurrences of both true animate NP Recipients and Recipients referenced by metonymic transfer from inanimate NPs, only excluding inanimate goals. This frequency pattern is roughly consistent with the one found by Trips and Stein (2019). The slight difference in frequencies is most probably due to the circumstance that the lemmatised version available for the present study was not yet available for Trips and Stein's (2019) investigation, and the list of word forms used might have deviated slightly from the list of word forms associated with the lemma *yēven* now that lemmatisation is complete.

This specific diachronic pattern for the frequency of the syntactic variants of the dative alternation can be taken to show that the *to*-dative variant emerges in ME. The data presented

Table 5: Relative frequencies of occurrence of DOCs with verbs of giving across Helsinki periods and French-based and other texts by animacy of indirect object

Lexeme & text origin	**DOC_M1**			**DOC_M2**			**DOC_M3**			**DOC_M4**		
	REC	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**
yēven_O	7.2907	0.0824	0.0412	4.1777	0.1899	0	5.5983	0.0619	0.0309	5.8987	0	0
yēven_F	9.3816	0	0	4.4722	0	0	3.8667	0	0.0595	6.2363	0	0
fẹ̄den_O	0	0	0	0	0	0	0.0309	0	0	0	0	0
fẹ̄den_F	0	0	0.2406	0	0	0	0	0	0	0	0	0
dēlen_O	0.1236	0	0	0	0	0	0	0	0	0	0	0
dēlen5_O	0	0	0	0	0	0	0	0	0	0	0	0
lēnen_O	0.6179	0	0	0	0	0	0	0	0	0.0509	0	0
lēnen_F	0	0	0	0.4259	0	0	0	0	0	0.2654	0	0
lēten_O	0	0	0	0.1899	0	0	0	0	0	0	0	0
lēten_F	0	0	0	0.2130	0	0	0.0595	0	0	0	0	0
ayēven_O	0.1236	0	0	0	0	0	0	0	0	0	0	0
ayēven_F	0	0	0	0	0	0	0	0	0	0	0	0
yarken_O	0.3708	0	0	0	0	0	0	0	0	0	0	0
yarken_F	0	0	0	0	0	0	0	0	0	0	0	0
sellen_O	0.0824	0	0	0	0	0	0.0309	0	0	0.0509	0	0
sellen_F	0	0	0	0.1065	0	0	0.0595	0	0	0	0	0
wēven_O	0	0	0	0	0	0	0	0	0	0	0	0
wēven_F	0	0	0	0	0	0	0	0	0	0	0	0
yēten_O	0.1236	0	0	0	0	0	0	0	0	0	0	0
yēten_F	0	0	0	0	0	0	0	0	0	0	0	0
ministren_O	0	0	0	0	0	0	0	0	0	0	0	0
ministren_F	0	0	0	0	0	0	0	0	0	0	0	0
passen_O	0	0	0	0	0	0	0	0	0	0	0	0
passen_F	0	0	0	0	0	0	0	0	0	0	0	0
paien_O	0	0	0	0.1899	0	0	0.0619	0	0	0.1526	0	0
paien_F	0	0	0	0.1065	0	0	0.1785	0	0	0	0	0
serven_O	0.0412	0	0	0	0	0	0.0309	0	0	0	0	0
serven_F	0	0	0	0	0	0	0	0	0	0	0	0
quĭten_O	0	0	0	0	0	0	0.0309	0	0	0.1526	0	0
quĭten_F	0	0	0	0	0	0	0	0	0	0	0	0



	M1	M2	M3	M4
DOC_O	7.3731	4.3676	5.6602	5.8987
DOC_F	9.3815	4.4722	3.8667	6.2363
toPP_O	0.3295	2.2787	4.5158	2.3391
toPP_F	0	5.4305	4.5806	1.1942

Figure 1: Argument realisation pattern for *yēven* in the PPCME2 across M1 - M4, relative frequencies per 10,000 words in the samples for each text condition

in figure 1 shows that and its use with *yēven* peaks in M3 in texts not directly influenced by French and in M2 in French-based texts. These frequency peaks do not directly correspond to those observed by Trips and Stein (2019), but still these differences alone do not discount or contradict the analysis made by Trips and Stein (2019) for *yēven*. At the beginning of the ME period, DOCs strongly outweigh *to*-datives, but by M2 this distribution has shifted significantly and *to*-datives and DOCs occur nearly equally frequent in the PPCME2 data. Relative to the significantly (χ^2, $p<0.001$) increasing realisations of *yēven with to*-datives from M1 to M2 in both French-based and other texts, the frequency of *yēven* with the DOC in both French-based and other texts decreases significantly (χ^2, $p<0.01$ in French-based texts and $p<0.05$ in other texts) from M1 to M2. Between M2 and M3 DOCs keep decreasing in French-based texts, but start increasing again in other texts. Meanwhile *to*-datives keep increasing in other texts from M2 to M3, but start decreasing slightly in French-based texts.

Reflecting the results of Trips & Stein (2019: 256ff.) the frequency of *to*-datives with *yēven* decreases significantly (χ^2, $p<0.001$) in both types of texts from M3 to M4 when intense language contact and the strong influence of French on ME tail off (Trips & Stein, 2019: 261), stifling the further spreading of the *to*-dative to more verbs of giving and verbs of other classes. This seems to be continuing the trend starting in M2 in French-based texts and turning the trend around in other texts. Generally from M1 to M4 the frequency of prepositional RECIPIENT marking increases significantly (χ^2, $p<0.001$) in other texts, but the difference in frequencies between M1 and M4 is not significant in French-based texts (χ^2, $p<0.05$).

What is more, the uses of DOC slightly increase again from M3 to M4 in both text types, as the constraint on the use of the DOC as formulated by Pinker (see section 2.2.2) as the Latinate Constraint takes hold in English on later copied verbs leading to the picture of the

dative alternation observable in PDE (cf. Trips & Stein, 2019: 262).

The comparison of frequencies across French-based texts and other texts show that in M2 the frequencies of *to*-datives with y*ēven* are significantly higher in French-based texts than in other texts (χ^2, p<0.01). The frequency of DOCs with y*ēven* in M3 is significantly higher in other texts than in French-based texts. None of the other differences in frequency across the origin of text condition for the relative frequencies of y*ēven* with both syntactic variants of the dative alternation in the PPCME2 data were significant.

The argument realisation patterns across the ME periods vary for the other verbs of giving investigated in this corpus study in the data. Prepositional datives with *sellen* and *ministren* and *paien* peak in other texts in M4, while *lēten* and *sellen* peak in French-based texts in M3. For all other lexemes of this class occurrences for only one of the Helsinki-periods respectively were found in the data and no trends could be deduced.

7.6.2 Verbs of Future Having

The quantitative results for the investigated set of ME verbs of future having occurring in the *to*-dative construction presented in table 6 show a similar picture to the one presented by the data for the verbs of giving. *To*PPs with animate RECIPIENT *to*-complements occur with the native verbs of future having *ouen*, *willen* and *offren* as early as M1 in the data, while verbs of this class copied from OF only show true *to*-datives starting in M2. The verb *graunten* is copied around 1250 CE according to the OED (Proffitt, 2015) and soon after starts showing both syntactic variants of the dative alternation in M2. The lexemes *assīgnen* and *profren* enter ME in 1297 CE and 1300 CE respectively, but only start showing the *to*-dative construction in M3 and M4 and only in texts classified as not being directly influenced by French, as is apparent from table (6).

The conclusion concerning RQ1 must then be that according to the presented data the *to*-dative did not occur with copied verbs of future having before occurring with native verbs of this class.

