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Article

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Alternations emerge and disappear: the network of dispossession constructions in the history of English

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Abstract: This paper focuses on two main issues regarding syntactic alternations and their development over time. On the one hand, it discusses the diachronic implications of alternations as involving multiple (rather than binary) choices. On the other hand, it shows that while studies are typically interested in the emergence of alternation relationships, there are also cases of diachronic loss of such. This is illustrated by zooming in on the history of a particular set of ditransitive verbs, viz. dispossession verbs such as *steal* or *rob*, and their connection to the well-known English dative alternation. Based on a quantitative analysis of different dispossession-constructions in corpora of Middle, Early Modern and Late Modern English, I demonstrate that the network of dispossession constructions has changed considerably over time – from a complex interaction between three overlapping patterns to a clear differentiation of two non-alternating constructions.

Keywords: constructional network; dative alternation; dispossession verbs; history of English; prepositions

1 Introduction

The present paper uses the example of verbs of dispossession in the history of English to explore two aspects pertaining to syntactic alternations from a diachronic construction grammar perspective. The first main point to be discussed here is that while much diachronic alternation research is concerned with connections being established over time, alternation relationships may also be

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lost, despite the (abstract) constructions themselves being maintained. The second point hones in on the fact that diachronic and synchronic alternation studies are mostly concerned with binary choices only, disregarding the fact that speaker choices are more complex than ‘clear-cut dichotomies’, and the potential role of additional options in the development of alternations (Arppe et al. 2010: 12–13).

The case study used to illustrate these issues is the history of a class of ‘ditransitive’ verbs, viz. verbs of dispossession/deprivation like *steal* or *rob*, expressing “a situation in which somebody *loses* rather than *receives* something [...] by instigation of a volitional agent” (Coleman and De Clerck 2009: 200). In Present-Day English, dispossession verbs with two explicit object arguments — a deprivée (victim) or source and a theme — are typically used in one of two constructions. On the one hand, we find what I term ‘prepositional deprivée constructions’ (PDC, 1a), where the preposition marks the deprivée/source, and on the other hand, ‘prepositional theme constructions’ (PTC, 1b), in which the PP denotes the lost entity.¹ Importantly, despite expressing similar events, the two constructions cannot be said to alternate in the strictest sense in today’s English, as individual verbs do not vary between them (cf. Goldberg 1995: 45–47; Levin 1993: 128–130; also Dux 2018, 2020). The constructions are furthermore associated with different prepositions (*from* vs *of*) and complementary object orders (the deprivée either following or preceding the theme).

- (1) a. They stole cake **from** the students.
 b. They robbed **the students** of cake.

However, previous research suggests that these categorical preferences were not yet given in earlier stages of English (Visser 1963). In addition, dispossession verbs were used in a further pattern in earlier English, namely a construction with two nominal objects, as in (2).

- (2) For dronkenesse bireveth **hym** the discrecioun of his wit.
 for drunkenness bereaves him the discretion of his wit
 ‘For drunkenness robs him of the discretion of his wit.’
 (PPCME2: CMCTPARS,316.C2.1212)

This structure, commonly referred to as the ‘double object construction’ (DOC) is restricted to transfer- and transfer-related verbs in Present-Day English, and forms part of one of the most thoroughly studied syntactic alternation phenomena in English linguistics, viz. the dative alternation. That is, ditransitive verbs such as *give* or *hand* today typically alternate between the DOC (3a) and a prepositional

¹ Cf. also Malchukov et al.’s (2010) distinction between indirective and secundative alignment.

pattern with *to* (3b); the latter corresponds to the PDC in that the preposition marks the recipient rather than the theme.

- (3) a. They gave **the students** cake.
 b. They gave cake **to the students**.

In Present-Day English, dispossession verbs cannot be used in the DOC with a privative meaning anymore (**They stole the students cake*). This ousting has been discussed in several places (Colleman and De Clerck 2011; Rohdenburg 1995; Zehentner 2019), but the precise development of the verb class in the history of English, and its relation to the dative alternation has not been addressed in sufficient detail yet. The present paper aims to provide such an account of dispossession verbs in the history of English based on a quantitative analysis of relevant data. Specifically, it investigates a total of 12 verbs belonging to the semantic field of dispossession and the ditransitive constructions they are used with in the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2), the *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME) and the *Penn-Helsinki Parsed Corpus of Modern British English* (PPCMBE), thus covering a time span from 1150 to 1914.

The main questions that are addressed on the basis of this investigation are the extent of variation between the three constructions (DOC, PDC and PTC) over time; furthermore, semantic and information-structural factors influencing the choice between the constructions are analysed and related to studies on the dative alternation. Taking a diachronic construction grammar approach to the results, I argue that first, the increasing loss of dispossession verbs from the DOC can be connected to the availability of a further prepositional pattern with similar semantic-pragmatic features (the PTC), as well as the progressively stronger association between DOC and a *to*-prepositional construction, i.e., the dative alternation. Second, I show that the history of dispossession constructions differs significantly from the history of the dative alternation, in that it involves the loss of an alternation relationship rather than the emergence or maintenance of one: after the DOC ceased to be used with dispossession verbs, the prepositional patterns increasingly differentiated from each other, to a point where each construction is now exclusively linked to particular verbs, prepositions and other features, and there is no variation to speak of anymore.

The paper is structured as follows: In Section 2, I first review the history of dispossession verbs in the context of the history of the dative alternation (2.1), before discussing the diachronicity of the prepositional dispossession patterns (2.2). Section (3) presents the corpus study, reporting on data and methodology in (3.1) and the main results in (3.2). Section (4) uses the findings to model the network of dispossession constructions and their relationship over time. Section (5) concludes the paper.

2 Dispossession in the history of English

2.1 Dispossession verbs in the context of the dative alternation

The dative alternation is likely one of the most studied syntactic phenomena in English linguistics across frameworks. In recent constructionist work on the topic, the DOC and the *to*-prepositional construction are taken to be represented individually and to specify preposition absence or presence as well as opposing object-orders. Slight differences in meaning between the constructions, e.g., in terms of profiling, are assumed to correlate with (either reflecting or resulting from, depending on the precise approach) verb-specific preferences for either one or the other pattern (e.g., Gries and Stefanowitsch 2004). Moreover, the constructions are associated with different object-related features such as animacy, givenness or relative length of the objects (e.g., Bresnan et al. 2007; Szmrecsanyi et al. 2017; among many others). At the same time, there is evidence that the patterns are recognised as related. In Perek (2012, 2015), building on Cappelle (2006), this is then captured in an underspecified, schematic ditransitive ‘constructeme’ which the two ‘allostructions’, DOC and *to*-pattern, vertically connect to. Zehentner and Traugott (2020) add horizontal links between the ditransitive allostructions to the model.

The history of the dative alternation has been dealt with at large in a number of publications, including e.g., Allen (1995), McFadden (2002), De Cuypere (2015a, 2015b), Coleman and De Clerck (2009, 2011) and Zehentner (2017, 2019). What has been shown in these studies is that although some prepositional alternatives to the DOC were present in Old English already, the emergence of the alternation is essentially a Middle English phenomenon: at the beginning of the period, the DOC is predominant, various prepositional patterns are available and object ordering is flexible. At the end of the period, however, the DOC systematically varies with one particular PP-construction, viz. the *to*-prepositional construction, and the patterns show complementary object order. The choice between constructions — despite some changes in the relative importance of variables — seems to have been influenced by the same object-related factors across time (see De Cuypere 2015a, 2015b on Old English, as well as Wolk et al. 2013 on Late Modern English).

Most importantly for the present purposes, English has also seen a striking reduction in the range of verb classes used in the DOC. Besides verbs of ‘pure benefaction’ as well as malefaction and banishment, this concerns agentive verbs of dispossession (Coleman and De Clerck 2009: 200). In contrast to e.g., German and Dutch, where DOCs with stealing verbs are still grammatical with a privative

interpretation (4), in English such uses have become increasingly rare from Middle English onwards (Zehentner 2017: 164–165). Rohdenburg (1995) finds some isolated examples in 16th and 17th century English, whereas they are completely absent in Coleman and De Clerck's (2011) 18th century dataset.

- (4) De man heeft **de vrouw** een boek ontnomen
 the man has the woman a book away-taken
 'The man has taken a book from the woman'
 (Delorge et al. 2014: 41)

If verbs of dispossession do occur in the DOC in standard Present Day English (as in 5), they typically receive a benefactive transfer-reading rather than one of deprivation (e.g., Dux 2018: 371). Together with the high prevalence of giving verbs, these coercions are indicative of the prototypical meaning of the DOC in standard Present-Day English: rather than the earlier meaning of 'indirect affectedness', the construction is now mainly used to express 'successful transfer/caused possession' (see Goldberg's 1995: 32–39 discussion of the various sub-senses of the Present-Day English DOC; also e.g., Croft 2003).

- (5) Go steal **me** some cake [= Go steal some cake for me]

An interesting special case is the continued use of *cost* in the DOC (6), which qualifies as a dispossession verb in that it denotes a meaning of 'X causes Y to lose Z' and is therefore unexpected (Goldberg 2002: 333). However, as Coleman and De Clerck (2011: 204) argue, these instances differ from typical events of dispossession as they are "incompatible with an agentive subject, and there is no suggestion that the subject eventually possesses the direct object". Still, its persistent DOC use is somewhat surprising; note also that the verb does not partake in the dative alternation as *to*-paraphrases with *cost* are marginal at best if attested at all (see further Coleman and De Clerck 2008, 2009).

