The intertwining of differentiation and attraction as exemplified by the history of recipient transfer and benefactive alternations

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Abstract

De Smet et al. (2018) propose that when functionally similar constructions come to overlap analogical attraction may occur. So may differentiation, but this process involves attraction to other subnetworks and is both "accidental" and "exceptional". I argue that differentiation plays a considerably more significant role than De Smet et al. allow. My case study is the development of the dative and benefactive alternations. The rise of the dative alternation (e.g. 'gave the Saxons land' ~ 'gave land to the Saxons') has been shown to occur in later Middle English between 1400 and 1500 (Zehentner 2018). Building on Zehentner and Traugott (2020), the rise of the benefactive alternation (e.g. 'build her a house' ~ 'build a house for her') in Early Modern English c1650 is analyzed from a historical constructionalist perspective and compared with the rise of the dative alternation. The histories of the alternations exemplify the rise of functionally similar constructions that overlap, and show that differentiation from each other plays as large a role as attraction. Both attraction and differentiation occur at several levels of abstraction: verb-specific constructions, schemas and larger systemic changes.

1 Introduction[1]

In a paper that addresses how to understand the development of long-term functional overlap in historical linguistics, De Smet et al. (2018) discuss a number of current issues, among them how the concepts "competition", "attraction" and "differentiation" might best be understood. Attraction is understood as the process of two constructions becoming more alike, usually as the result of analogy, while differentiation is the process of becoming less similar (De Smet et al. 2018: 197). The authors espouse "a view of language as a network of expressions whose properties align to those of similar expressions" (p. 227), and regard attraction as a fundamental tendency in change. On the other hand, differentiation is considered to be "probably accidental and exceptional, as it depends on special circumstances" (p. 229). The paper brings together work on analogy (e.g. Anttila 2003; Fischer 2007; De Smet 2013) with De Smet's (2008) work on functional overlap, convergence with and differentiation from extant constructions. The discussion concerns the spread of changes as evidenced in texts and, by hypothesis, in mental representations.

In the present paper I take the position, as do De Smet et al. (2018) (hereafter DS), that linguists should looks for abstractions and generalizations based on empirical data. I explore the issues that DS raise concerning similarities

[1] I am deeply indebted to Eva Zehentner for invaluable discussion of the issues and for her generous sharing of benefactive data. Thanks also to participants in the Berkeley Linguistics Colloquium at the University of California, Berkeley, April 2019, for their helpful remarks and to three anonymous reviewers for insightful comments and suggestions.

and differences between attraction and differentiation.[2] In doing so, I take a constructional perspective on the history of the development in English of the "dative alternation", illustrated in (1) and especially of the "benefactive alternation", as illustrated in (2).[3] In (1) and elsewhere, the three NP roles are distinguished graphically as follows: agent unmarked, (intended) recipient bold, theme underlined, and the verb in italics.

(1) a. My six-year-old nephew has had several attacks during the last 18 months. The doctor *gave* **his parents** medication to use.
(1993 *Saturday Evening Post* [COCA])
b. In 2013, two New Jersey counties alone incarcerated or *gave* ankle monitors **to 1800 parents**.
(2017 *Stanford Law Review* [COCA])

(2) a. One day a few years before he died, I *baked* **my father** three pies.
(2009 *America* [COCA])
b. I *baked* the bread **for you**.
(2011 Lake, *Endurance* [COCA])

In Present Day English (PDE), dative alternation consists of a pairing of two constructions: a ditransitive with the form [SUBJ V OBJ1 OBJ2] and a prepositional variant "*to*-dative" with the form [SUBJ V OBJ2 to OBJ1]. Both are prototypically associated with the meaning 'X CAUSE Y TO HAVE Z'. The first is known as the Double Object Construction (DOC), the second as the Prepositional Object Construction (POC). The prototypical dative alternation consists of an animate subject, a verb such as *give, sell* which refers to transfer of possession of

[2] I do not address competition for two main reasons. One is that, despite their title, "Changing functions of competing forms", DS find concepts of competition inadequate for an account of long-term functional overlap. What they call the "simple competition" model (e.g. Bolinger 1977) is said to assume "no synonymy", isomorphism (parallelism in structural levels of language), and one-to-one organization (p. 101); it therefore allows no overlap. While the "extended competition" model (e.g. MacWhinney 2014; Rohdenburg 1996) posits division of labor among expressions based on general pragmatic processing constraints, in DS's view, cases of diachronic differentiation are not predicted in the model, and "if they occur, they cannot be explained" (p. 203). The concepts attraction and differentiation are invoked to give some explanatory power to competition. Another reason for not discussing competition is that, in a usage-based view of language change such as is espoused in this paper, linguistic entities are ideally not reified as organisms or "entities independent of people" (Joseph and Janda 2003: 79) that can "compete".