Taking into account the quantitative data for verbs of future having occurring in the DOC variant presented in table 7, one must note that the copied lexemes *graunten* and *profren* show the DOC in other texts already in M2 and later on occur in M3 and M4 with the DOC in both French-based and other texts. The copied lexeme *assīgnen* starts realising the DOC variant in French-based texts in M3 and in other texts only in M4. The occurrence of copied verbs first in other texts with the DOC argument realisation before DOCs are used with copied verbs in texts based on a French original is to be expected, as scribes producing texts influenced by French are expected to adhere somewhat to the OF model code argument realisations used in the French template texts i.e. prepositional RECIPIENT marking, (cf. Allen, 2006: 214f). The use of copied *assīgnen* with the DOC in French-based texts and with *to*-dative in other texts in M3, before it is used with *to*-dative in French-based texts, thus seemingly opposes the expected picture, but might become clearer after discussion in the context of recent work by Trips (forthcoming). Still this pattern as well as unexpected patterns for other investigated verbs could be artefacts of the comparatively small text sub-samples and the low frequency of

Table 6: Relative frequencies of occurrence of *to*PP second objects with future having verbs across Helsinki periods and French-based and other texts classed by animacy of *to*-complement

Lexeme & text origin	**toDat_M1**			**toDat_M2**			**toDat_M3**			**toDat_M4**		
	REC	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**
biquēthen_O	0	0	0	0	0	0	0	0	0	0	0.0509	0
biquēthen_F	0	0	0	0	0	0	0.0595	0	0	0	0	0
foryēven_O	0	0	0	0	0	0	0	0	0	0	0	0
foryēven_F	0	0	0	0	0	0	0.0595	0	0	0	0	0
lēven_O	0	0	0	0	0	0	0.1856	0.0309	0	0.0509	0	0
lēven_F	0	0	0	0.1065	0	0	0.0595	0	0	0	0	0
ouen_O	0.0412	0	0	0	0	0	0.0309	0	0	0.1526	0	0
ouen_F	0	0	0	0	0	0	0.2974	0	0	0.2654	0	0
shulen_O	0	0	0	0	0	0	0	0	0	0	0	0
shulen_F	0	0	0	0.1065	0	0.1065	0	0	0	0	0	0
willen_O	0.0412	0	0	0	0	0	0	0	0	0.0509	0	0
willen_F	0	0	0	0.1065	0	0	0.0595	0	0	0	0	0
yę̄lden_O	0	0	0	0	0	0	0	0	0	0.1017	0	0
yę̄lden_F	0	0	0	0	0	0	0.1190	0	0	0	0	0
offren_O	0.0824	0	0	0.3798	0	0	0.4639	0.0309	0.0309	0.1017	0	0
offren_F	0	0	0	0.4259	0	0	0.1785	0	0	0	0	0
prŏmisen_O	0	0	0	0	0	0	0	0	0	0.0509	0	0
prŏmisen_F	0	0	0	0	0	0	0	0	0	0	0	0
avauncen_O	0	0	0	0	0	0	0	0	0.0309	0	0	0
avauncen_F	0	0	0	0	0	0	0	0	0	0	0	0
assīgnen_O	0	0	0	0	0	0	0.0928	0	0	0.1017	0	0
assīgnen_F	0	0	0	0	0	0	0	0	0	0	0	0
graunten_O	0	0	0	0.1899	0	0	0.2784	0	0	0.2034	0.0509	0
graunten_F	0	0	0	0.1065	0	0	0.1190	0	0	0	0	0
profren_O	0	0	0	0	0	0	0.0309	0.0309	0	0.0509	0	0
profren_F	0	0	0	0	0	0	0	0	0	0	0	0

this lexeme.

The copied lexeme *avauncen* does not occur in the DOC in the data at all and only occurs once with an inanimate GOAL *to*PP in M3 lexicalising the meaning *(to) promote in position/status* listed as meaning (3a) in the MED entry for this lexical verb (McSparran, 2001). Levin (1993) lists the PDE cognate of *avauncen* as alternating between the DOC and the *to*-dative, but this pattern must have its onset later on in the development of English.

One more verb and its etymology must be specially noted in the class of future having verbs. While the etymon of ME *prõmisen* is copied from OF or Latin, it is not originally copied as a verb, but as the noun *promise, promesse* or Latin *prōmissum*. The descendant ME noun *prõmis* or *prõmisse* is then converted to the verb *prõmisen*. This specific genesis is the reason why *prõmisen* is not treated as a verb copied from French in this thesis, as the converted noun cannot have brought the argument structure of a corresponding verb into ME by way of copying from French. The same is the case for ME *pleğğen*, as mentioned in section 7.1, which is first attested in English in 1439 CE and is converted from the copied noun *pleğğe* (< OF *plege*) according to the OED. However, the queries did not yield any results for *pleğğen* in the PPCME2, probably because it enters English quite late in ME.

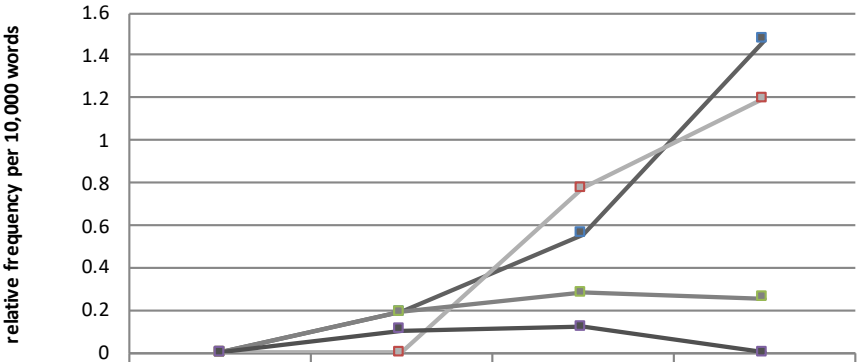
The frequency patterns of both syntactic realisations of the dative alternation across the verbs of future having and across both text conditions and the Helsinki periods do not yield insightful results, as for most lexemes data is too scarce and some queries return hits for only one time period. Figure 2 shows the diachronic frequency pattern for both syntactic variants of the dative alternation for the copied lexeme *graunten* in both French-based and other texts and figure 3 shows the corresponding frequencies for the native lexeme *offren*. These relative frequencies reflect the combined occurrences of both true animate NP RECIPIENTS and RECIPIENTS referenced by metonymic transfer from inanimate NPs, only excluding inanimate goals. The lexemes *graunten* and *offren* stand in for the class of future having verbs to exemplarily illustrate the emergence of the dative alternation with future having verbs during ME.

Results for *graunten* The fact that *graunten* does not occur in M1 at all is due to its entry date into ME around 1250 CE, as has been mentioned. The significant increase of DOCs occurring with *graunten* in both French-based (χ^2, $p<0.01$) and other (χ^2, $p<0.05$) texts from M2 to M4 indicates a successful integration of this lexeme into the ME basic code and functional compatibility with the native argument realisation pattern. However, the increase in the frequency of *to*-datives used with *graunten* from M2 to M4 is not significant in either French-based or other texts. Comparing the frequency of occurrence of each variant across text-conditions shows that *to*-datives with *graunten* occur more often in French-based texts than in other texts across the periods M2 – M4, but the difference is not significant in any Helsinki period. Computing these differences for occurrences of *graunten* in the DOC shows that DOCs occur more frequently in other texts in M2 and M4, while they occur more often in French-based texts in M3, when bilingualism was widespread. Again, none of these differences were significant.