- (6) That's not good enough, it cost **me** time & money to attend this conference
 (COCA 2012)

The reduction in verb classes associated with the DOC in the history of English has been discussed as a prime case of constructional semantic narrowing/specialisation and increased semantic coherence of the construction (Barðdal et al. 2011; Coleman and De Clerck 2011; Zehentner 2017, 2019). As for the causes of this development, Zehentner (2017) discusses the 'crystallisation' of the *to*-construction as the main competitor to the DOC and the strengthening of the association between the two patterns as the main trigger — with DOC and *to*-construction increasingly being recognised as interchangeable, verbs not congruent with (or indeed opposing) the goal-meaning of *to*, such as verbs of

dispossession, become marginalised and eventually cease being used in the construction entirely. In line with current constructionist takes on the Present-Day English alternation, its emergence is here modeled as the increasing entrenchment or constructionalisation of a ditransitive constructeme (see also Zehentner and Traugott 2020 for a related approach to the history of the English benefactive alternation). The present paper builds on these suggestions and elaborates the account by including additional patterns, specifically other prepositional constructions such as the PTC. Before presenting the results of the corpus study aimed to substantiate the proposal, the following section gives a brief overview of the patterns and their relation.

2.2 Prepositional dispossession constructions in the history of English

Prepositional constructions appear to have been used to express events of possessions being taken away from an inanimate (locational) or animate source from the earliest records of English on (De Cuypere 2015b; Visser 1963: 633). The most typical prepositions involved are source-prepositions like *of* or *from* (but also others such as *at* or *on*). The examples of PDCs in (7) and PTCs in (8) suggest that the individual prepositions were not clearly restricted to one or the other pattern; similarly, it seems that verbs varied relatively freely between the constructions.² Although not reflected in the instances below, objects could appear in either order independent of construction, verb or preposition involved (Visser 1963: 633).

- (7) a. *Đu afyrdest of Jacobe ða graman hæft-ned*
 you took away of Jacob the troublesome captivity
 ‘you took the troublesome captivity away from Jacob’
 (Ps. Th. 84, 1.; Bosworth-Toller, s.v. *a-fyrnan*)
- b. *him ageafe þæt he ær on him bereafode*
 him restored what he before on him bereaved
 ‘restored to him what he had earlier stolen from him’
 (Ors. 3, 11; S. 146, 30.; Bosworth-Toller, s.v. *be-reaftian*)

² With the exception of Visser’s (1963) seminal but cursory overview of syntactic patterns in the history of English, and a preliminary dictionary-based investigation of dispossession patterns in Old English by the author, research on dispossession verbs in Old English is more or less non-existent so far; all discussion is therefore tentative.

- (8) a. þus wes **þas kineriche** of heora kinge bi-ræued
 thus was this kingdom of their king bereaved
 ‘thus was this kingdom robbed of its king’
 (Lazamon Brut (Calig.) (1963) l. 1,447; OED, s.v. *bereave*)
- b. Gif hwylc man reafige **oðerne** æt his dehter
 if any man robs other at his daughter
 ‘if any man robs another of his daughter’
 (Poenitentiale Pseudo-Egberti (Laud) iv. ix. 51; OED, s.v. *reave*)

In Present-Day English, the situation is reportedly quite different. Levin (1993) clearly distinguishes between two groups of verbs of possessional deprivation based on their syntactic behavior: the first group, viz. ‘steal-verbs’ like *steal*, *snatch*, *take*, *thieve* or *withdraw*, “primarily describe the removal of something from someone’s possession; the previous possessor or a location associated with this possessor is expressed in a *from* prepositional phrase” (Levin 1993: 128–129). By contrast, ‘cheat-verbs’ like *bereave*, *burgle*, *cheat*, *deprive*, *dispossess* or *rob* are largely restricted to *of*, which marks the theme (Levin 1993: 129–130). Levin connects the patterns to typical instances of the ‘locative alternation’, where the *of*-variant usually receives a more holistic interpretation compared to the *from*-variant; however, the individual dispossession verbs are strictly classified as non-alternating. Similarly, Goldberg’s (1995: 45–47) discussion of *rob* and *steal* highlights the semantic and syntactic differences between the two verbs and respectively constructions. While with *rob*, the semantic roles of target and thief are profiled, *steal* emphasises the thief and stolen goods — the target, in this case, is also often a more general (not necessarily human) source which may only moderately be impacted by the event or is not given at all. On the other hand, *rob* typically involves an animate victim which is “seriously negatively affected” (Goldberg 1995: 46). Finally, the verbs/constructions show complementary object orders. The *steal*-PDC is associated with theme-first order like its correspondent in the dative alternation (9a); the *rob*-PTC usually has deprivee-theme order (9b).

- (9) a. Jesse stole money **from the rich**.
 b. Jesse robbed **the rich** of all their money.
 (adapted from Goldberg 1995: 45)

While both Levin’s and Goldberg’s claims are based on introspection only, the restrictions on *steal*-verbs are largely confirmed by the corpus investigation in Dux (2020). His results show that if theft-verbs like *steal* and *snatch* occur ditransitively, they predominantly do so in a *from*-PDC; nevertheless, the study also indicates that the constraint is not categorical and absolute, but rather a strong statistical tendency (cf. further Stefanowitsch’s 2011 results on *rob* and *steal* in terms of profiling differences).

Comparing Old English and Present-Day English, we find that the two constructions PDC and PTC accordingly appear to have changed considerably, moving from flexibility in preposition-usage and verb-preferences as well as (presumably) greater semantic overlap to very distinct profiles, despite both still expressing an abstract sense of dispossession. Interestingly, a similar ‘polarisation’ or ‘semantic specialisation’ has been observed with verbs of dispossession in the history of Dutch, albeit between DOC and a PDC with *aan* ‘to’. — In their investigation of Dutch *ont*-verbs, Delorge et al. (2014: 54) find that “there seem to be few verbs left in this morphological class which can be said to alternate more or less freely”, with lexical preferences becoming stronger over time. This change is also in line with other observed diachronic differentiation tendencies between competing constructions (e.g., De Smet et al. 2018; also Van de Velde 2014).

The present study then tests whether a polarisation trend in the history of English dispossession verbs can be corroborated by corpus data. In addition to preferences in verbs, prepositions, and object orders, several semantic and information-structural features of the object arguments that may have had an impact on the constructions (i.e., the DOC, PDC and PTC in earlier periods, and the latter two in more recent stages of English) are included. The paper thus investigates the extent to which the factors involved in the dative alternation are also at play in the competition between the main dispossession constructions, and the implications this has for a constructional network approach to these patterns.

3 Corpus study: dispossession verbs in the history of English

3.1 Data and methodology

The databases used for the present study are the well-known *Penn-Helsinki Parsed Corpora of Historical English*, specifically the *Penn-Helsinki Parsed Corpus of Middle English* (PPCME2; Kroch and Taylor 2000), the *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME; Kroch et al. 2004) and the *Penn Parsed Corpus of Modern British English* (PPCMBE; Kroch et al. 2016), representing Middle English, Early Modern English and Late Modern English, respectively. The PPCME2 includes about 1 million words in texts produced between 1150 and 1500;³ the PPCEME has a size of about 1.8 million words in texts from 1500 to 1710, and the PPCMBE

³ The size of the entire PPCME2 is roughly 1.2 million words over 56 texts, but only 43 of these texts were included in the present study due to the unclear chronological status of the remaining ones.

(1st edition) features about 1 million words from 1700 to 1914. For Middle English, I used the verb-lemmatized files from the *BASICS Toolkit lemmatizer* for Middle English (Percillier 2018; Percillier and Trips 2020). Although especially for the later periods, other (more extensive and balanced) corpora are available, the Penn-Helsinki corpora were chosen since they are syntactically annotated, and for reasons of methodological coherence with the Middle English data.

The study focuses on a number of verbs of dispossession selected from the list of *steal*- and *cheat*-verbs in Levin's (1993: 128–130) classification. For Middle English, the reverse lookup function in the *BASICS Toolkit* (Percillier 2016) was used. This tool allows users to search for Middle English verbs in the *Middle English Dictionary* (MED) grouped according to Levin's verb classes: that is, not only can earlier forms of Present-Day English stealing and robbing verbs be determined by the dictionary search, but we can also identify items with a corresponding meaning which are no longer attested today. I then extracted all occurrences of the verbs yielded by this approach in combinations with NP objects (NP-OB1/NP-OB2 in the Penn-Helsinki annotation) and/or PPs tagged as 'sisters' of the verbs from the corpora by means of *Stanford Tregex* (Levy and Andrew 2006). This greatly reduced the list of verb types, since many verbs (like e.g., *pilfer*) were either not attested in ditransitive patterns at all, or only very infrequently — I here applied a threshold of a minimum of 5 tokens per verb per period (in any of the three constructions). The remaining 12 verbs were used in the final investigation; 7 of these verbs (*bereave*, *cost*, *deprive*, *rob*, *steal*, *take* and *withdraw*) are given in both the Middle English and the Early/Late Modern English datasets, while the Middle English set also includes *benimen*, *nimen*, *ravishen* and *reven* (*reave*), all of which express a sense of deprivation or taking away. The verb *snatch* (ME *sneccchen*) only appears in the Early Modern English and Late Modern English corpora.