[3] Arguments that have been made against alternations and against the ditransitive status of benefactives like (2a) are touched on in section 3.

a theme (OBJ2) to an animate recipient (OBJ1). The preposition is typically *to*.[4] *Give, sell* are telic (successful transfer is entailed). In (1a), even though they may not have used the prescription for the medication or administered the medication, and in (1b) even though they may have attempted to remove the ankle monitors, the parents are understood to have received the prescription for the medication and the monitors. I extend Kay's (2005: 80) useful term "direct recipient construction" from ditransitive recipient constructions to dative alternations (i.e. to both DOC and POC variants of e.g. *give, sell*).

The benefactive alternation is similar with respect to the abstract form of the ditransitive. It consists of a pairing of a ditransitive construction with the form [SUBJ V OBJ1 OBJ2] and a prepositional variant, but the preposition is *for* ([SUBJ V OBJ2 for OBJ1]). Both are prototypically associated with the meaning 'X INTEND Y TO HAVE Z'. Prototypical benefactive verbs are verbs of creation and obtaining, e.g. *bake, build, buy, make*. OBJ1 is understood as an "intended recipient" who may or may not in fact receive the intended benefit. I extend the term "indirect recipient construction" (Kay 2005: 76) from ditransitive benefactive constructions to benefactive alternations (i.e. to DOC and POC variants of e.g. *bake, buy*).

Both sets of alternation exemplify functional overlap because both have ditransitive and prepositional members and both refer to reception. Members of a pair are paraphrases of each other, although there are differences with respect to such factors as givenness that have been extensively studied in the case of dative alternation both synchronically (Bresnan et al. 2007; Bresnan and Ford 2010) and diachronically (e.g. De Cuypere 2015; Wolk et al. 2013). Historically each member of the pair is attested independently prior to the conventionalizing of alternation, that is, before the alternation is integrated into a tradition of speaking or writing and therefore is attested in the works of several authors. The rise of the alternation can therefore be considered to be a case of reorganization of constructional relationships over time. What is of interest for this paper is the fact that, despite their functional overlap, their histories evidence considerable differentiation.[5] Furthermore, differentiation and attraction both occur at several levels of linguistic analysis. The data call into question DS's hypothesis that differentiation is accidental and exceptional. I conclude that differentiation is closely intertwined with attraction.

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[4] Although *to* is the prototype preposition associated in contemporary English with recipient-transfer constructions, other prepositions, e.g. *at*, may be used with certain verbs, cf. *cast somebody a coy glance/cast a coy glance at somebody*, or *of*, cf. *ask somebody a favor/ask a favor of someone* (Colleman and De Clerck 2009: 7).

[5] Ditransitives and benefactive ditransitives in particular have been attested from the time of the earliest Germanic records, as have prepositional phrases. The present paper is therefore concerned with changes to the syntax of benefactives and to the reorganization over time of the relationship with prepositional expressions, not with the emergence of the category ditransitive.

My approach is usage-based and draws on the following principles outlined in Kemmer and Barlow (1999) [KB]):

a) "[T]he speaker's linguistic system is fundamentally grounded in 'usage events': instances of a speaker's producing and understanding language" (KB: viii).
b) Structures posited are hypotheses about "mental structure and operation (the 'internal' linguistic system)" rather than being conceptualized as independent of these (the "'external' linguistic system") (KB: viii).
c) Units of language are "dynamic, subject to creative extension and reshaping with use … in a kind of feedback loop" (KB: ix).
d) "[T]here is always the potential for regular aspects of context to become conventionalized and thus part of the linguistic system itself" (KB: xxi).

In keeping with the linguistic orientation adopted in this paper, I understand "context" primarily as textual "co-text".

The structure of the paper is as follows. In Section 2 I introduce the theoretical proposals as developed in DS regarding attraction, differentiation and network relationships. Section 3 provides an overview of some arguments for and against the existence of dative and benefactive alternation. The history of the rise of the dative alternation is outlined in section 4, and that of the benefactive alternation in section 5. Implications for DS's theoretical arguments are discussed in section 6. Section 7 concludes.

2 The theoretical issues

In this section I introduce the main issues that the rise of the dative and benefactive alternations will be shown to illustrate and problematize. These are attraction (2.1), differentiation (2.2) and relationships among networks (2.3).

2.1 Attraction

DS define functionally similar expressions as "distinct forms that can be used more or less interchangeably in the same discourse contexts because their semantic extensions cover overlapping areas of conceptual space" (p. 198). DS suggest that in many cases, functionally similar constructions originate in ones that are somewhat distinct. For example, in the COHA data 1840-2000, at the beginning of the nineteenth cnetury *begin to V* was the default construction with *begin*. A few examples of *begin V-ing* are attested, with agentive subjects and therefore with activity verbs. Over time, tokens of *begin V-ing* increased, among them a small number with non-agent subjects. DS say that in the second half of the twentieth century the *-ing* variant is found in raising constructions with passive auxiliaries, e.g. (3):

(3) Electricity **began being** scientifically investigated in the eighteenth century.
(2001 *American heritage* [COHA; De Smet et al. 2018: 210])

In other words, "the semantic profile of [*begin + -ing*-clause] became less restrictive" (De Smet et al. 2018: 210) and the two constructions have become more similar.