When comparing the relative frequencies of DOCs and *to*-datives occurring with *graunten* it is obvious that *graunten* realises the DOC far more often than the *to*-dative. As Trips (forthcoming) notes in recent work on the integration of copied argument structure and integration

Table 7: Relative frequencies of occurrence of DOCs with future having verbs across Helsinki periods and French-based and other texts classed by animacy of indirect object

Lexeme & text origin	**DOC_M1**			**DOC_M2**			**DOC_M3**			**DOC_M4**		
	REC	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**	**REC**	**MT**	**GOAL**
biquēthen_O	0	0	0	0	0	0	0	0	0	0	0	0
biquēthen_F	0.2406	0	0	0	0	0	0	0	0	0	0	0
foryēven_O	0	0	0	0	0	0	0	0	0	0	0	0
foryēven_F	0	0	0	0	0	0	0.0595	0	0	0	0	0
lēven_O	0.1648	0	0	0	0	0	0.0309	0	0	0.1017	0	0
lēven_F	0	0	0	0	0	0	0.1190	0	0	0.2654	0	0
ouen_O	0.1648	0	0	0	0	0	0.3712	0	0	0.0509	0	0
ouen_F	0	0	0	0	0	0	0	0	0	0.3981	0	0
shulen_O	0	0	0	0	0	0	0	0	0	0	0	0
shulen_F	0	0	0	0.2130	0	0	0	0	0	0	0	0
willen_O	0.0412	0	0	0	0	0	0	0	0	0	0	0
willen_F	0	0	0	0.4259	0	0	0.0595	0	0	0	0	0
yę̄lden_O	0.0824	0	0	0.1899	0	0	0.0928	0	0	0	0	0
yę̄lden_F	0.2406	0	0	0	0	0	0	0	0	0	0	0
offren_O	0.8238	0	0	0	0	0	0	0	0	0	0	0
offren_F	0.2406	0	0	0.4259	0	0	0	0	0	0	0	0
prŏmisen_O	0	0	0	0	0	0	0	0	0	0	0	0
prŏmisen_F	0	0	0	0	0	0	0	0	0	0.9288	0	0
avauncen_O	0	0	0	0	0	0	0	0	0	0	0	0
avauncen_F	0	0	0	0	0	0	0	0	0	0	0	0
assīgnen_O	0	0	0	0	0	0	0	0	0	0.2034	0	0
assīgnen_F	0	0	0	0	0	0	0.1190	0	0	0	0	0
graunten_O	0	0	0	0.1899	0	0	0.5258	0.0309	0	1.4747	0	0
graunten_F	0	0	0	0	0	0	0.7733	0	0	1.1942	0	0
profren_O	0	0	0	0.1899	0	0	0.0928	0	0	0.2543	0	0
profren_F	0	0	0	0	0	0	0.0595	0	0	0.3981	0	0



	M1	M2	M3	M4
DOC_O	0	0.1899	0.5567	1.4747
DOC_F	0	0	0.7733	1.1942
toPP_O	0	0.1899	0.2784	0.2543
toPP_F	0	0.1065	0.119	0

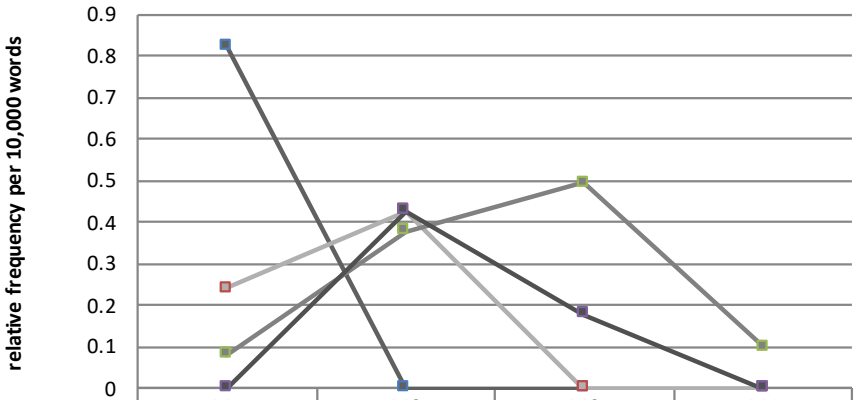
Figure 2: Argument realisation pattern for *graunten* in the PPCME2 across M1 - M4, relative frequencies per 10,000 words in the samples for each text condition

conflicts, some OF verbs of transfer, including *graunter* "grant", could realise RECIPIENT arguments both as bare NPs and as *à*PPs. These verbs could have been copied and integrated into ME with their NP realisation pattern without an integration conflict taking place. This can account for the relative frequencies found for *graunten* quite neatly. A possible scenario of global copying of these verbs with both the NP and PP pattern will be discussed in chapter 8.

The general lack of occurrences in M1 cannot be taken as the baseline to evaluate the increase in frequency of DOCs or *to*-datives with *graunten*, as it is not due to a lack of presence of prepositional RECIPIENT marking in the basic code, but due to the fact that *graunten* had not yet been copied into ME in M1 and therefore did not occur at all in any construction.

Results for *offren* In contrast, for the ME lexeme *offren* the lack of data for *to*-datives being used in French-based texts in M1 can be taken as the baseline for comparing frequencies, as *offren* most definitely already is an established lexical verb used more or less frequently in M1. According to the OED (Proffitt, 2015), *offren* is copied in OE from Latin as *offrian* and its etymological and phonological proximity to its OF cognate verb *offrir* poses optimal conditions for its use in French-based ME texts as well as in other texts.

The frequency of use of *offren* with *to*PPs increases significantly from M1 to M3 in other texts (χ^2, $p<0.05$) and from M1 to M2 in French-based texts, though not significantly. Regarding the only condition for which occurrences of *offren* were found in all periods, namely *to*-datives in texts not influenced by French, still only limited statements can be made concerning the emergence of the *to*-dative variant with this lexeme in ME. Parallel to Trips and Stein's (2019) findings for *yēven* the *to*-dative peaks in frequency of use with *offren* in M3 in other texts and significantly decreases after intense language contact with French subsides approaching the end of the ME period in M4 (χ^2, $p<0.05$). The data for *to*-datives with *offren* in French-



	M1	M2	M3	M4
DOC_O	0.8238	0	0	0
DOC_F	0.2406	0.4259	0	0
toPP_O	0.0824	0.3798	0.4949	0.1017
toPP_F	0	0.4259	0.1785	0

Figure 3: Argument realisation pattern for *offren* in the PPCME2 across M1 - M4, relative frequencies per 10,000 words in the samples for each text condition

based texts can be taken to mirror this pattern only to a limited extent, as the frequency of *to*-datives in these texts peaks in M2 and starts decreasing in the data when language contact was still intense and bilingualism widespread and no hits were found for M4. The frequency of *to*PPs with *offren* in French-based texts decreases after M2, but the difference is not significant; neither between M2 and M3 nor M2 and M4. The differences in frequency across the origin of text condition are not significant for either variant or any Helsinki-period.

8 Discussion

As is apparent from the description of the quantitative results, none of the investigated verbs of giving or future having copied from French can be evidenced showing the *to*-dative with an animate Recipient before native verbs of the same semantic class do in the PPCME2 (Kroch & Taylor, 2000).

The verbs of giving *serven, passen, paien*, and *quĭten* are copied between 1175 CE and 1225 CE in M1 according to the OED (Proffitt, 2015) but only *serven* occurs at all in M1, and *paien* occurs in M2, both showing the DOC. The *to*-dative with copied verbs of giving is only attested in the data for the verbs *paien*, *quĭten* which are copied around 1225 CE, and *ministren*, which is copied in 1340 CE, and no occurrences are dated earlier than M3. The native lexemes *yēven*, *lēten* and *ayēven* from the class of verbs of giving investigated in this thesis show *to*-datives with animate Recipients as early as M1, with *sellen* following suit in M2 and *dēlen*, *wēven* and *yēten* in M3. Just like for verbs of giving, native verbs of future having like *ouen*, *willen* and *offren* occur with animate Recipients in the *to*-dative construction as early as M1. According to the OED (Proffitt, 2015), none of the investigated copied verbs in the class of future having

verbs are even copied from OF before 1250 CE, which also marks the methodological divide between Helsinki-periods M1 and M2.