The ditransitive tokens ($N = 550$) were then either manually or (semi-)automatically classified according to construction (DOC, PDC or PTC), type of preposition (if applicable), order of objects ('DEPR>TH' or 'TH>DEPR' as well as 'DEPR|TH' for passives), verb lemma and verb origin (nonFrench or French), voice of the clause (active or passive), as well as a number of features pertaining to the object arguments which are known to influence the dative alternation in Present-Day English (and earlier stages) and are briefly described in the following. The coding was based on previous variationist studies on the English dative alternation (e.g., Bresnan et al. 2007 for a discussion); note, however, that the categories employed in the present investigation were rather coarse due to data sparsity. Furthermore, a factor often reported as significant in the choice of the dative alternation, namely givenness (vs newness) of the objects was not taken into account here.

- **Animacy:** binary distinction between ‘animate’ entities (humans and animals, as well as institutions such as *school* or *church* unless unambiguously referring to the building or location, and spiritual beings such as *God*, *Christ* or the *holy spirit*) and ‘inanimate’ (locations or non-sentient entities, including body-parts)
- **Definiteness:** binary distinction between ‘definite’ (personal and demonstrative pronouns, proper nouns and head nouns modified by definite articles, demonstratives or possessive pronouns) versus ‘indefinite’ (modification by indefinite pronouns or determiners, bare nouns)
- **Concreteness:** three-way distinction between ‘concrete’ (material, tangible objects), ‘abstract’ (non-tangible entities, concepts) and ambiguous (‘ambig’) for elements that can denote either a concrete or an abstract entity (cf. e.g., *offering* which may refer to a concrete sacrifice presented to God, such as food, but can also express a more abstract notion of offering, a distinction often not recoverable from the context)
- **Pronominality:** binary distinction between personal pronouns, demonstrative and reflexive pronouns as ‘pron’, and indefinite pronouns and all full nouns as ‘noun’
- **(Relative) length:** log-transformed weight ratio of the length of the deprivee divided by the length of the theme, measured in number of words (cf. De Cuyper 2015a, 2015b), converted to a categorical binary variable ‘longerDEPR’ and ‘longerTH’ for the analysis.

The findings of the study are presented in the following sections. All analysis and visualisation was carried out in R (R Core Team 2017); frequency distributions were visualised by means of the packages ‘ggplot2’ (Wickham 2016), ‘ggmosaic’ (Jepson et al. 2018) and ‘vcd’ (Meyer et al. 2020), while the interaction between all annotated features, including object orders, preposition types, verb lemmas, as well as object-related factors, was investigated by means of an exploratory statistical technique for multivariate data with more than two categorical variables, viz. *Multiple Correspondence Analysis* (MCA; cf. e.g., Husson et al. 2017: Ch.3; Levshina 2015: 375–385; also Greenacre 2017). For this analysis, the R package ‘FactoMineR’ (Lê et al. 2008), as well as selected functions from the package ‘ca’ (Nenadic and Greenacre 2007), were used; furthermore, the package ‘rms’ (Harrell 2020) was employed for regression modeling on the dimensions of the MCAs (cf. Levshina 2015: 383).

The main goal of using MCA on the present data is to explore associations between the constructions (all three for Middle English, and the two prepositional patterns for Early and Late Modern English) and the features outlined above. The specific expectations are (i) that the Middle English constructions formally and

functionally correspond to each other to a degree that would put them in competition: the PTC is hypothesised to intersect with both the DOC and the propositional deprivée construction, whereas the latter two presumably share fewer features. In the model, this should be reflected by differences in the extent of overlap of the ellipses around the constructions – a greater overlap indicates greater similarity between the patterns based on the features outlined above. In addition (ii), I expect that the overlap between PDC and PTC reduces over time, i.e., that the two constructions come to develop increasingly different profiles (and accordingly more clearly separate ellipses in the model for Late Modern English than in those for Middle and Early Modern English). The present study is thus akin to recent quantitative approaches to lexical and constructional semantics, exploring degrees of constructional synonymy (cf. e.g., Glynn 2014; Silvennoinen 2018; and especially Delorge et al. 2014). An additional, though minor, point in the present study is to determine which factors are relevant in the choice between the constructions and whether the impact of specific factors may change over time (cf. Wolk et al. 2013).

3.2 Results

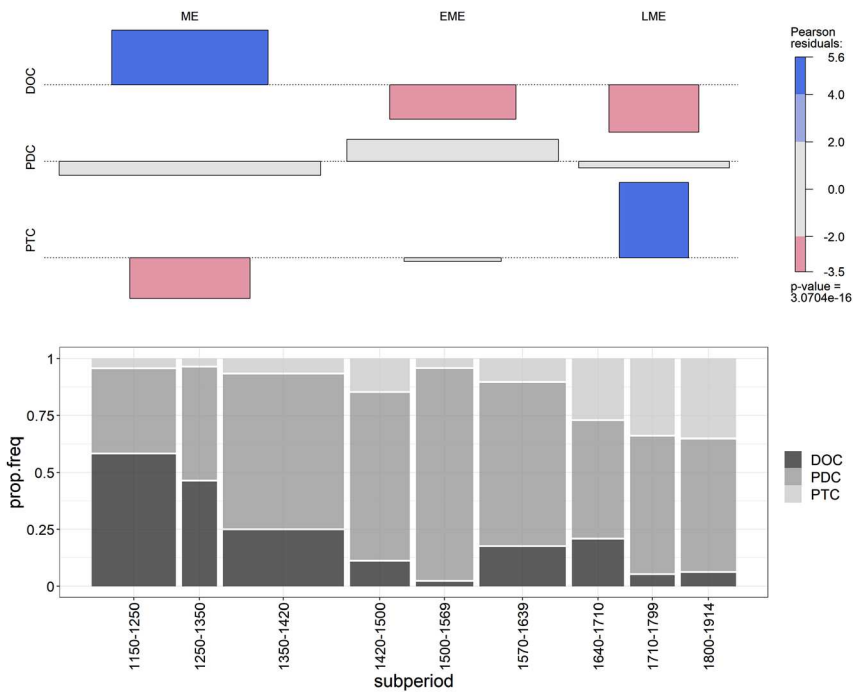
3.2.1 Frequency distribution

Considering first the basic frequency distribution of the three constructions over time, Table 1 gives the raw counts and proportional frequency of the constructions over the main periods, showing that the DOC steadily decreased over time (from 34% in Middle English to about 5% in Late Modern English). By contrast, the PTC steadily increased, moving from about 7% to 35%; the PDC temporarily spikes in Early Modern English but takes up roughly the same fraction in Late Modern English as in the earliest data (approx. 60%). A Chi-square test of the distribution indicates that the overall interaction between the variables is significant (construction \times period, $X^2 = 88.416$, $df = 4$, $p < 2.2e-16$). This is also reflected in the association plot at the top of Figure 1, which demonstrates that while the DOC is strongly over-represented in Middle English, the construction is under-represented in the later periods. The PTC displays the opposite trend by being dispreferred in Middle English, but strongly favored in Late Modern English in comparison. The PDC, by contrast, shows no significant interaction with the period. These results provide first support for the assumption that the main change took place between DOC and PTC, with the latter increasingly replacing the former.

The bottom of Figure 1 provides some more detailed information on the frequency distribution of the constructions over sub-periods: As seen, the DOC

Table 1: Raw and proportional frequency of CxG per PERIOD.

	Middle English	%	Early Modern English	%	Late Modern English	%
DOC	95	34.3	25	13.81	5	5.43
PDC	163	58.84	133	73.48	55	59.78
PTC	19	6.86	23	12.7	32	34.78
TOTAL	277	100	181	100	92	100

**Figure 1:** Association plot of residuals of CxG by PERIOD (top); proportional distribution of constructions in sub-periods (bottom).

starts out as the prevalent construction, accounting for over 60% in the earliest sub-period (1150–1250), but its frequency drops considerably in Middle English already (11% in 1420–1500). Occurrences of the DOC in Early Modern and Late Modern English are exclusively tied to one single verb, viz. *cost*, and no other verbs are attested with the construction beyond Middle English. Both prepositional patterns increase in frequency during the Middle English period — the PDC doubles

in numbers, rising from approximately 40% in the earliest subperiod to almost 80% at the end of the period, whereas the PTC moves from a mere 4% of instances to over 10%. Disregarding the DOC with *cost* in the later periods, PDC and PTC settle on a roughly 60 to 40 distribution after some fluctuations in the beginning of Early Modern English.