According to DS, once situations of functional overlap have arisen, they entail the similarity "that motivates analogical alignment" and enables attraction (p. 228). In analogy "the behaviour of one expression is modelled after the behaviour of another which it resembles" (p. 217). Such modeling may be formal or functional (p. 217), in other words, the modeling may concern form (part of speech, segmental structure, and distributional behavior, such as constituent order) or function (meaning). In the case of the attraction of the *begin V-ing* construction to the *begin to V* construction the analogical model is formal and distributional (animacy of the subject, as discussed below in section 3.2 with reference to differentiation from *start to V* and *start V-ing* (p. 220-223)).

An example of the rise of both formal and functional overlap followed by attraction that DS cite is the emergence of variation between determiner genitives and noun modifiers as in *Bush's administration/The Bush administration* (Rosenbach 2007). In Late Middle English (approximately 1400-1500), there was a division of labor between determiner genitives and noun modifiers. Determiner genitives were typically animate and had "individuating" function, like *Bush's administration*, in which the administration is uniquely specified as the administration of President Bush. By contrast, noun modifiers were typically inanimate, and had a classifying function, e.g. *war budget,* in which the budget is characterized as belonging to the type *war* (not e.g. *entertainment*). From the Early Modern English period (approximately 1500-1700) on, distributional restrictions on animacy were gradually relaxed. Determiner genitives came to be used increasingly with inanimate nouns (e.g. *this week's notes*). At the same time, noun modifiers, which were originally used mainly with inanimate nouns, came to be used increasingly with animate nouns (Rosenbach 2007: 183-185). Two semantically and distributionally distinct constructions came to be used in contexts that are compatible with both (Rosenbach 2007: 144), a change type that exemplifies DS's concept of functional overlap. The two constructions were analogically aligned to each other, and the result was variation such that genitives can alternate with noun modifiers. De Smet et al. (2018: 215) exemplify with:

(4) a. and then you have to pay two pounds **student's** fees (BNC]
b. they receive only the **student** fee (BNC)

(5) a. Urben […] was fined £60 by the **city's** magistrates (BNC)
b. His passenger […] will appear before **city** magistrates next week (BNC)

In DS's view, what prevents total synonymy/merger under functional alignment is "adherence to different networks of formally similar and semantically related expressions" (p. 205). Assuming DS's hypothesis about why total merger does

not occur is correct, it is likely that the bare N structure of noun modifiers, as in *a stone wall*, provides a systemic pattern/template that maintains a distinct network.

A helpful addition here to the role of analogy proposed in DS may be Traugott and Trousdale's (2013: 37-38) distinction between:

a) analogy understood as observable linguistic change based on a particular (partial) match,
b) the ubiquitous unobservable cognitive process (also traditionally called analogy) whereby an expression is matched or partially matched to an exemplar model in the first place.

Both are traditionally called "analogy". Traugott and Trousdale call the first "analogization", and the second "analogical thinking". It appears that "alignment" in DS is a kind of unobservable conceptual matching that involves analogical thinking. Such thinking may result in observed changes by a process that can be called "analogization". "Attraction" is then the accrual over time of small-step changes, mostly analogizations, to an abstract construction with which there is functional overlap. Such shifts are typically so small that De Smet (2012: 608) refers to their "sneakiness".

2.2 Differentiation

DS point out that change may also involve "differentiation", which "requires the assignment of new functions to existing forms" (p. 199) The authors hypothesize that "the forces at work are probably the same" as for attraction (p. 222), paradoxical as this may seem. Both attraction and differentiation are "essentially processes that affect the functional profile of forms" (p. 205). However, they are "opposites and rule each other out" (p. 205). Alignment also occurs here, but in the case of differentiation it is alignment to "distinct subnetworks of formally related expressions … potentially causing them to become less similar over time" (p. 227). The larger constructional family network may attract behavior away from one match to another. In other words, while attraction occurs within a subschema, differentiation involves "relations that stretch beyond the pair of functionally similar expressions" (p. 229). Note that this is a very different way of thinking about differentiation from that associated with "divergence" in the grammaticalization literature, where "split" is privileged, not motivation by matching (see e.g. Hopper and Traugott 2003[1993]: 118-122).