The occurrences of *to*-datives with native lexemes of the semantic classes of giving and future having in M1 can thus only be construed as the *to*-dative already being a possible pattern of argument realisation for RECIPIENT arguments in eME, before verbs of the same classes were copied from OF, which could have brought prepositional RECIPIENT marking as their native argument realisation into the ME basic code via global copying. Consequently the results admit only one answer to the research question RQ1: Verbs of giving and future having copied from OF during ME start showing the *to*-dative later in ME than native verbs of the same semantic classes do.

The conclusion following from this is that t*o*-dative was not globally copied with the investigated copied verbs of giving or future having from OF, but is either an argument realisation pattern emerging from a process of internal language change as many researchers suggest (De Cuypere, 2015; McFadden, 2002; Zehentner, 2018), or is extended from semantically related verb classes which first licensed the *to*-dative as a possible argument realisation to express animate RECIPIENT arguments by globally copying OF verbs which prepositionally marked dative in the model code (cf. Trips & Stein, 2019; Trips, forthcoming). This investigation must conclude that the verbs of giving and future having cannot have been the classes in which the *to*-dative was first licensed if it is indeed a structure copied from French.

8.1 The Animacy of RECIPIENTS

Aside from determining the diachronic distribution of the dative alternation's variants across native and copied verbs investigated in the corpus study during ME, this thesis also aims to illustrate the relative occurrence of animate RECIPIENTS and inanimate goals with verbs lexicalising caused possession in ME by coding the data returned in the corpus study for the animacy of the IO. This is done in light of De Cuypere's (2015) analysis of the *to*-dative as emerging via a gradual semantic extension of the allative *to*PP.

De Cuypere (2015) describes the situation in OE for *to*PPs as being established with verbs of caused motion and communication, regularly expressing inanimate goals and animate addressees/RECIPIENTS of these events. However, with verbs of caused possession, like the classes of verbs of giving and future having investigated in this thesis, De Cuypere (2015) finds only few uses of *to*PPs in OE which moreover do not occur with human entities as *to*-complement NPs. As described in section 6.1, De Cuypere (2015) identifies uses of inanimate NPs denoting locations which can be construed as referring to animate entities capable of being RECIPIENTS by metonymic transfer and analyses these as being embryonical to the use of *to*PPs to express animate RECIPIENT arguments of verbs lexicalising caused possession. If such a gradual extension were the case, we might expect to find a gradual shift from predominantly inanimate *to*PP uses to predominantly animate *to*PP uses with the investigated verbs in ME, with metonymic uses of inanimate *to*PPs serving as bridging contexts (Allen, 2006; cf. Szczepaniak, 2009).

The gathered data on the animacy of the non-THEME object NPs in the investigated struc-

tures paint a clear picture: All throughout ME, uses of *to*PP with animate NPs predominate and only few of the uses of inanimate NPs used in *to*PPs cannot be construed as referring to animate entities by metonymy. Considering the distribution of the data across the animacy scale (16; as defined in section 3.3) adopted in this work

(16) <*human - organisation/community - animal/abstract animate entity - inanimate entity*>

the following observations can be made:

As is evident from the results in section 7.6 the vast majority of *to*-complements are categorised as RECIPIENTS, falling into the categories human (17), organisation/ community (18) or animal/ abstract animate entity (19). The frequent uses of proper names and common nouns referring to God, Christ and the Christian devil are classed under abstract animate entities. Communities like ethnic groups, nations and religious communities occur far less frequently than human entities and abstract animate entities, but were mostly expressed by use of a proper name and in some cases possessive constructions of the forms "*Þe folk/pēple of* LOCATION".

(17) *and his partye he gaf* ***to pore men***,
and his part he gave to poor men,
'and he gave his part to poor men'

(CMMIRK,5.93)

(18) *and ȝaf greet fraunchise and onour* ***to the Jewis***.
and gave great freedom and honour to the Jews.
'and gave great freedom and honour to the Jews.'

(CMPURVEY,I,36.1716)

(19) *What þyng shal y ȝeue* ***to our Lord*** *for alle þyng þat he haþ ȝeuen to me?*
What thing shall I give to our Lord for all thing that he has given to me?
'What thing shall I give to our Lord for all things that he has given to me?'

(CMEARLPS,143.6260)

In the data, *to*PPs denoting inanimate entities occur with the lexemes *yēven* and *paien* in the class of *give*-verbs and with *biquēthen, lēven, offren, profren*, and *graunten* in the class of future having verbs. Most of these occurrences of inanimate *to*-complements can be interpreted to be cases of metonymic transfer, where an inanimate noun is used to refer to an animate entity closely associated with the inanimate noun (see sections 3.3 and 6.1). For example see uses of the lexemes *yēven* and *paien* with *to*PPs in the data for which such an interpretation is possible like the ones in (20, =15 repeated here) and (22) from non-French-based texts and (21) from a French-based text.

(20) *and he ȝaf a sauyour* ***to Israel***.
and he gave a saviour to Israel.
'and he gave a saviour to Israel.'

(CMPURVEY,I,17.779)

(21) *& ofte he ȝaf grete ȝiftes* ***to þe hous****, wherfore it was made ryche.*
and often he gave great gifts to the house, wherefore it was made rich.
'and he often gave great gifts to the house, wherefore it was made rich.'
(CMBRUT3,124.3760)

(22) *and compelled þe lond to pay her old tribute* ***to Rome****,*
and forced the land to pay her old tribute to Rome,
'and forced the county to pay her old tribute to Rome,'
(CMCAPCHR,61.882)

These instances clearly show inanimate NPs occurring as RECIPIENT-like goals. The named entity *Israel* in (20) refers not to the location of the country, but to the people originating from this country, or even more specifically the congregation of believers of a religion based there: the Jewish people. Similarly the common noun *hous* in (21) denotes not a location, but refers to a family or community of people, probably specified in the context. The named entity *Rome* in (22) denotes a location, but refers not to the location itself of the people living there, but the institution of the reigning government located there. The referents of the *to*-complements in (20)-(22) are thus shifted on the animacy scale from denoting inanimate entities to referencing a community or organisation by metonymy.

The distribution of animacy of the non-THEME object arguments occurring with the investigated ditransitive verbs across the Helsinki-periods provides no substantial evidence for a gradual semantic extension of the uses of *to*PPs by metonymy in ME. Considering the fact that, while OE seems to include such uses only embryonically (De Cuypere, 2015), these uses of *to*PPs with animate RECIPIENTS constitute the vast majority of *to*PPs with the investigated verbs in all conditions in the PPCME2, the extension of *to*PP marking from goals to RECIPIENTS might not have occurred via the bridging contexts of metonymic uses. The wide dispersion of only a few cases of metonymic uses of inanimate NPs across the ME sub-periods does not allow for any other kind of conclusion at this point.

8.2 Possible Extension to Other Alternating Verb Classes

Considering the quantitative results of the present study and the conclusion that the verbs of future having and giving copied in ME cannot be interpreted as being the locus of innovation for the *to*-dative construction, the consequence presents itself, that the *to*-dative was not globally copied into ME with OF ditransitive verbs lexicalising caused possession.