3.2.2 Multiple correspondence analysis

The changes observed in the overall frequency distribution are then explored in more detail by means of separate multiple correspondence analyses (MCA) for the three main periods. This method can be useful in determining groups of individuals with similar profiles, and also to identify systematic associations between different categorical variables (Levshina 2015: 375). As discussed above, the categorical variables (columns) coded for in the analysis include verb type, preposition type, object order, verb origin and voice, as well as features of the objects such as animacy or relative length, giving a total of up to 15 features.⁴ The values of these variables consist of the respective categories (e.g., ‘animate’ or ‘inanimate’ for the variable ‘animacy’), and are represented as points in a (multi-) dimensional space. The associations between the different categories of the variables are captured on a number of (as few as possible) dimensions, and are visualised in two-dimensional plots (two dimensions at a time). Construction type is treated as a supplementary qualitative variable in the present analyses, meaning that this variable is not taken into account in creating the semantic-functional space, but the constructions are ‘mapped’ onto it (Levshina 2015: 378–379). The models and figures furthermore include representations of the individual observations (rows), viz. the tokens of dispossession patterns in the different periods, as well as confidence ellipses around the mean points of the constructions. For Early Modern English and Late Modern English, the analysis is restricted to PDC and PTC, since the DOC is categorically used with *cost* only, and accordingly does not contribute much insight to the questions at hand.

We start by examining the proportions of variability that can be explained by the different dimensions in the models, to assess how well the included features predict the variation between the constructions in the respective periods, and to determine how many dimensions (axes) should be considered

⁴ For Early Modern English and Late Modern English, the variables ‘voice’ and ‘verb origin’ were discarded, since they correlated perfectly with other variables (‘object order’ for the former, in that all passives but no active clause shows ‘other’ orders and ‘verb type’ for the latter, since *rob* is the only verb of French origin in the later datasets).

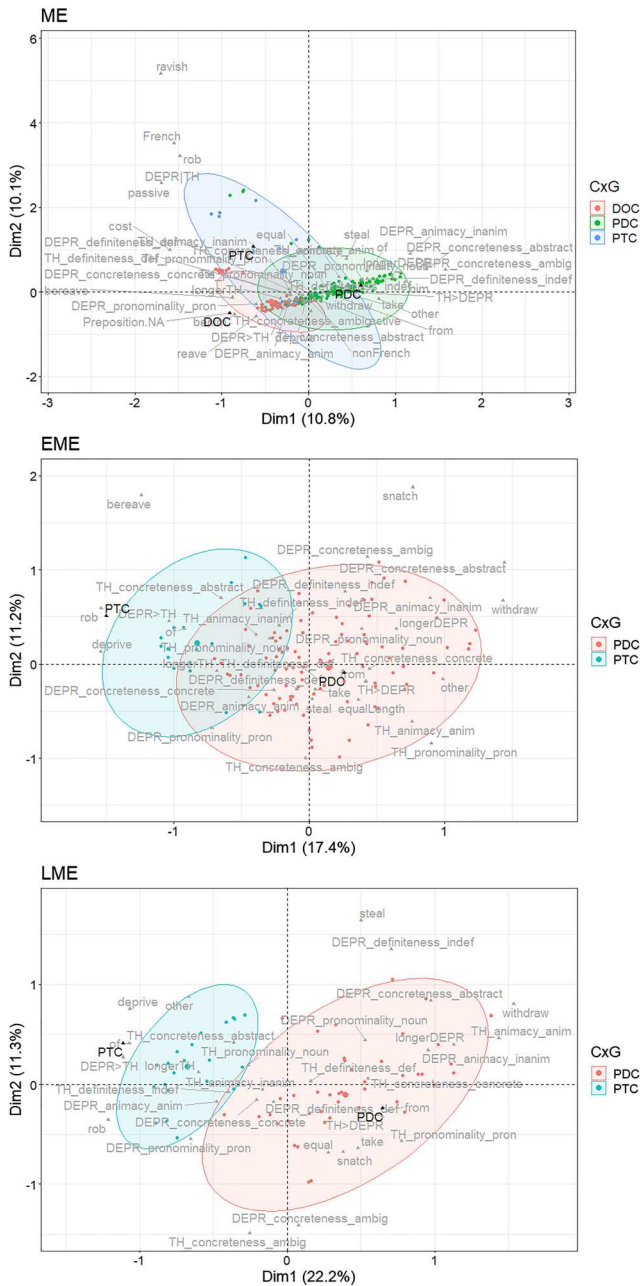


Figure 2: MCA biplot of dimensions 1 and 2 for Middle English/Early Modern English/Late Modern English data, with supplementary variables (constructions) in black, variables (features) in grey, individual exemplars in colour, and 95% confidence ellipses around exemplars of the constructions.

(the fewer the better). The amount of information yielded by each dimension is referred to as eigenvalues or principal inertias (Table 2). Since regular MCA tends to under-estimate proportions of variance, adjusted, more realistic percentages are also provided (cf. Glynn 2014: 450; Greenacre 2017; Levshina 2015: 382).⁵ The dimensions are ordered according to the amount of explained variance, with the highest-ranked first. The column for ‘% cumulative adjusted’ then gives the added adjusted percentages for the respective dimensions, indicating the running total; the scree plot in the last column visualises the contributions of the respective dimensions.

Table 2: Principal inertias (eigenvalues) of MCA for Middle English, Early Modern English and Late Modern English (non-adjusted/adjusted), first 5 dimensions.

Middle English						
Dim	Value	% Non-adjusted	% Adjusted	% Cumulative adjusted	Scree plot adjusted	
1	0.031	10.78	31	31	*****	
2	0.023	20.84	22.4	53.4	*****	
3	0.008	28.23	7.9	61.3	***	
4	0.003	33.99	3.1	64.4	*	
5	0.002	39.24	2.4	66.8	*	
Early Modern English						
1	0.069	17.39	60.8	60.8	*****	
2	0.014	28.57	12.1	72.9	****	
3	0.005	36.58	4.6	77.5	*	
4	0.002	43.27	1.5	79		
5	0.001	49.54	0.7	79.7		
Late Modern English						
1	0.124	22.24	71.7	71.7	*****	
2	0.012	33.5	7.2	78.9	**	
3	0.005	42.54	3	81.9	*	
4	0.003	50.68	1.7	83.6	*	
5	0.001	57.61	0.6	84.2		

⁵ Adjusted proportions were determined by means of the function ‘mjca’ in the R package ‘ca’ (Nenadic and Greenacre 2007).

What is immediately noticeable about the Middle English MCA is that the model performs relatively badly overall — the cumulative adjusted proportion of explained variance by the first two dimensions is barely over 50%, and the first five dimensions still account for less than 70% of the variation.⁶ This suggests that the features included in this study are not too useful in predicting the variation between the constructions in Middle English. However, the predictive power of the models improves with the later stages: in the Early Modern English MCA, the cumulative amount of variance explained by the first two dimensions is about 73%, and in Late Modern English, the number rises to almost 80%. In both cases, the added dimensions again do not contribute substantially and are therefore not represented visually.

The growing predictability of variation over time is also reflected in Figure 2, which presents two-dimensional MCA factor maps for the periods, i.e., biplots of dimensions 1 and 2. This most importantly allows us to find associations between the values of the different variables as well as between the categories and construction types based on their relative position in the space. A first glance at the graphs supports the assumption of considerable change between the periods. In Middle English, we see a large overlap between the constructions, suggesting that the boundaries between them are quite fuzzy at this stage, or that they at least cannot be very well distinguished based on the included variables. (The large confidence ellipsis around the PTC individuals is mainly due to the rare and scattered occurrences of this construction in the earliest period). In Early Modern English, the two prepositional constructions still overlap to some extent, albeit less strikingly, whereas in the latest period, there is almost no fuzziness left between the categories, and the constructions seem to have come to neatly ‘divide up’ the functional space. This is perfectly in line with our expectations based on observations on Present-Day English dispossession verbs, as well as the developments in their Dutch counterparts. In the following, the models for the different periods are inspected in more detail, focussing on the relations between the constructions and the respective features.

3.2.2.1 Middle English

Taking a closer look at the Middle English model in Figure 2, we find that dimension 1 (horizontal *x*-axis) roughly distinguishes DOC and PTC from PDC. While the former is located in the left-hand part of the plot, the PDC is found on the

⁶ Following Levshina (2015: 383), I used dimensions 1 and 2 as predictors in a logistic regression model. The results, which are given in Table A4 in the Appendix, indicate that the two dimensions still have high predictive power in the choice between the constructions ($C = 0.88$), which is not significantly increased by adding further dimensions.

right-hand part. Dimension 2 (vertical y-axis), on the other hand, seems to separate the two prepositional patterns in the upper half from the nominal construction in the lower half. This is also reflected in the lower part of Table A1 in the Appendix, where on dimension 1, both DOC and PTC show values below 0, while the PDC is further away from both at +0.4. This part of the table furthermore provides precise information on the associations between the constructions and individual categories: similar R2-values indicate the closer position in the functional space (visually represented in Figure 2), and accordingly stronger association. For example, the values closest to that of the PDC on dimension 1 (x-axis) are ‘Object order: TH>DEPR’ and ‘verb lemma: take’, indicating a strong association of these two categories to each other as well as to the construction. The top part of Table A1 specifies the overall relevance of the different variables for both dimensions, ranked decreasingly according to their contribution. For instance, ‘verb type’ appears to play a very important role on both dimensions in Middle English, suggesting that the three constructions differed considerably in the verbs they were used with. By contrast, the animacy of the theme is less informative in predicting the choice of one construction over the other.