An example of differentiation that DS provide is the development in the late eighteenth century of *start*, which was originally intransitive and meant 'make a sudden movement' into a transitive causative 'make someone/thing move suddenly'. In the COHA data both *start to V* and *start V-ing* were preferred with agentive subjects around 1900, but by the 1990's *start to V* became strongly associated with non-agentive subjects (De Smet et al. 2018: 221-222). The result is differentiation from each other in the *start* pair. More interestingly, the pair also shows differentiation from the *begin to V* and *begin V-ing* pair mentioned in section 2.1. above. While the *begin* pair became more alike over the twentieth

century, the *start* pair became less alike, even though both pairs express inchoative aspect. DS suggest that *start to V* may have been attracted to *begin to V* (p. 222). This could be considered to be an "intertwining" of differentiation and attraction.

I will emphasize the importance of differentiation and of interpreting it, as do DS, as involving alignment and analogization to different subschemas, and even to systemic changes. But I will question DS's hypothesis that differentiation is "epiphenomenal … a more or less accidental by-product of the relations in a bigger constructional network" (p. 223), and "probably accidental and exceptional, as it depends on special circumstances" (p. 229).

2.3 Network relationships

As is implied in the prior discussion, DS's views on the rise of functional overlap, attraction and differentiation (as well as other factors they discuss such as substitution and stability) depend crucially on their views of the relationship of expressions to constructional networks, and of networks to each other. DS argue that networks capture "the possibility of an expression maintaining multiple and even potentially conflicting relations to other expressions" (p. 206). It is network relationships that enable alignments that give rise to attraction on the one hand and differentiation on the other.

Network relationships have been the topic of intense research in recent years, see e.g. Van de Velde (2014); Petré (2014); Perek (2015) and Sommerer and Smirnova (2020). In early work on Construction Grammar, a "vertical inheritance network" was posited, a taxonomic model intended to capture language-users' knowledge of language as an inventory of the relationships between concrete expressions and abstractions over them (Goldberg 1995, Goldberg 2006). This is a hierarchic model in which members of lower levels have properties of higher level ones. Such hierarchic networks imply that constructions are discrete, and do not readily allow for the fact that "structurally different elements can fulfil the same function" (Van de Velde 2014: 141), i.e. are in a paradigmatic relationship with each other.

To address the fact that form-function relationships are typically many-to-many in languages, and that paraphrase relationships may abound, various types of network relationships have been posited. Among these is the proposal that alternations that serve as paraphrases (which DS include under functional overlap) can be captured by abstract "constructemes" with underspecified syntactic type and linear order (see Perek 2012, Perek 2015 drawing on Cappelle 2006). A further suggestion is that paradigmatic alternations are in a "horizontal" relationship (Van de Velde 2014). The theoretical implications of such horizontal links is that the members of a network that are linked by them are in a paradigmatic relationship. This may be not only a traditional morphological relationship but also a syntactic one (Van de Velde 2014: 149). These proposals are illustrated in section 3.1 below in connection with representation of the relationship between DOC and POC.

3 Arguments for and against dative and benefactive alternation

Cross-linguistically, ditransitive constructions involve a verb and three arguments (agent, theme, recipient). They express an event of transfer, either physical or mental (cf. *give someone something, tell someone something*) (Haspelmath 2015). The contemporary English ditransitive construction has received much attention in recent years, especially in the context of work on Construction Grammar, e.g. Goldberg (1995, 2006). Focus has been mainly on recipient-transfer constructions, i.e. those with verbs like *give* that typically entail both transfer and reception of the theme by the recipient and for which there is a prepositional *to*-variant. But not all ditransitive – dative pairs entail completion of transfer, only prototype members. For example, *send*, which allows dative alternation, implies intention of transfer but not necessarily reception, and is therefore not prototypical:[6]

(6) a. The elders of the caste would doubtless *send* **her** a letter of censure.
(2012 Jemisin, *The shadowed sun* [COCA])
b. She got him to *send* a letter **to her** at his address.
(2013 Horvath, *The desert of Maine* [COCA])

That the letter arrived is implied, but not entailed, cf. *They sent her a letter of censure but she never received it* is fully grammatical.

3.1 Debates about dative alternation

Questions have been raised (see e.g. Hampe 2014) about what the optimal level of granularity of description is, in other words, how revealing abstract schemas such as constructemes are, and which constructions should be grouped within one constructeme. In the present case, whether or not the prepositional "*to*-dative" should be considered to alternate with the direct recipient ditransitive has been a matter of debate. Goldberg (1995) and others have shown that in English the prepositional "dative" construction, as in *Sam gave a book to Amy*, has much in common with another construction, caused-motion, as in (7):

(7) a. Pat pushed the piano into the room (X CAUSES Y TO MOVE Z)
(Goldberg 1995: 76)
b. Pat allowed Chris into the room (X ENABLES Y TO MOVE Z)
(Goldberg 1995: 76)

For one, the surface syntax is similar, both constructions are used to refer to physical transfer, and both entail causation and telicity. Just as *Sam gave a book to Amy* entails that Amy received the book, so *Pat pushed the piano into the*