Another class of verbs that alternate in PDE are verbs lexicalising caused motion, e.g. *send*-type verbs. The *verb-sensitive approach* by Rappaport Hovav & Levin (2008) sketched in chapter 4 argues that verbs of sending a well as the verbs of throwing are associated both with the caused possession meaning and caused motion meaning in a direct mapping from the respective event schemes formalising these meaning variants to the DOC and *to*-dative realisation variants of the dative alternation (Rappaport Hovav & Levin, 2008: 132). While both *send*- and *throw*-type verbs entail change of location, only *send*-type verbs lexicalise caused motion and thus are three-argument verbs (Rappaport Hovav & Levin, 2008: 135). In line with Jackendoff's

(1990) argument that *throw*-type verbs in contrast to *send*-type verbs are two-argument verbs lexicalising events of an entity instantaneously imparting force on a second entity, we would exclude them from the proposed extension of this study. What is more is that the assumed multiple meanings associated with *send*-type verbs reflect both the OE use of allative *to*PPs in a caused motion meaning and the emerging use of *to*PPs as marking RECIPIENT arguments of verbs lexicalising caused possession.

An initial attempt at compiling a set of verbs of sending reveals that the lexemes copied from OF belonging to this class are copied between circa 1225 CE and 1382 CE, according to the OED (Proffitt, 2015).

Table 8: Preliminary list of ME predecessors of verbs of sending as classed in Levin (1993) and other ME verbs of this class

Lex_OED	OED_entry date	Lex_MED	MED_ID	Origin
i-send (obs.)	971	isę̆nden	23442	non-French
a'send (obs.)	c1000	asenden	2443	non-French
NA	*NA*	tǫ̆senden	46413	non-French
wain (v1, obs.)	?c1200	wainen (v1, a/b)	51523	non-French
ship (v1; 3)	c900	shippen (1d)	39978	non-French
transmit	a1400–50	transmitten	46793	non-French
remit (12a)	1379	remitten	36730	non-French
deliver (8a)	?c1225	dēliveren (4a)	10989	French
convey (v1)	a1375	cŏnveien	9612	French
transfer	1382	transferren	46762	French
transport	c1374	transporten	46805	French

Having said this, one must also note that native *send*-type verbs and communication verbs already occur with *to*PPs in OE (Cassidy, 1938; De Cuypere, 2015; Allen, 2006) and their argument realisation pattern can consequently not be innovated by global copying of the *to*-dative from OF with verbs of the same class, as this realisation of goals and RECIPIENT arguments is already established in OE (De Cuypere, 2015: 14). Thus the integration of OF ditransitive verbs of sending would not have presented an integration conflict[19] in the terms defined by Holler and Scherer (2010).

The value such an extension of the present study to verbs of sending and communication might still have to a language contact approach to the rise of the *to*-dative is, that it could provide an illustration of the possible frequency effects language contact with OF had on the use of *to*PPs marking RECIPIENT-like arguments with verbs that already used *to*PP to this end in OE. To achieve this, data for both the OE and ME period must be analysed. If the frequency of use of *to*-datives with *send*-verbs were to show a rapid and significant increase simultaneously with rising bilingualism during ME, whereas it only gradually increased before contact with

[19] See section 8.3 and Trips (forthcoming) for a scenario of integration conflict and unproblematic integration of argument structure with ME ditransitive verbs.

OF, we might suggest that the OF *à*PP marking of dative Recipients might have served as the model for frequential copying (Johanson, 2002; see section 5.1) of the structural 'dative' marking of Recipient arguments. The influence of the OF model code in which prepositional 'dative' marking of Recipients by the *à*PP is far more frequent than bare NP realisation of 'dative' arguments (Trips, forthcoming) would have led to an increase of *to*PP as the equivalent basic code pattern of realising Recipient arguments of ditransitive verbs like *send*-verbs and verbs of communication, which could already realise both bare NP and *to*PP Recipients (De Cuypere, 2015; Allen, 2006). The frequency pattern of the prepositional argument realisation pattern would in this case not be copied globally with verbs of these classes, but detached from its original form, expanding over ME verbs and classes, the OF cognates of which show this pattern in the model code.

This suggestion could provide a possible consolidation of analyses of the *to*-dative as a case of language internal change and the lack of explanatory sufficiency of these analyses to explain why *to*-datives marking animate Recipients with verbs of caused possession increase so rapidly in ME after being only rarely attested in OE (De Cuypere, 2015). It unifies the emergence of *to*-datives realising animate Recipients by extension from the OE allative *to*PP construction used with verbs of caused motion and communication with the effects language contact with OF had on the argument structure for experiencer verbs and the ditransitive dative verb *yēven* as identified by Trips and Stein (2019). Contact with OF, a language that structurally marked 'dative', might well have catalysed the rise of the *to*-dative in ME by way of frequential copying of the prepositional realisation pattern onto semantically related ME verbs and classes. However, this speculative suggestion must be thoroughly examined on a larger basis of corpus data than that of the present study (see also section 8.4).

8.3 Copied French Verbs of Giving and Future Having used with DOC in ME

In sections 2.2.2 and 7.2 the foundational expectation was laid out, that verbs of the investigated classes copied from OF during ME would be copied with their native argument realisation of prepositional 'dative' marking and only later on start showing the DOC variant. The analysis planned to generally take the occurrence of any of the copied verbs of giving or future having with the DOC in the data to hint at successful integration and assimilation of the lexemes in question into the ME basic code.

However, the quantitative results of the corpus study presented in section 7.6 do not fulfill this expectation. In fact, quite the opposite pattern is revealed for some of the copied verbs of giving and future having, which in fact start showing the DOC variant in the data soon after being copied and only much later starting to show the *to*-dative variant, if at all. An attempt at accounting for this data is made in this section.

As Trips (forthcoming) states OF verbs like *granter* 'grant', *paier* 'pay', *ministrer* 'provide' and *prometter* 'promise' could express Recipient arguments both as an NP and a PP in OF. Trips (forthcoming) argues that these verbs were integrated into the basic code with their native pattern of expressing the Recipient as a bare NP, constituting a case of code-match with the OE basic code DOC for expressing Recipients of transfer events. This could be

taken to account for the fact that *paien* starts showing the DOC in M2 in both French-based and other texts before occurring with the *to*-dative in M3, after being copied *a*1225 CE. *Serven* shows similar behavior and shows the DOC in M1 shortly after being copied in 1175 CE, but does not occur with the *to*-dative in the data at all.

The lexeme *minister* does not show the DOC at all and only occurs with the *to*-dative in M3 and M4 after being copied in 1340 CE. While *ministren* has since become obsolete, the related lexeme *administren*, which returned no hits for the DOC or *to*-dative from the PPCME2, shows both bare NP and *à*PP RECIPIENT marking in modern French, but does not alternate in PDE and only occurs with the *to*-dative. This pattern might be occurring because *administren* was copied in the latest stages of ME around 1425CE, when the influence of OF had all but disappeared. What is more, the double origin of *administren* from either French or Latin, or even partly both according to the OED, might have emphasised the foreignness of *administren* in the speakers' perception and the Latinate Constraint on verbs of Romance or Latin origin might have started to take hold at this time and restricted *administren* from showing the DOC. The copied verbs *assīgnen* and *quĭten* start showing both the DOC and *to*-dative in M3 and *profren*, which is copied circa 1300 CE shows the DOC in M2, shortly after integration and only starts showing the *to*-dative in M3 in the data and *graunten* starts showing the DOC and *to*-dative simultaneously in M2.

These quantitative data found in the present corpus study support Trips' (forthcoming) analysis, but a qualitative analysis of the argument realisation of these verbs in OF and in ME after copying is necessary to corroborate the tentative findings of the present study on this issue. Whether OF verbs of caused possession that could express RECIPIENTS as both bare NPs or *à*PPs were indeed integrated into ME with their native pattern of expressing the RECIPIENT argument as a PP, resulting in an integration conflict resolved by the global copying of the prepositional dative into ME, or whether they were integrated with the code-matching bare NP realisation pattern and later extended to uses with *to*-dative, can only be investigated verb by verb.