Aggregating the results for verb types on both dimensions, we find that the DOC is most clearly associated with *benim* and *reave*: these verbs have mostly disappeared from English, meaning they do not occur in other (ditransitive or non-ditransitive) patterns anymore at all.⁷ The categorical use of *cost* in the DOC is not present yet in Middle English but seems to be a later phenomenon, corroborating that this construction ceased to be linked to dispossession verbs as a coherent group after this period. As for the PDC, it patterns with *nim* and *take* in Middle English, whereas the PTC clusters with *ravish* and *rob*, in line with Present-Day English usage. Interestingly, these are also the only French verbs in the dataset (apart from *cost*) – French argument structure patterns may thus have been involved in or contributed to the spread of the PTC construction as an alternative to the PDC. It is furthermore noticeable that the PTC is associated with passives in this period, meaning that this pattern may have spread from an initially relatively confined niche of passives with French verbs.

What these results suggest, on the one hand, is that verb-specific preferences impacted the choice of construction in this period already. At the same time, other verbs such as *bereave* or *steal* are not clearly linked to either of the patterns at this stage; this supports that verbs really did alternate between all constructions in

⁷ The loss of these verbs cannot unequivocally be attributed to the loss of the DOC or vice versa: for example, prefixed verbs such as *be-nim* as a morphological group have decreased substantially in the history of English, a phenomenon extending way beyond ditransitives and dispossession verbs (Thim 2012).

Middle English (illustrated for *bereave* in 10a–c). As for *steal* – the prime PDC verb in accounts of Present-Day English dispossession – the lack of clear association with this construction may furthermore also be linked to the fact that the verb is much more frequently attested in mono-transitive patterns in historical as in Present-Day English (cf. Dux 2020: 219 on the latter). In Middle English to Late Modern English, ditransitives account for less than 20% of all instances of the verb.

- (10) a. For dronkenesse bireveth **hym** the discreiou of his wit
 for drunkenness bereaves him the discretion of his wit
 ‘for drunkenness robs him of the discretion of his wit’
 (ME; CMCTPARS,316.C2.1212)
- b. so muche He bireveth **fro** **God**
 so much he bereaves from god
 ‘he steals so much from God’
 (ME; CMCPARS,298.C2.433)
- c. Another synne of lecherie is to bireve
 another sin of lechery is to bereave
a mayden **of hir maydenhede**
 a maiden of her maidenhood
 ‘another sin of lechery is to rob a maiden of her maidenhood’
 (ME; CMANCRIW-1,II.96.1148)

Similar to verb type, preposition type is also featured on both dimensions for Middle English, in that the DOC is evidently different from both PDC and PTC by not featuring any preposition (Preposition=NA). The absence of a significant association between PTC and any preposition in Middle English is likely explained by the low overall token frequency of this construction at this stage. Surprisingly from a Present-Day English viewpoint, the PDC clusters with *of* in Middle English (*of* accounting for about 70% of uses, by contrast to 10% *from* and 20% other prepositions such as *at* or *on*). This variability is illustrated in (11a–b), indicating also that a particular verb could vary in preposition use. The now-canonical association between PDC and *from* is only established towards the end of Middle English.

- (11) a. sum laye men [...] whythedrewe hyr almys **from them**
 some lay men withdrew their alms from them
 ‘some laymen withdrew their alms from them’
 (ME; CMGREGOR,229.2351)
- b. eke if he [...] withdrawe the almesse **of the povre**
 also if he withdraws the alms of the poor
 ‘also when he withdraws his alms from the poor’
 (ME; CMCTPARS,299.C1a.447)

Object order is as expected relevant in that even in Middle English already, the DOC shows an affinity to DEPR>TH order (over 70% of DOC instances in 1150–1250). By contrast, the PDC — albeit still comparatively variable in Middle English — is mainly associated with TH>DEPR, and there is no significant interaction between PTC and order yet.

Moving on to object-related factors, the figures indicate that pronominality, concreteness and animacy of the deprivee/source feature among the most distinctive features on dimension 1, i.e., between DOC/PTC and PDC. Specifically, pronominal, animate, concrete and definite deprivees are located more towards the left (i.e., correlate with the DOC/PTC), whereas nominal, inanimate, abstract/ambiguous, indefinite and longer deprivees cluster together on the right-hand side with the PDC; examples (12a–b) illustrate these preferences for DOC and PDC. These tendencies are highly reminiscent of the dative alternation, where the factors influence the choice between constructions in much the same way.

- (12) a. which bitternesse bynymeth **hym** the love of alle goodnesse
 which bitterness benims him the love of all goodness
 ‘which bitterness robs him of the love of all goodness’
 (ME; CMCTPARS,310.C2.966)
- b. He [...] toke me **fram** **many tribulaciouns**
 he took me from many tribulations
 ‘he took me away from much suffering’
 (ME; CMEARLPS,18.696)

An interesting aspect of dimension 2 (y-axis) associations is that the DOC is somewhat more strongly associated with animate, concrete deprivees than the prepositional patterns, which also frequently involve abstract sources (see 12b). This suggests that the source-argument in the PP-constructions is more general, while the first argument in the DOC is more semantically coherent, denoting prototypical (often human) deprivees. Features pertaining to the themes — apart from relative length, with longer themes more frequently appearing in DOC and PTC — do not seem to play a major role in either dimension.

3.2.2.2 Early Modern English

In the model for PDC vs PTC in Early Modern English (Table A2), verb type, object order and preposition type are again most strongly associated with the first dimension. The PDC clusters with the verb *withdraw* and *take*, the preposition *from* (contrary to *of* in ME) and TH>DEPR order, whereas the PTC is linked to *bereave*, *deprive* and *rob*, the preposition *of* and DEPR>TH order. On the other hand, variables relating to the objects are represented on both dimensions, and among the main features in the second. On the horizontal, first dimension, the clusters are

exactly as expected, with nominal, inanimate, indefinite, abstract or ambiguous and longer deprivee-arguments clustering with the PDC on the right-hand side of the figure, by contrast to pronominal, animate, concrete and shorter deprivees clustering around the PTC on the left-hand side. For themes, the preferences are the precise opposite – pronominal, animate, definite, concrete themes appear on the right-hand side with the PDC, while noun themes, inanimate, abstract and longer theme-arguments are found towards the left with the PTC. Still, as also clear from Figure 2 and Table A2, there is some variation to these tendencies on the second dimension in Early Modern English, with some values of variables quite peripheral and spread out over the functional space. This can be interpreted as follows: the two prepositional constructions correlate with complementary features – in particular parameters such as object order and preposition type – more strongly than before, and the choice between the patterns can be predicted based on these variables to a reasonable extent. Nevertheless, regarding variables like object animacy or definiteness, there is still a good amount of contexts in which either of the construction can be used.

3.2.2.3 Late Modern English

The MCA for Late Modern English presented in Table A3 then essentially shows further strengthening of the associations already present in Early Modern English; in addition to verbs like *take* and *steal* also becoming more distinctive for the PDC in this model, the object-related features now clearly show the anticipated correlations on both dimensions. This is mirrored in the results of a confirmatory logistic regression model, using dimensions 1 and 2 as predictors for choice of construction (following Levshina 2015: 383; for the full results see Table A4 in the Appendix). The analysis indicates that the predictive power in the choice between constructions is high for the first two dimensions in Middle English and Early Modern English despite the low proportions of explained variance in the former (Middle English: $C = 0.88$; Early Modern English: 0.98), which is not significantly increased by adding further dimensions. For Late Modern English, however, using both dimensions 1 and 2 as predictors leads to overfitting: dimension 1 as a sole predictor gives a value of $C = 0.997$, indicating near-perfect discrimination.

The results presented in this section have accordingly confirmed the hypotheses put forward above, namely that (a) in Middle English, the PTC overlaps with the other prepositional construction to a certain extent, but importantly also strongly clusters with the DOC in a number of aspects, whereas DOC and PDC share few common features. Second (b), we have seen that the prepositional patterns have essentially ceased to alternate entirely over time, and have come to be associated with clearly distinct semantic-pragmatic niches. In the next section, I briefly discuss the implications of these two main conclusions from a diachronic

construction grammar perspective, proposing that the history of ditransitive dispossession constructions in English saw a major restructuring of the original network. This involved changes on various levels of schematicity and changes in both horizontal and vertical links between constructions (cf. e.g., the contributions in Sommerer and Smirnova 2020 for recent discussions of such questions in diachronic construction grammar).