[6] Rappaport Hovav and Levin (2008) consider *send* to combine both transfer ('cause to have') and caused-motion. For caused-motion see section 3.1 below.

room entails that the piano came to be in the room. Also, as Goldberg shows, there are similar subpatterns of enablement, resistance and aid (Goldberg 1995: 76). Goldberg (2002: 349) argues that, despite similarities such as are illustrated in (1), it is not clear that "one particular paraphrase should have a privileged status, nor that it is profitable to analyze one phrasal pattern solely by implicit or explicit reference to another". She privileges "surface generalizations" over alternations and regards direct recipient expressions with *to*-POC "datives" as a subset of caused-motion constructions, independent of ditransitive direct recipient constructions, although linked to them.

Alternations have played a large part in thinking about the constructional lexicon (known as the "constructicon") and syntactic and semantic properties of verbs. Alternations associated with *spray/load* verbs e.g. *spray paint on the wall ~ spray the wall with paint,* as well as verbs of change of possession such as *give/lend* are among the many examples of alternation considered in Levin (1993). Building on Levin's and related work on alternations and on Bresnan et al. (2007), Bresnan and Ford (2010) demonstrated that probabilistic differences in production and comprehension of ditransitives (DOCs) and *to*-datives (POCs) support the alternation hypothesis. In particular, "if the recipient argument is a lexical noun phrase, inanimate, indefinite, or longer, it will tend to appear in the prepositional dative construction" (Bresnan and Ford 2010: 181). Seeking to further test the cognitive reality of the dative alternation and surface generalization hypotheses, Perek (2012) found that in a sorting experiment speakers did not combine the prepositional dative with the caused-motion construction. Rather, they generalized over the recipient ditransitive and prepositional dative, supporting hypotheses that these two form a pair in speakers' linguistic knowledge.

Perek proposed that generalization of this kind over the recipient and prepositional dative could be modeled by an abstract "constructeme" for dative alternation, as modeled in Figure 1 (based on Perek 2012: 627). On the meaning side this constructeme is [X CAUSE Y TO HAVE Z]. On the form side it is underspecified with respect to argument order (signaled by '?'). It has two variants for which the order of the arguments is specified. The close relationship between the ditransitive and *to*-dative is inferable from the hierarchical branching structure because the alternative constructions are represented as daughters of the same [X CAUSE Y TO HAVE Z] schema. Closeness has been made additionally visible by using a horizontal link between the alternating forms. The relationship between caused-motion and the dative prepositional construction is represented as conceptually more "distant" because the *to*-dative is linked to a separate schema.[7]

[7] The right-hand node under CAUSED-MOTION links to other alternations such as locative alternation, e.g. *load the stones on the cart, load the cart with stones* (cf. Levin 1993 and elsewhere).

Figure 1 combines the notion of constructeme with that of horizontal network links and specifies that the ditransitive and *to*-dative are in a syntactic paradigmatic relationship (see also Zehentner 2018: 168, Zehentner 2019: 324):

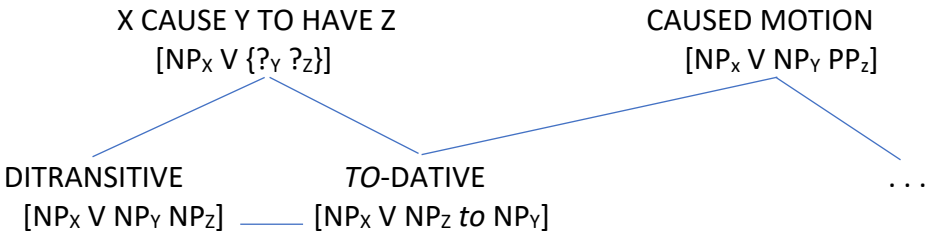

Figure 1. Constructional network of the dative alternation in PDE

Note that positing a constructeme for the alternation analysis does not entail derivation. This is in keeping with constructional views of grammar and of relationships among functionally similar constructions. Members of a schematic representation such as a constructeme are equal members of the schema. I will show how this kind of network linking arose in the histories of English dative and benefactive alternations.

3.2 Debates about benefactives and benefactive alternation

There have also been debates regarding the benefactive. While Goldberg (1995) regards benefactives as a subset of ditransitives, Goldberg (2002: 345) points out that the intended recipient is not a profiled/obligatory participant of the verb, and proposes that it is not an argument. Rather, it is an adjunct construction "added by the construction". Kay (2005) and especially Nisbet (2005) argue for adjunct status on grounds that the recipient is optional (e.g. *bake* does not inherently require a recipient, cf. *She baked a cake*) and cannot be passivized (**Kim was baked a cake*). However, the distinction is not always easy to make and Hoffmann (2007) challenges a binary complement-adjunct classification of PPs in English.