Occurrences of DOC used with copied OF verbs that could not express RECIPIENTS as bare NPs in the model code, but only as *à*PPs, can still be taken to indicate successful integration of these lexemes into the ME basic code, following Eisenberg's (2012) work on the integration of copied material and observations made on Pinker's (1989) Latinate Constraint. At this point in the argument we cannot justifiably assume this to be the case for any of the investigated copied verbs, but only suggest that *graunten*, *assīgnen* and *quĭten* might have been copied globally with both argument realisation options, as each of these copied verbs starts showing the *to*-dative and the DOC simultaneously (see tables 4–7 in sections 7.6.1 and 7.6.2).

8.4 The Issue of Limited Data and Possible Extension of the Corpus Study

When interpreting the quantitative results on any of the issues raised in this discussion the fact that the empirical base for this thesis has turned out to be insufficiently small must be considered.

The very limited number of occurrences and the general lack of results for some lexemes and

time periods cannot generally be taken to represent non-existent availability of the queried structures in the grammar of the scribes, but may be the combined statistical effect of the limited amount of available data for the ME period, the general low frequency of use of ditransitive constructions and the general low frequencies of use of some of the lexemes under investigation and must therefore not be seen as negative evidence. The wide dispersion of occurrences of *to*-datives found for both native and copied French ditransitive verbs as well as the occurrences of copied verbs with the DOC in both French-based and other texts must indeed be exploited fully to gain a better picture of the integration of copied French verbs into the ME basic code and the possible long-term effect their global copying might have had on the basic codes' argument structure concerning the realisation of RECIPIENT arguments.

If, however, any one text includes a high count of instances for the DOC and shows no instances of the *to*-dative, it's likely that *to*-dative simply wasn't available in the grammar underlying the text's composition (McFadden, 2002). If this is the case for a whole sub-period in either French-based or other texts and the difference in frequencies is significant, the same scenario must be considered. After M2, for which McFadden (2002) describes for the five most frequent ditransitive verbs *give*, *grant*, *show*, *teach*, and *tell* that no text that has more than 5 total dative sentences lacks the *to*-dative, we might thus assume that even if any lexeme investigated in this thesis shows no *to*-datives in M3 or M4 after realising them in M2, the scribe's or composer's grammar includes the *to*-dative as a viable argument realisation option.

To gain a more representative picture of the emergence of the *to*-dative construction with both native and copied verbs of giving and future having, an extension of this investigation to a larger set of historical data like the Parsed Corpus of Early English Correspondence (PCEEC, Taylor, Nurmi, Warner, Pintzuk, and Nevalainen, 2006), the Parsed Corpus of Middle English Poetry (PCMEP, Zimmermann, 2015) and the Corpus of Middle English Prose and Verse (MEC, McSparran et al., 2002) would be advisable.

8.4.1 Accounting for Regional Differences

As is commonly known, labels for historical stages of languages like *ME* do not signify a unified language spoken throughout all parts of England during this time, but only a convenient term to subsume the regional dialects spoken in different areas (Mossé, 1975). Five main dialects are commonly identified: *Kentish* in the South-East, *Southern* in the South-West, the *East-* and *West-Midland* dialects in the Midlands and the *Northern* dialect bordering on Scotland and *Scots*. This thesis does not provide quantitative or qualitative analyses of the factor of ME regional dialects in the rise of the *to*-dative and cannot make any statements on how the rise of the *to*-dative and the concomitant emergence of the dative alternation progressed in any one regional dialect. While classification of the PPCME2 texts for the main five regional dialects of ME is available, an analysis of the corpus data returned for the queries of the corpus study in chapter 7 is not expected to yield enlightening results, as data points are generally too few and too widely dispersed across time periods, text conditions and not least lexemes. An analysis of the spread of *to*-datives across the dialects of ME on the basis of a larger data set would be intriguing concerning both the relative behavior of the dialects to this emerging

argument realisation as well as possible implications of the regional spread of the *to*-dative on a language contact approach to the *to*-dative.

9 Conclusion and Outlook

The corpus study providing the empirical base for this thesis presents a quantitative account of the dative alternations syntactic variants in use with verbs lexicalising caused possession during ME while taking into account the animacy of the supposed RECIPIENT arguments to effectively distinguish between uses of *to*-datives to mark RECIPIENTS and uses of allative *to*PPs marking goals. As discussed, inanimate GOAL arguments marked by the preposition *to* are taken to represent allative constructions if they are not extended by metonymy to signify animate RECIPIENTS, while animate RECIPIENTS are analysed as representing uses of the *to*PP to mark structural 'dative' in the *to*-dative variant of the dative alternation. The analysis shows that RECIPIENT uses are predominant with all investigated verbs across all time and text conditions.

This work does not provide a definitive formal syntactic or semantic analysis of the *to*-dative and its ascent in the English language, nor did it aim to, as the analyses on both of these aspects and the encompassing issue of the argument structure of verbs with two different argument realisations like the dative alternation are plenty and an extensive review of the common arguments would surpass the scope of this work.

Instead, this thesis primarily investigated the diachronic pattern of the rise of the *to*-dative not generally across all verbs alternating in PDE, or more specifically their ME predecessors and cognates, but from a perspective of language contact with French. It illustrates the relative timing of the *to*-dative being used with native and copied verbs respectively as well as the onset of copied verbs being used with the DOC using data from the PPCME2.

The data show that native verbs of the investigated semantic classes already occur in the *to*-dative with animate RECIPIENTS capable of possession before French verbs of the same class are even copied into ME. Having said this, this thesis leaves a quantitative analysis of the use of animate *to*PPs with *send*-verbs and other alternating caused motion verbs as well as the extension of the corpus study to a larger empirical basis and the integration of the factor of region into the quantitative analysis to future research. All these possible amendments to the present study could broaden the picture gained here to reveal more illuminating results on the primary research question.

This work concludes that the hypothesis posed in chapter 7.2, that global copying of verbs lexicalising caused possession from OF into ME effected the emergence of the dative alternation, cannot be maintained. Drawing from the quantitative analysis of PPCME2 data for the dative alternation variants with both native and copied verbs of giving and future having the present study has revealed that neither the copied verbs of giving nor the copied verbs of future having investigated in this study can be identified as the equivalence position into which prepositional dative marking has been first licensed by way of global copying of verbs of the corresponding classes from OF.

Structural dative marking might still be the effect of global copying of OF argument structure of psych-verbs during ME, as suggested by Trips and Stein (2019) and Trips (forthcoming), but other verb classes must be investigated to clearly map the process of licensing of the *to*-dative variant of marking RECIPIENTS of possessional transfer events lexicalised by ditransitive dative verbs in ME, if this phenomenon is to be analysed as a case of copying as described in Johanson's (2002) framework.

What is still feasible is the frequency patterns' implication that the global copying of OF verbs lexicalising transfer of possession might have had a catalytic effect on the language-internal structural language change beginning in OE with the loss of morphological case marking (Allen, 1995) and the extension of *to*PPs from marking spatial goals to marking 'dative' RECIPIENTS, be it by reanalysis or gradual extension (De Cuypere, 2015; McFadden, 2002). This internal language change, which eventually led to the use of the *to*-dative construction with verbs of transfer of possession and the preposition *to* marking RECIPIENT phrases in lieu of a morphological dative marker to mark RECIPIENT arguments, could have been strengthened in M2 and M3 by the growing influx of verbs from the OF model code that could realise RECIPIENTS as PPs, a realisation that had only recently been innovated in lOE (De Cuypere, 2015). Trips and Stein (2019, see also section 6.2) reason that the influence of OF on ME was most strong during the phase of widespread bilingualism described in section 5.2, which is consistent with the frequency data found in this thesis. This suggestion treads a middle ground between structural changes in a language code being internally motivated by general tendencies of language change on the one hand, and changes in a language code being wholly externally motivated by being "borrowed", or rather imposed or adopted, from a foreign model code on the other hand.