4 Discussion: the changing network of dispossession verbs

The development of the network of dispossession constructions is modelled in a series of five diachronic steps. For stage I, viz. early Middle English, such a sketch needs to account for the following points, based on the preceding analysis of the Middle English dispossession data and previous research on ditransitives in the history of English. In this period, dispossession verbs could alternate between the three constructions comparatively freely, and the behavioural profiles of the constructions intersected. At the same time, DOC and PDC especially were used with sufficient frequency to likely be entrenched as constructions, and the patterns did have some prototypical distinctive features, i.e., were not used in completely random and unpredictable variation. Furthermore, we know that the DOC occurred with a large number of other, non-dispossession verbs such as *give*, and that prepositional patterns were also present for some of these verbs, even if not for all of them (cf. e.g., *to* with communication verbs in Old English and early Middle English; De Cuyper 2015b). Figure 3 captures these assumptions, viewing the network of dispossession patterns in the larger context of ditransitive constructions. In the figure, the DOC-subconstruction with dispossession verbs (disp-DOC) is linked horizontally to a number of other DOC-verb classes such as ‘transfer’ or ‘communication’, which all have vertical links to an abstract DOC-schema expressing a general meaning of ‘indirect affection’.⁸ While the most salient sub-construction of ‘transfer’ – indicated by bold lining – does not alternate yet with other patterns, other verb classes, such as communication verbs and dispossession verbs, are furthermore connected to prepositional patterns expressing a sense of (originally mainly physical, but later also metaphorical)

⁸ For a discussion of horizontal links in addition to vertical links in usage-based construction grammar approaches see e.g. Van de Velde (2014), Diessel (2015), Traugott (2018), or Zehentner and Traugott (2020). On this view, horizontal links between constructions on the same level of schematicity precede vertical links, as abstractions only arise from usage once connections between constructions have been established.

caused motion. In the case of dispossession verb, these PP-patterns are the PDC and the still rather infrequent PTC: low frequency and linked to this, low entrenchment, is indicated by dashed lining. The variability in verbs and prepositions involved in these patterns, as well as in object ordering and other features means the PDC and PTC potentially were not excessively salient to users, but the options were captured in an under-specified prepositional schema (disp-P?C), which only details that a source-preposition can be used to mark one of the participants in a dispossession event. Postulating this schema is also warranted by the fact that in several cases, it is difficult to clearly distinguish between deprive and theme (and accordingly between construction), cf. e.g., example (12a) above, which could be interpreted as a PTC instead of a PDC.⁹ Finally, the graph features a very tentative general dispossession-schema with an optional preposition-slot (disp-??C), indicating the overlap between disp-DOC, PDC and PTC. This abstraction may have been represented only for some speakers at this stage and is not strictly necessary to posit.

In the next stages of mid- to late Middle English, the dispossession-DOC (and consequently its links to other sub-DOCs as well as the abstract DOC) start to weaken; this then also affects the potential abstraction over all dispossession patterns, viz. disp-??C. While the disp-DOC is still weakly represented in Figure 4, it is absent from Figure 5, indicating its eventual complete loss. I suggest that this change is connected to the strong (and increasing) bias of the DOC towards encoding a basic transfer-meaning, as verbs of transfer and transfer-related events make up the large majority of DOC tokens in Middle English (cf. Zehentner 2017, 2019). This bias, reflected in the bold lining around the DOC sub-construction for

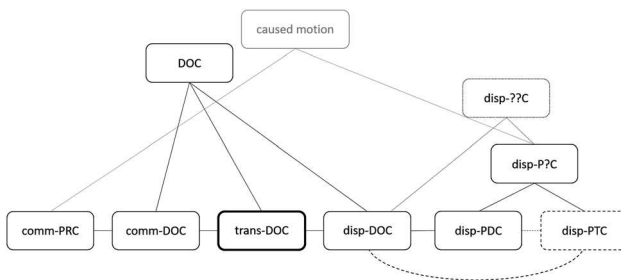


Figure 3: Stage I – network of ditransitive (dispossession) constructions in early Middle English.

⁹ Although not covered in this study, the schema is arguably related to (or a sub-type of) the locative-alternation (also referred to as spray/load-alternation), which also involves two object arguments variably marked by prepositions (cf. e.g. Iwata 2008).

transfer in Figure 4, means that DOC uses of verbs and verb classes more marginal to the prototypical transfer-meaning, such as dispossession verbs, are prone to loss. In Figure 5, the increasing semantic restriction to the more specific meaning of ‘transfer’ is shown in that transfer is included in the abstract construction’s label, viz. ‘(trans-)DOC’.

At the same time, the observed bias of the DOC for transfer events arguably also drives its increasingly close relationship with the *to*-prepositional pattern in this period, as the latter construction expresses highly similar transfer-meanings (Zehentner 2017, 2019). In Figures 4 and 5, the correspondences between the DOC and trans-*to*-prepositional recipient construction (PRC) are captured by bold lining, and the constructionalisation of a more abstract *to*-prepositional pattern as well as the eventual emergence of a ‘dative alternation constructeme’ are represented on the left-hand side of the figures (see Perek 2015; Zehentner 2017, 2019).¹⁰

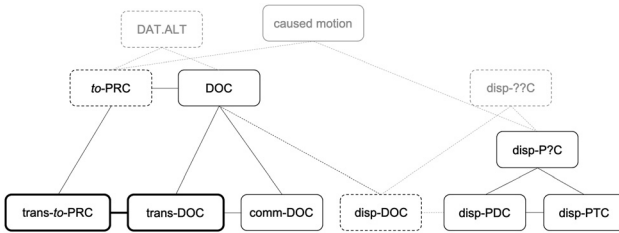


Figure 4: Stage II – network of ditransitive (dispossession) constructions in Middle English.

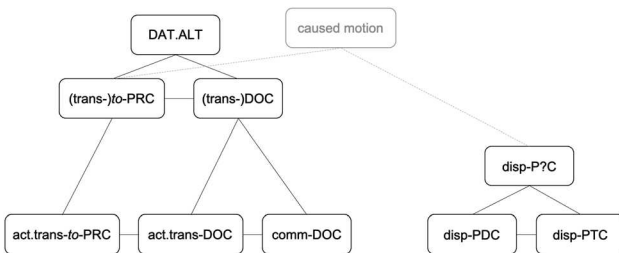


Figure 5: Stage III – network of ditransitive (dispossession) constructions in late Middle English to Early Modern English.

¹⁰ As discussed in more detail elsewhere, it could be argued that the emergence of the dative alternation in fact directly triggers the loss of DOC uses with dispossession verbs, as the increasingly close association between the DOC and *to*-patterns marginalise verbs encoding events not compatible with the transfer. However, this suggestion remains speculative at this point and awaits empirical validation.

In addition to the transfer-bias of the DOC, a supplemental explanation for the loss of the disp-DOC is the presence of a PP-pattern which has a very similar profile to the DOC. As shown above, DOC and PTC in Middle English pattern with each other against the PDC in regard to object order preferences and object-related features, even though these are still tendencies rather than strict preferences at this stage. This means that the PTC – possibly being boosted by French impact in the course of Middle English, even if not an innovation per se – comes to present a viable and increasingly strong competitor to both PDC and DOC, but especially the latter. Its wider applicability in not being as restricted to human, animate prototypical deprivees as the disp-DOC is a further advantage, and together with the emergence of the dative alternation ultimately leads to a comparatively quick decline of dispossession verbs in the nominal construction. As seen in Figure 5, at the turn from Middle English to Early Modern English, the dispossession constructions essentially constitute an entirely separate network from the dative alternation and transfer-patterns (except for a very loose link between all prepositional ‘caused motion’ constructions).

Before moving on to the later development of PDC and PTC, a brief final comment on *cost* and its continued DOC-use is in order: first, it should be noted that (ditransitive) uses of the verb – a French loan – are excessively rare in earlier English, with merely 1 DOC-attestation each in the 15th and 16th century. Second, as Colleman and De Clerck (2008: 204–205) point out, the verb differs from prototypical dispossession verbs despite expressing a general sense of ‘causing to lose’ in that the agent is usually not volitional and there is no change of possession in the strictest sense; the *cost*-DOC furthermore does not seem to be very productive, since the themes are greatly restricted to nouns denoting (sums of) money, time, life or aspects of health and hardships of some kind. It has been argued that the structure’s meaning could even be re-conceptualised as ‘transferring the cost of sth. to so.’ similar to *to charge so*. (also Goldberg 2002: 333). The non-nativeness of the verb, its low frequency at the time of major changes, and its semantic idiosyncrasy may well have influenced its syntactic development.

In Figure 6, the proposed dispossessive network in Early Modern English is given. Based on the findings from this period, pointing at a still substantial semantic/functional variation and at least some degree of interchangeability between the patterns, I assume that at this stage the two prepositional constructions can still be said to ‘alternate’. Nevertheless, earlier tendencies become increasingly foregrounded, and the constructions come to be more closely correlated with complementary features: in the figure, this is illustrated by the preposition types *from* and *of* being specified for PDC and PTC, respectively. Other properties not reflected graphically include verb types or object orders (TH>DEPR for PDC and DEPR>TH for PTC), going hand in hand with information-structural factors like

animacy of the deprivee (with animate elements typically preceding inanimates, and thus more likely to be used in the PTC).

The last stage (Figure 7), approximating Late Modern English and in essence, the Present-Day English situation, shows a strengthening of the complementary profiles of the two constructions, to a point where they cease to alternate in the sense of being (near-)categorically associated with different verbs, prepositions and a range of other syntactic, semantic and pragmatic features. While the PDC is typically used with ‘stealing’-verbs and *from* in deprivee-last order, and usually involves inanimate, indefinite, nominal, etc. deprivees, the PTC is almost exclusive to ‘cheating’-verbs and *of*, with theme-last order, and animate, definite, pronominal, etc. deprivees (cf. Dux 2020; Levin 1993). Although this is not to say that these principles cannot be overridden in certain contexts and represent absolute constraints, the prototypical distribution of the constructions has thus become very systematic and pervasive, corresponding to observations on dispossessives in other Germanic languages (Delorge et al. 2014). It is plausible that the patterns are still recognised as related due to their both expressing dispossession events (reflected in the remaining link between the boxes, as well as the very weakly entrenched but still present abstraction over them in Figure 7), but I presume that the two constructions and their individual profiles are more salient to language users than their similarities in Present-Day English.