Despite questions about the status of the *for*-PP, many researchers have regarded benefactives as a subtype of ditransitive, and have also assumed benefactive alternation. This is in part because reception, even if only potential, is fundamental to benefaction. It has been pointed out by Van Valin and LaPolla (1997) and Kittilä (2005), among others, that in PDE the benefactive ditransitive cannot be used to express events in which a participant benefits from an action without receiving anything. This holds true even in cases where an agent may substitute for a person, for example, *bake a cake for someone* may be understood as baking the cake instead of someone (the "substitutive benefactive" meaning), but *bake someone a cake* cannot. In part, too, it is because, like *to*, *for* is not understood literally, as is shown by the difference between literal spatial (locative, goal) uses of *to*-PPs and the recipient semantics of *to*-POCs.

Below I argue that alternating benefactives are in general equivalent to alternating direct recipient ditransitves and are part of language-users' knowledge of language. This is consistent with Theijssen et al. (2010), who compare a regression analysis of benefactive ditransitives with Bresnan at al.'s (2007) study of recipient ditransitives. In historical work, Colleman and De Clerck (2011) note that ditransitives referring to events of "pure benefaction" which do not result in transfer (Kittilä 2005), e.g. *open someone the door*, were among subclasses of ditransitives that obsolesced after the eighteenth century and were replaced by *for*-POC expressions (*open the door for someone*).[8] Zehentner and Traugott (2020) suggest that benefactive alternation may have been analogically matched with recipient ditransitive alternation in Early Modern English.

As is discussed in section 6, despite the similarities between the benefactive and dative alternations, there are also significant differences. Attraction and differentiation are both essential to their development in different ways.

4 Dative alternation: the precursor of benefactive alternation

This section outlines Zehentner's (2018) account of the development of dative alternation. The alternation was stabilized by the end of the Middle English period, 1420-1500, and is the precursor of the development of benefactive alternation. Section 4.1 outlines the data and methodology and 4.2 is devoted to the history of the construction.

4.1 Data and methodology

Zehentner (2018) presents a statistical analysis of patterns leading to the rise of dative alternation in late Middle English. The data are drawn from the *Penn-Helsinki Parsed Corpus of Middle English,* version 2 (PPCME2). In a first step, tokens of DOC with two overtly realized NP-arguments were searched for using *CorpusSearch* (Randall 2009) and filtered manually. In a second step, occurrences of the verbs identified in the first step were searched for with a prepositional recipient. Full details of the methodology can be found in Zehentner (2018: 155-158).

4.2 A sketch of the development of dative alternation

In PDE the direct recipient ditransitive construction (*give, sell*) is generally regarded as the prototype ditransitive (e.g. Goldberg 1995, Malchukov et al. 2010). However, this was not the case in early Germanic. Investigating Gothic, Old English and Norse-Icelandic, Vásquez-Gonzáles and Barðdal (2019) argue that there was a significantly larger number of verbs that could be used in three-argument DOC structures than in PDE. Not only has the set of verbs that can be used with DOC syntax declined, but the meaning of DOC has been narrowed from indirect affectedness to transfer.

[8] See also, with a different meaning, *open the door to someone*.

As outlined in section 5.2 below, important subtypes within the ditransitive event-type schema in Old English were benefactives and malefactives (three-place verbs with negative semantics, e.g. 'X cut her the head off'). Use of ditransitive benefactive expressions in general, not only of malefactives, has declined (Vázquez-González and Barðdal 2019: section 4.2). This decline is part of the wider phenomenon of a general loss in English of both types and tokens of ditransitives. Colleman and De Clerck (2011) discuss the loss of types of ditransitives in the eighteenth centory and Wolk et al. (2013: 393) the steady decline of the absolute frequency with which recipient ditransitives are used since 1700.

De Cuypere (2015) shows that in Old English two subtypes of ditransitives, those with verbs of caused-motion (e.g. *ber-* 'bear', *bring-* 'bring') and communication (e.g. *tell-* 'tell', *secg-* 'say'), are found more frequently with a *to*-PP adjunct construction than with DOC syntax. Zehentner (2018:151) identifies the meaning of DOC at this time as "indirect affectedness" (see also Malchukov et al. 2010). During Old English, there was a typological shift that favored transfer of possession verbs with human recipients (e.g. *gief-* 'give') in ditransitive syntax. These did not occur with a *to*-dative. The first example of 'give' in the textual record with *to* and a human recipient appears only in the thirteenth century (Early Middle English). De Cuypere (2015: 16) cites *ȝeve to ioseph … hap* 'give to Joseph … good fortune' (CMJULIA 119.390 [PPCME2]). McFadden (2002) interprets the new distribution as evidence that *to* was neoanalyzed from a goal to a recipient marker in the context of verbs of direct reception. Zehentner (2018: 166) identifies the loss over time of the restriction of ditransitives with *to*-PP variants to verbs of communication and caused-motion with the narrowing of the meaning of DOC from indirect affectedness to transfer ('cause to possess'). Uses that later came to be crystallized as "dative alternation" were incipient with the loss of the restriction.