When analysing language change, one must keep in mind that internal structural change as described by Allen (1995) and contact-induced structural change as suggested by Trips & Stein (2019) might be at work parallel and reinforcing one another in a dynamic language system and that these two realms of influences are not mutually exclusive in their workings (Heine & Kuteva, 2005: 11f.).

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Appendix

A.1 Classification of PPCME2 Texts by Helsinki-Period, French Text Influences and Genre

text	genre	period/date	period as classed in PPCME2-lemmatised	language influences	word count
cmaelr3	rule	m23 c1400	M3	Other	17039
cmaelr4	relig_treatise	m4 a1450	M4	French-based	11196
cmancriw-1	relig_treatise	m1 c1230	M1	Other	49225
cmancriw-2	relig_treatise	m1 c1230	M1	Other	15269
cmastro	handbook_astro	m3 a1450	M3	Other	6867
cmayenbi	relig_treatise	m2 1340	M2	French-based	45945
cmbenrul	rule	m3 a1425	M3	Other	18312
cmboeth	philosophy	m3 ?a1425_c1380	M3	French-based	10682
cmbrut3	history	m3 c1400	M3	French-based	50377
cmcapchr	history	m4 a1464	M4	Other	52850
cmcapser	sermon	m4 c1452	M4	Other	1469
cmcloud	relig_treatise	m3 a1425	M3	Other	15723
cmctmeli	philosophy/fiction	m3 c139	M3	French-based	17518
cmctpars	relig_treatise	m3 c1390	M3	French-based	30626
cmearlps	bible	m2 c1350	M2	French-based	44454
cmedmund	biography_life_of_saint	m4 c1450_1438	M4	French-based	3872
cmedthor	relig_treatise	m34 c1440_?1350	M3	Other	14046
cmedvern	relig_treatise	m3 c1390	M3	Other	12920
cmequato	handbook_astro	m3 c1392	M3	Other	6307
cmfitzja	sermon	m4 ?1495	M4	Other	5806
cmgaytry	sermon	m34 c1440	M3	Other	5276
cmgregor	history	m4 c1475	M4	Other	37057
cmhali	relig_treatise	m1 c1225_ ?c1200	M1	Other	8869
cmhilton	relig_treatise	m34 a1450_a1396	M3	Other	4930
cmhorses	handbook_medicine	m3 a1450	M3	Other	6313
cminnoce	sermon	m4 1497	M4	Other	4269
cmjulia	biography_life_of_saint	m1 c1225_?c1200	M1	Other	7180
cmjulnor	relig_treatise	m34 c1450_c1400	M3	Other	5083
cmkathe	biography_life_of_saint	m1 c1225_ ?c1200	M1	Other	9032
cmkempe	relig_treatise	m4 c1450	M4	Other	64015
cmkentho	homily	m1 a1150_c1125	M1	Other	4287
cmkentse	homily	m2 c1275	M2	French-based	3515

text	genre	period/date	period as classed in PPCME2-lemmatised	language influences	word count
cmlamb1	homily	m1 a1225	M1	Other	6462
cmlambx1	homily	mx1 a1225	M1	Other	20653
cmmalory	romance	m4 a1470	M4	French-based	60297
cmmandev	travelougue	m3 ?a1425_c1400	M3	French-based	51715
cmmarga	biography_life_of_saint	m1 c1225_ ?c1200	M1	Other	8523
cmmirk	sermon	m34 a1500_a1415	M3	Other	57944
cmntest	bible	m3 c1388	M3	Other	11001
cmorm	homily_poetry	m1 ?c1200	M1	Other	73576
cmotest	bible	m3 a1425_a1382	M3	Other	9910
cmpeterb	history	m1 c1150	M1	Other	7333
cmpolych	history	m3 a1387	M3	Other	46326
cmpurvey	relig_treatise	m3 c1388	M3	Other	39836
cmreynar	fiction	m4 1481	M4	Other	8799
cmreynes	handbook_other	m4 1470–1500	M4	Other	8913
cmrollep	relig_treatise	m24 a1450_ ?1348	M2	Other	17914
cmrolltr	relig_treatise	m24 c1440_a1349	M2	Other	17708
cmroyal	sermon	m34 c1450_c1425	M3	Other	6349
cmsawles	homily	m1 c1225_ ?c1200	M1	Other	4304
cmsiege	romance	m4 c1500	M4	Other	7757
cmthorn	handbook_medicine	mx4 c1440	M4	Other	5720
cmtrinit	homily	mx1 a1225	M1	French-based	41571
cmvices1	relig_treatise	m1 a1225_c1200	M1	Other	28061
cmvices4	relig_treatise	m34 c1450_c1400	M3	French-based	7184
cmwycser	sermon	m3 c1400	M3	Other	56168

A.2 Absolute Frequencies of Verbs of Giving in the PPCME2

A.2.1 Verbs of Giving in the *to*-dative Variant

Lexeme & text origin	toDat_M1			toDat_M2			toDat_M3			toDat_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
yēven 53944_Other	8	0	0	12	0	0	141	5	1	44	2	1
yēven 53944_French	0	0	0	45	6	0	71	6	0	9	0	0
feden15435_Other	0	0	0	0	0	0	0	0	0	1	0	0
feden15435_French	0	0	0	0	0	0	0	0	0	0	0	0
delen10945_Other	0	0	0	0	0	0	6	0	0	0	0	0
delen10945_French	0	0	0	0	0	0	0	0	0	0	0	0
lenen25108_Other	0	0	0	0	0	0	0	0	0	0	0	0
lenen25108_French	0	0	0	0	0	0	0	0	0	0	0	0
leten25257_Other	1	0	0	0	0	0	0	0	0	0	0	0
leten25257_French	0	0	0	1	0	0	3	0	0	0	0	0
ayēven3354_Other	1	0	0	0	0	0	0	0	0	0	0	0
ayēven3354_French	0	0	0	0	0	0	0	0	0	0	0	0
yarken53768_Other	0	0	0	0	0	0	0	0	0	0	0	0
yarken53768_French	0	0	0	0	0	0	0	0	0	0	0	0
foryēven17381_Other	0	0	0	0	0	0	0	0	0	0	0	0
foryēven17381_French	0	0	0	0	0	0	1	0	0	0	0	0
sellen39312_Other	0	0	0	0	0	0	2	0	0	5	0	0
sellen39312_French	0	0	0	1	0	0	3	0	0	0	0	0
weven52404_Other	0	0	0	0	0	0	0	0	0	0	0	0
weven52404_French	0	0	0	0	0	0	1	0	0	0	0	0
yeten53933_Other	0	0	0	0	0	0	1	0	0	0	0	0
yeten53933_French	0	0	0	0	0	0	0	0	0	0	0	0

Lexeme & text origin	toDat_M1			toDat_M2			toDat_M3			toDat_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
ministren27842_Other	0	0	0	0	0	0	2		0	2	0	0
ministren27842_French	0	0	0	0	0	0	0	0	0	0	0	0
passen32556_Other	0	0	0	0	0	0	0	0	0	0	0	0
passen32556_French	0	0	0	0	0	0	0	0	0	0	0	0
paien32178_Other	0	0	0	0	0	0	4	0	0	5	3	0
paien32178_French	0	0	0	0	0	0	1	3	0	0	0	0
serven39583_Other	0	0	0	0	0	0	0	0	0	0	0	0
serven39583_French	0	0	0	0	0	0	0	0	0	0	0	0
quiten35686_Other	0	0	0	0	0	0	1	0	0	0	0	0
quiten35686_French	0	0	0	0	0	0	0	0	0	0	0	0