Although not explicitly focused on in the present study, the distinct, opposing preferences of the constructions in terms of semantic-pragmatic features of their object arguments may be related to the profiling and overall meaning differences between *steal* and *rob* highlighted in Goldberg (1995: 45–47), and explored further in Stefanowitsch (2011: 260–264) as well as Dux (2018, 2020). As has been seen, the

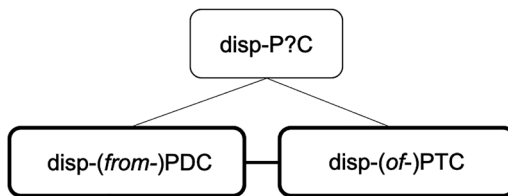


Figure 6: Stage IV – network of ditransitive (dispossession) constructions in Early Modern English.

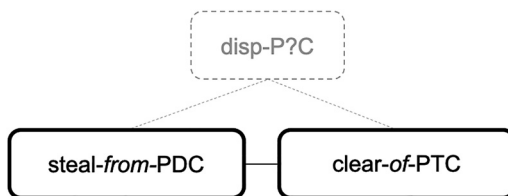


Figure 7: Stage V – network of ditransitive (dispossession) constructions in Late Modern English.

PTC (and thus *rob*) has come to primarily occur with animate deprivees and is dispreferred with inanimate sources, including locations. If we assume that language users are more likely to identify with animate/human referents, this observation would be in line with Goldberg's claim that the PTC foregrounds (profiles) the thief and victim in dispossession events. By contrast, in the stealing-PDC, the emphasis is on the stolen goods rather than the target, which may be reflected in the deprivee-argument denoting a wider range of inanimate, nominal, indefinite victims or sources in the present data (cf. also Dux 2020: Ch.5). A final point to make in this regard is the question to which extent positing strongly entrenched abstract and PDC and PTC is warranted for Present-Day English — although there is evidence to suggest that the observed tendencies hold for groups of dispossession verbs in similar ways (cf. e.g. the overview of theft-verbs and the correspondences in behaviour in Dux 2020: 219), there also seem to be considerable differences between individual verbs, and the preferences outlined seem to be strongest with the prototypes *rob* and *steal*. For Present-Day English, lower-level or even verb-specific constructions may be more relevant than potential verb-class abstractions.¹¹ Evidently, these assumptions require further empirical (especially experimental) confirmation in addition to the diachronic perspective on the Present-Day English constructions and their interaction which this paper has aimed to provide.

In sum, the history of dispossession verbs in English nicely illustrates reconfigurations of constructional networks (cf. e.g., Hilpert 2018; Sommerer and Hoffmann 2020). That is, it includes both innovation and loss in the constructional network, with new constructions both emerging or becoming more entrenched (e.g., in the case of the PTC) and constructions being weakened or disappearing entirely (most strikingly the disp-DOC); cf. e.g., Torrent (2015). This also goes for more abstract generalisations over alternating patterns — while an emerging 'alternation'-constructeme can be posited for transfer-verbs, dispossession verbs have lost the option of alternating, but have become restricted to specific constructions (see also e.g., Zehentner and Traugott 2020). Viewed in terms of constructional synonymy and constructional competition, the considerable overlap between dispossession constructions in earlier English has been shown to gradually reduce, first by the ousting of the DOC through the PTC, and later by the clear divergence of PDC and PTC. Finally, dispossession verbs are a prime example of how changes in parts of the constructional network can trigger (or at least contribute to) changes in other parts: the increasingly close association between

¹¹ As suggested by one of the reviewers of this paper, this question also ties in with the distinction between lexical and phrasal approaches to argument structure constructions (cf. e.g. Boas 2014; Müller and Wechsler 2014).

(transfer-)DOC and *to*-prepositional construction is taken to have played a significant role in the demise of DOC-uses with dispossession verbs.

5 Conclusion

This paper has investigated the history of ditransitive dispossession constructions in English by means of a quantitative study of tokens of three different patterns, one nominal (DOC) and two prepositional (PDC/PTC, with the prepositions marking the deprivee or the theme, respectively) in corpora of Middle, Early Modern and Late Modern English. The main focus has been on exploring (a) the interaction between DOC, PDC and PTC in the earliest stages, connecting the development of the dispossessive constructions with the historical emergence of the English dative alternation, and (b) the more recent interaction between the two prepositional constructions. The results of the statistical analysis regarding the former point support the assumption that the presence of a third competitor dispossession construction (PTC) with similar distributional profiles, together with changes in associations between the DOC and construction not compatible with dispossession verbs resulted in the ousting of this verb class from the DOC, in turn leading to a semantic specialisation of this construction to a basic ‘transfer’-meaning. While the prepositional constructions then stood in an alternation relationship for some time, this changed towards Present-Day English — over time, PDC and PTC have come to diversify more and more in their formal and functional features, eventually stopping to alternate and instead representing two individually very entrenched constructions with clearly separate, opposing characteristics.

On a broader level — in addition to evidencing the loss of an alternation relationship — the paper has shown that investigating alternations as complex, multi-relational networks can shed new light on both their Present-Day features as well as their historical development. This is reflected in that dispossession verbs in earlier English varied not between two, but three different ditransitive constructions. The loss of one of these options for dispossession verbs, viz. the DOC, can then plausibly be linked to (and potentially be explained by) its functional similarity with one of the other constructions, viz. the PTC. This proves more insightful than earlier accounts of the semantic narrowing of the DOC, which either view the construction in isolation, or dichotomously focus on the relation between the DOC and its Present-Day prepositional variant with *to*. Nevertheless, the paper has also pointed towards a need for further empirical, quantitative research into dispossession verbs both in earlier stages of English, specifically Old English, as well as more contemporary English: in particular, assumptions about the differing semantics of the prepositional constructions and changes in the meaning relations

of the patterns over time need to be put on firmer standing (e.g., by means of semantic vector-space models as explored in Hilpert and Flach 2020; Hilpert and Perek 2015; Percillier 2020; Perek 2016; among others). Finally, a point of interest relating to the history of English is the impact of sociocultural factors on the development of dispossession constructions — earlier work on comparable alternations in varieties of Dutch has, for example, indicated that standardisation may play a role in constructions becoming more lexically driven over time (cf. e.g., Grondelaers et al. 2008; Pijpops 2019). A similar influence may hold for English.

Appendix

Table A1: Contributions of categories (top) and specific values of the variables (bottom) to dimensions 1 and 2 of the MCA for Middle English.

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
V_lemma	0.598	V_lemma	0.708
Preposition	0.466	V_origin	0.555
DEPR_pronominality	0.376	Object_order	0.544
Object_order	0.382	Voice	0.510
DEPR_concreteness	0.306	DEPR_animacy	0.155
DEPR_animacy	0.264	Preposition	0.170
Voice	0.221	DEPR_pronominality	0.086
Rel_length	0.201	TH_concreteness	0.067
V_origin	0.108	DEPR_concreteness	0.040
TH_definiteness	0.096	Rel_length	0.039
DEPR_definiteness	0.074	TH_animacy	0.023
TH_animacy	0.024	DEPR_definiteness	0.015
V_lemma=nim	0.734	V_lemma=ravish	2.007
Object_order=TH>DEPR	0.482	V_lemma=rob	1.113
V_lemma=take	0.459	Object_order=DEPR TH	0.843
CxG=PDC	0.433	V_origin=French	0.838
Voice=active	0.431	Voice=passive	0.632
V_origin=nonFrench	0.382	CxG=PTC	0.378
DEPR_animacy=inanim	0.330	Preposition=of	0.245
Rel_length=longerDEPR	0.323	DEPR_animacy=inanim	0.244
DEPR_concreteness=ambig	0.316	TH_concreteness=concrete	0.166
Preposition=Preposition_other	0.295	DEPR_pronominality=noun	0.134
DEPR_pronominality=noun	0.290	Rel_length=longerDEPR	0.119
Preposition=of	0.228	DEPR_concreteness=abstract	0.097
DEPR_concreteness=abstract	0.212	TH_animacy=anim	0.095
DEPR_definiteness=indef	0.185	DEPR_concreteness=ambig	0.087
TH_definiteness=indef	0.158	DEPR_definiteness=indef	0.081

Table A1: (continued)

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
TH_animacy=anim	0.099	V_lemma=steal	0.004
Object_order=DEPR>TH	0.090	CxG=PDC	-0.041
Rel_length=equalLength	-0.039	TH_concreteness=abstract	-0.067
V_lemma=reave	-0.076	DEPR_definiteness=def	-0.081
TH_animacy=inanim	-0.099	TH_animacy=inanim	-0.095
CxG=PTC	-0.152	TH_concreteness=ambig	-0.099
TH_definiteness=def	-0.158	Rel_length=longerTH	-0.125
DEPR_definiteness=def	-0.185	DEPR_pronominality=pron	-0.134
V_lemma=benim	-0.194	DEPR_concreteness=concrete	-0.184
V_lemma=bereave	-0.207	Preposition=Preposition.NA	-0.206
CxG=DOC	-0.280	DEPR_animacy=anim	-0.244
Rel_length=longerTH	-0.284	CxG=DOC	-0.338
DEPR_pronominality=pron	-0.290	Object_order=DEPR>TH	-0.509
DEPR_animacy=anim	-0.330	V_lemma=benim	-0.594
V_origin=French	-0.382	V_lemma=reave	-0.613
Voice=passive	-0.431	Voice=active	-0.632
V_lemma=rob	-0.493	V_origin=nonFrench	-0.838
Preposition=Preposition.NA	-0.517		
DEPR_concreteness=concrete	-0.528		
Object_order=DEPR TH	-0.572		
V_lemma=ravish	-0.597		

Table A2: Contributions of categories (top) and specific values of the variables (bottom) to dimensions 1 and 2 of the MCA for Early Modern English.