Zehentner (2018: 167-168) argues that PPCME2 provides evidence of a correlation in Middle English between the appearance of the prepositional variants and three factors:

a) widening of prepositional meaning: directional *to* came to be associated with abstract as well as physical transfer,
b) narrowing of ditransitive semantics from indirect affectedness to transfer-related meanings,
c) fixing of OBJ1 OBJ2 order (both OBJ1 OBJ2 and OB2 OBJ1 orders were available in Old English).

The period from 1250 to 1350 (period 2 in PPCME2) shows the greatest increase in prepositional use, not only in terms of token frequency, but also of preposition types used. Zehentner cites the use of *unto* from the late thirteenth century on, especially with verbs of transfer. She exemplifies with the pair in (8) (TH is short for theme, and REC for recipient):

(8) a. he *ʒaf* þe londe$_{TH}$ **to** þ**e Saxones**$_{REC}$
he gave the land to the Saxons
(late 13thC CMBRUT3,95.2879 [PPCME2; Zehentner 2018: 159])
b. when he had conquered Engeland, & it$_{TH}$ *ʒaf* **vnto Saxonus**$_{REC}$
when he had conquered England, and gave it to the Saxons
(late 13thC CMBRUT3,111.3350 [PPCME2; Zehentner 2018: 159])

By the end of Middle English, this increase in prepositional use had leveled off and indeed declined somewhat. Since there was little significant change after that, Zehentner (2018: 162) concludes that the later Middle English period (1400-1500) is the time during which the dative alternation was established.

It should be noted that in Modern English there may still be ambiguity between directional PPs and direct recipient arguments. Wolk et al. (2013: 390 ft.3) cite *send, bring, take* with *to*-POC syntax as likely to be ambiguous in ARCHER (*A Representative Corpus of Historical English Registers*, with data from 1600-1999). An example of the ambiguity from EEBO is cited in (9). (9a) is clearly ditransitive, while *to my maid* in (9b) is ambiguous between a directional PP and a dative alternation reading:

(9) a. and at the same time *sent* **he**r a companion, and presently after that another.
(1658 Davies, *Astrea* [EEBO])
b. but he *sent* a mssenger **to my maid** (who had betray'd me) to give him a meeting.
(1680 Head, *The English rogue* [EEBO])

The dative alternation that developed in Middle English appears to be part of the general typological reorganization of English at the time from a largely synthetic system with inflectional case marking to a more analytic one with prepositional phrases and auxiliaries instead of tense-aspect-modality inflections (Zehentner 2018, Zehentner 2019). Indeed, the overall decline of ditransitives mentioned above may be linked to this reorganization, since ditransitive DOC constituent order is a relic of the earlier, more synthetic stage of English.

However, Wolk et al. (2013) show that overall, since around 1650, direct recipient verbs with dative alternation were used in ARCHER in DOC c70% of the time, and in *to*-POC c30% of the time. The preponderance of DOC is unexpected given the traditional view that English has been consistently used in more analytic ways. However, Szmrecsanyi (2012) shows that this traditional view is incorrect. Some expressions that are associated with synthetic morphology and syntax have come to be used more frequently, such as markers of possessive (*-s*) and adjectival degree (*-er, -est*). Wolk et al.'s findings with regard to dative

alternation can be considered additional evidence for the need to revisit the idea that English is on a consistent trajectory toward more analytic status. However, it should be noted that not all recipient ditransitives are equally likely to alternate (Gries and Stefanowitsch 2004). Wolk et al. (2013: 404) find that in their data *cost, tell, allow* are strongly preferred in DOC, while *present, extend, take* are preferred in *to*-POC. The issue of changing trends in analyticity will be revisited in section 6 in connection with discussion of attraction and differentiation.

5 The development of benefactive alternation

In this section I outline the development of the benefactive alternation, drawing on Zehentner and Traugott (2020), but elaborating on some of the data, especially on constructions with *open* and *build*. Section 5.1 outlines the methodology, section 5.2 describes the changes. Section 5.3 reports on two brief studies, one on benefactives with *open* and the other on benefactives with *build*. Given that the ditransitive benefactive has the same abstract form as the direct recipient ditransitive (SUBJ V OBJ1 OBJ2) and similar semantics, intended reception, it was unexpected that the rise and subsequent history of the benefactive alternation (e.g. *build*) would turn out to be rather different from that of the recipient subtype (e.g. *give*).