A.2.2 Verbs of Giving in the DOC Variant

Lexeme & text origin	DOC_M1			DOC_M2			DOC_M3			DOC_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
yēven 53944_Other	177	2	1	22	1	0	181	2	1	116	0	0
yēven 53944_French	39	0	0	42	0	0	65	0	1	47	0	0
feden15435_Other	0	0	0	0	0	0	1	0	0	0	0	0
feden15435_French	0	0	1	0	0	0	0	0	0	0	0	0
delen10945_Other	3	0	0	0	0	0	0	0	0	0	0	0
delen10945_French	0	0	0	0	0	0	0	0	0	0	0	0
lenen25108_Other	15	0	0	0	0	0	0	0	0	1	0	0
lenen25108_French	0	0	0	4	0	0	0	0	0	2	0	0
leten25257_Other	0	0	0	1	0	0	0	0	0	0	0	0
leten25257_French	0	0	0	2	0	0	1	0	0	0	0	0
ayēven 3354_Other	3	0	0	0	0	0	0	0	0	0	0	0
ayēven 3354_French	0	0	0	0	0	0	0	0	0	0	0	0
yarken53768_Other	9	0	0	0	0	0	0	0	0	0	0	0
yarken53768_French	0	0	0	0	0	0	0	0	0	0	0	0
sellen39312_Other	2	0	0	0	0	0	1	0	0	1	0	0
sellen39312_French	0	0	0	1	0	0	1	0	0	0	0	0
weven52404_Other	0	0	0	0	0	0	0	0	0	0	0	0
weven52404_French	0	0	0	0	0	0	0	0	0	0	0	0
yeten53933_Other	3	0	0	0	0	0	0	0	0	0	0	0
yeten53933_French	0	0	0	0	0	0	0	0	0	0	0	0
ministren27842_Other	0	0	0	0	0	0	0	0	0	0	0	0
ministren27842_French	0	0	0	0	0	0	0	0	0	0	0	0
passen32556_Other	0	0	0	0	0	0	0	0	0	0	0	0
passen32556_French	0	0	0	0	0	0	0	0	0	0	0	0

Lexeme & text origin	DOC_M1			DOC_M2			DOC_M3			DOC_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
paien32178_Other	0	0	0	1	0	0	2	0	0	3	0	0
paien32178_French	0	0	0	1	0	0	3	0	0	0	0	0
serven39583_Other	1	0	0	0	0	0	1	0	0	0	0	0
serven39583_French	0	0	0	0	0	0	0	0	0	0	0	0
quiten35686_Other	0	0	0	0	0	0	1	0	0	3	0	0
quiten35686_French	0	0	0	0	0	0	0	0	0	0	0	0

A.3 Absolute Frequencies of Verbs of Future Having in the PPCME2

A.3.1 Verbs of Future-Having in the *to*-dative Variant

Lexeme &	toDat_M1			toDat_M2			toDat_M3			toDat_M4		
text origin	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
biquēthen4703_Other	0	0	0	0	0	0	0	0	0	0	1	0
biquēthen4703_French	0	0	0	0	0	0	1	0	0	0	0	0
foryēven 17381_Other	0	0	0	0	0	0	0	0	0	0	0	0
foryēven17381_French	0	0	0	0	0	0	1	0	0	0	0	0
lēven25339_Other	0	0	0	0	0	0	6	1	0	1	0	0
lēven25339_French	0	0	0	1	0	0	1	0	0	0	0	0
ouen31051_Other	1	0	0	0	0	0	1	0	0	3	0	0
ouen31051_French	0	0	0	0	0	0	5	0	0	2	0	0
shulen40162_Other	0	0	0	0	0	0	0	0	0	0	0	0
shulen40162_French	0	0	0	1	0	1	0	0	0	0	0	0
willen52797_Other	1	0	0	0	0	0	0	0	0	1	0	0
willen52797_French	0	0	0	1	0	0	1	0	0	0	0	0
yę̄lden53804_Other	0	0	0	0	0	0	0	0	0	2	0	0
yę̄lden53804_French	0	0	0	0	0	0	2	0	0	0	0	0
offren30313_Other	2	0	0	2	0	0	15	1	1	2	0	0
offren30313_French	0	0	0	4	0	0	3	0	0	0	0	0
prŏmisen34875_Other	0	0	0	0	0	0	0	0	0	1	0	0
prŏmisen34875_French	0	0	0	0	0	0	0	0	0	0	0	0
avauncen3110_Other	0	0	0	0	0	0	0	0	1	0	0	0
avauncen3310_French	0	0	0	0	0	0	0	0	0	0	0	0
assīgnen2618_Other	0	0	0	0	0	0	3	0	0	2	0	0
assīgnen2618_French	0	0	0	0	0	0	0	0	0	0	0	0

Lexeme & text origin	toDat_M1			toDat_M2			toDat_M3			toDat_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
graunten19274_Other	0	0	0	1	0	0	9	0	0	4	1	0
graunten19274_French	0	0	0	1	0	0	2	0	0	0	0	0
profren34832_Other	0	0	0	0	0	0	1	1	0	1	0	0
profren34832_French	0	0	0	0	0	0	0	0	0	0	0	0

A.3.2 Verbs of Future Having in the DOC Variant

Lexeme & text origin	DOC_M1			DOC_M2			DOC_M3			DOC_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
biquēthen4703_Other	0	0	0	0	0	0	0	0	0	0	0	0
biquēthen4703_French	1	0	0	0	0	0	0	0	0	0	0	0
foryēven17381_Other	0	0	0	0	0	0	0	0	0	0	0	0
foryēven17381_French	0	0	0	0	0	0	1	0	0	0	0	0
lēven25339_Other	4	0	0	0	0	0	1	0	0	2	0	0
lēven25339_French	0	0	0	0	0	0	2	0	0	2	0	0
ouen31051_Other	4	0	0	0	0	0	12	0	0	1	0	0
ouen31051_French	0	0	0	0	0	0	0	0	0	3	0	0
shulen40162_Other	0	0	0	0	0	0	0	0	0	0	0	0
shulen40162_French	0	0	0	2	0	0	0	0	0	0	0	0
willen52797_Other	1	0	0	0	0	0	0	0	0	0	0	0
willen52797_French	0	0	0	4	0	0	1	0	0	0	0	0
yę̄lden53804_Other	2	0	0	1	0	0	3	0	0	0	0	0
yę̄lden53804_French	1	0	0	0	0	0	0	0	0	0	0	0
offren30313_Other	20	0	0	0	0	0	0	0	0	0	0	0
offren30313_French	1	0	0	4	0	0	0	0	0	0	0	0
prŏmisen34875_Other	0	0	0	0	0	0	0	0	0	0	0	0
prŏmisen34875_French	0	0	0	0	0	0	0	0	0	7	0	0
avauncen3110_Other	0	0	0	0	0	0	0	0	0	0	0	0
avauncen3310_French	0	0	0	0	0	0	0	0	0	0	0	0
assīgnen2618_Other	0	0	0	0	0	0	0	0	0	4	0	0
assīgnen2618_French	0	0	0	0	0	0	2	0	0	0	0	0
graunten19274_Other	0	0	0	1	0	0	17	1	0	29	0	0
graunten19274_French	0	0	0	0	0	0	13	0	0	9	0	0

Lexeme & text origin	DOC_M1			DOC_M2			DOC_M3			DOC_M4		
	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL	REC	MT	GOAL
profren34832_Other	0	0	0	1	0	0	3	0	0	5	0	0
profren34832_French	0	0	0	0	0	0	1	0	0	3	0	0