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
V_lemma	0.596	TH_concreteness	0.355
Object_order	0.433	DEPR_concreteness	0.301
DEPR_animacy	0.399	DEPR_pronominality	0.252
CxG	0.389	DEPR_animacy	0.247
Preposition	0.408	TH_pronominality	0.227
Rel_length	0.369	DEPR_definiteness	0.204
DEPR_concreteness	0.322	TH_animacy	0.190
TH_animacy	0.298	V_lemma	0.256
DEPR_pronominality	0.280	TH_definiteness	0.084
TH_pronominality	0.264	Object_order	0.083
TH_concreteness	0.232	Rel_length	0.082
TH_definiteness	0.025	Preposition	0.066
		CxG	0.045

Table A2: (continued)

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
V_lemma=withdraw	0.952	V_lemma=snatch	0.552
DEPR_concreteness=abstract	0.499	V_lemma=bereave	0.513
CxG=PDC	0.485	TH_concreteness=abstract	0.361
Object_order=TH>DEPR	0.401	TH_pronominality=noun	0.246
DEPR_animacy=inanim	0.370	DEPR_animacy=inanim	0.233
TH_pronominality=pron	0.330	DEPR_pronominality=noun	0.233
TH_animacy=anim	0.318	DEPR_definiteness=indef	0.229
DEPR_pronominality=noun	0.305	DEPR_concreteness=ambig	0.216
Rel_length=longerDEPR	0.296	TH_animacy=inanim	0.203
TH_concreteness=concrete	0.288	DEPR_concreteness=abstract	0.191
Preposition=from	0.142	Rel_length=longerDEPR	0.177
Rel_length=equalLength	0.140	Preposition=of	0.159
TH_definiteness=def	0.092	Object_order=DEPR>TH	0.141
TH_definiteness=indef	-0.092	TH_definiteness=indef	0.136
DEPR_pronominality=pron	-0.305	CxG=PTC	0.132
TH_concreteness=abstract	-0.317	V_lemma=withdraw	0.017
TH_animacy=inanim	-0.318	Preposition=from	-0.084
TH_pronominality=noun	-0.330	CxG=PDC	-0.132
DEPR_animacy=anim	-0.370	TH_definiteness=def	-0.136
Object_order=DEPR>TH	-0.401	Object_order=TH>DEPR	-0.141
Rel_length=longerTH	-0.436	Rel_length=equalLength	-0.157
DEPR_concreteness=concrete	-0.440	TH_animacy=anim	-0.203
CxG=PTC	-0.485	DEPR_definiteness=def	-0.229
V_lemma=bereave	-0.522	DEPR_pronominality=pron	-0.233
Preposition=of	-0.598	DEPR_animacy=anim	-0.233
V_lemma=rob	-0.686	TH_pronominality=pron	-0.246
V_lemma=deprive	-0.688	TH_concreteness=ambig	-0.389
		V_lemma=take	-0.399
		DEPR_concreteness=concrete	-0.407

Table A3: Contributions of categories (top) and specific values of the variables (bottom) to dimensions 1 and 2 of the MCA for Late Modern English.

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
V_lemma	0.819	V_lemma	0.548
Preposition	0.732	TH_concreteness	0.415
CxG	0.718	DEPR_pronominality	0.242
Object_order	0.636	DEPR_definiteness	0.238
Rel_length	0.506	Object_order	0.189
DEPR_animacy	0.457	DEPR_concreteness	0.164

Table A3: (continued)

<i>Dimension 1</i>	<i>R2</i>	<i>Dimension 2</i>	<i>R2</i>
DEPR_pronominality	0.345	Rel_length	0.152
TH_animacy	0.238	TH_pronominality	0.110
TH_pronominality	0.204	Preposition	0.108
DEPR_concreteness	0.199	CxG	0.098
TH_concreteness	0.186	DEPR_animacy	0.059
DEPR_definiteness	0.065		
TH_definiteness	0.063		
V_lemma=withdraw	0.872	V_lemma=steal	0.600
Object_order=TH>DEPR	0.622	DEPR_concreteness=abstract	0.468
CxG=PDC	0.535	DEPR_definiteness=indef	0.331
Preposition=from	0.534	TH_concreteness=abstract	0.327
Rel_length=longerDEPR	0.524	Object_order=other	0.260
TH_animacy=anim	0.487	V_lemma=withdraw	0.237
DEPR_animacy=inanim	0.436	V_lemma=deprive	0.217
DEPR_concreteness=abstract	0.422	DEPR_pronominality=noun	0.214
DEPR_pronominality=noun	0.360	Rel_length=longerDEPR	0.197
TH_concreteness=concrete	0.348	TH_pronominality=noun	0.165
TH_pronominality=pron	0.316	Preposition=of	0.146
DEPR_definiteness=indef	0.243	CxG=PTC	0.140
V_lemma=take	0.230	DEPR_animacy=inanim	0.112
TH_definiteness=def	0.169	DEPR_concreteness=concrete	0.037
TH_definiteness=indef	-0.169	DEPR_animacy=anim	-0.112
Object_order=other	-0.175	CxG=PDC	-0.140
TH_concreteness=abstract	-0.207	Preposition=from	-0.146
DEPR_definiteness=def	-0.243	TH_pronominality=pron	-0.165
DEPR_concreteness=concrete	-0.298	DEPR_pronominality=pron	-0.214
TH_pronominality=noun	-0.316	Object_order=TH>DEPR	-0.260
DEPR_pronominality=pron	-0.360	Rel_length=equal	-0.272
DEPR_animacy=anim	-0.436	DEPR_definiteness=def	-0.331
Object_order=DEPR>TH	-0.447	V_lemma=take	-0.386
TH_animacy=inanim	-0.487	TH_concreteness=ambig	-0.499
Rel_length=longerTH	-0.530		
Preposition=of	-0.534		
CxG=PTC	-0.535		
V_lemma=deprive	-0.712		
V_lemma=rob	-0.800		

Table A4: Logistic regression analysis of dimensions 1 and 2 of the MCA for Middle English/Early Modern English/Late Modern English.

Middle English							
Call: lrm(formula = deprME\$CxG ~ dim1 + dim2)							
		Model likelihood ratio test		Discrimination indexes		Rank discrim. indexes	
Obs	277	LR chi2	142.86	R2	0.486	C	0.881
DOC	95	d.f.	2	g	2.098	Dxy	0.761
PDC	163	Pr(>chi2)	<0.0001	gr	8.146	Gamma	0.762
PTC	19			gp	0.32	tau-a	0.408
max deriv 7.00E-07				Brier	0.087		
	Coef	S.E.	Wald Z	Pr(> Z)			
y>=PDC	1.0495	0.1752	5.99	<0.0001			
y>=PTC	-3.9354	0.3492	-11.27	<0.0001			
dim1	2.8382	0.3514	8.08	<0.0001			
dim2	2.7477	0.37	7.43	<0.0001			
Early Modern English							
Call: lrm(formula = deprEME\$CxG ~ dim1 + dim2)							
		Model likelihood ratio test		Discrimination indexes		Rank discrim. indexes	
Obs	156	LR chi2	97.99	R2	0.823	C	0.982
PDC	133	d.f.	2	g	6.397	Dxy	0.965
PTC	23	Pr(>chi2)	<0.0001	gr	600.228	gamma	0.965
max deriv 8.00E-06				gp	0.245	tau-a	0.244
				Brier	0.031		
	Coef	S.E.	Wald Z	Pr(> Z)			
Intercept	-6.2917	1.41	-4.46	<0.0001			
dim1	-9.9596	2.4676	-4.04	<0.0001			
dim2	2.4829	1.1603	2.14	0.0324			
Late Modern English							
Call: lrm(formula = deprLME\$CxG ~ dim1)							
		Model likelihood ratio test		Discrimination indexes		Rank discrim. indexes	
Obs	87	LR chi2	104.58	R2	0.956	C	0.997
PDC	55	d.f.	1	g	12.37	Dxy	0.993
PTC	32	Pr(>chi2)	<0.0001	gr	235,610.687	gamma	0.993
max deriv 3.00E-07				gp	0.468	tau-a	0.467
				Brier	0.015		

Table A4: (continued)

Late Modern English					
Call: lrm(formula = deprLME\$CxG ~ dim1)					
	Model likelihood ratio test			Discrimination indexes	Rank discrim. indexes
	Coef	S.E.	Wald Z	Pr(> Z)	
Intercept	-4.7327	2.1919	-2.16	0.0308	
dim1	-17.5532	7.1254	-2.46	0.0138	

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