5.1 Data and methodology

While Zehentner (2018) is a quantitative study, Zehentner and Traugott (2020) (henceforth Z&T) is largely qualitative, with some quantitative data. As a first step, a list of 215 benefactive verbs was compiled based on Levin (1993) and Zehentner (2016) and on a pilot study using *CorpusSearch* (Randall 2009) to identify instances of the preposition *for* with two objects in the syntactically annotated version of the *Penn-Helsinki Parsed Corpus of Early Modern English* (PPCEME). In the course of her study of ditransitives and the rise of dative alternation in Middle English, Zehentner had noted that verbs with benefactive meaning could occur not only with *for*, but also with *to* and other prepositions. The final inventory of 215 verbs identified in PPCEME served as the input for a larger-scale study of benefactive ditransitive patterns in EEBO in DOC and in both *to*- and *for*-POC expressions. For purposes of the present paper, I additionally conducted manual searches for *open* and *build* to attempt to tease apart some of the variants in the EEBO data.

The data used for Z&T and the present study are taken primarily from EEBO-TCP, a searchable data base of approximately 755 million words of Early Modern English from 1475-1700, organized in 10-year periods. According to the website of EEBO-Text Creation Partnership (EEBO-TCP), as of 2019 there are nearly 35,000 books in the data base including “works of literature, philosophy, politics, religion, geography, history, politics, mathematics, music, the practical arts, natural science”. Most texts are written in a relatively formal register, and the data base is not syntactically annotated, but its size outweighs its limitations.

Because of the high frequency of the relevant verbs in EEBO, the final search was heavily restricted and the following patterns were extracted:

a) DOC: verb (all forms) + pronoun + article + noun (e.g. *built her a house*)
b) *for*-POC: verb (all forms) + article + noun + for + pronoun (e.g. *built a house for her*)
c) *to*-POC: verb (all forms) + article + noun + to + pronoun (e.g. *built a house to him*).

"Pronoun" here refers to animate pronouns in their oblique form, specifically *her, him, me, them, us*. This method inevitably introduced bias toward pronominality, but nevertheless allowed in depth study of the benefactive in a large historical data base.

5.2 Sketch of the development of benefactive alternation

As mentioned at the beginning of section 4.2, in Old English (as well as earlier Germanic), there were several subtypes of benefactive ditransitive in Old English, some of which are now only used in *for*-POC. Subtypes that occurred in DOC include: creation (*atimbr-* 'build'), preparation (*bac-* 'bake'), obtainment (*bycg-* 'buy'), substitution (*open-* 'open'). An example of ditransitive use of *atimbr-* is:

(10) wolde **hire** on þære byri3 bur *atimbran*
wished her in that town chamber build
'[it] wished to build itself a chamber in this town'
(c960?, *Anglo Saxon riddles* [Old English aerobics glossary, s.v. *atimbran*; Z&T, ex. (12b)])

Most verbs of creation, preparation and obtainment continued to be used in DOC until the present day. However, as illustrated with *open*, by the eighteenth century verbs of substitution came to be used almost exclusively with *for*-POC (Colleman and De Clerck 2011). In addition to these subtypes of benefactive ditransitive verbs in Old English, there were also verbs of malefaction, which were typically used to refer to obstructing, spoiling, cutting, and accusing, etc. An example is:

(11) Nu ðu **me** stale *tihst,*
Now you.NOM me.DAT theft.ACC charge
'Since you accuse me of theft'
(*Genesis* 1, 32-33 [Vázquez-González and Barðdal 2019, Ex. (23b)])

Use of ditransitive malefactives declined significantly in Middle English, during which period they were largely replaced by possessive constructions (see 'accuse

of theft' in the translation of (11) above, and 'cut off his head' rather than *cut him the head off*).

In Middle English benefactive verbs with positive or neutral meaning are attested with a variety of prepositions, among them *to, for*, and occasionally other prepositions such as *unto, toward(s), on* and *upon*. Z&T cite the following examples with *to*, *on* and *for*:

(12) a. Salamon *bildide* a noble hous **to himself**
'Solomon built a noble house TO himself'
(c1388, CMPURVEY,I,12.477 [PPCME2; Z&T, Ex. (14b)])

b. ðat gode imiend ðe godd *hafde iscapen* **on ðe**
that good memory that god had created on you
(c1200 CMVICES,23.252; PPCME2; Z&T, Ex. (16b)])

c God *haþ wrou3t* **for him** meny a faire miracle
God has worked for him many a fair miracle
'God has often made great miracles FOR him'
(c1400, CMBRUT3,101.3058 [PPCME2; Z&T, Ex. (15b)])

By Early Modern English, speakers began to link purposive prepositional phrases with *for* with benefactive ditransitives, especially in the context of human beneficiaries. The increased frequency with which the alternation is attested and the collocational expansion is undergone suggest that some *for*-PP expressions had been neoanalyzed as recipient arguments in benefactive ditransitives. The benefactive alternation was established, but did not stabilize until around 1650, at least a century later than the use of *to*-POC for recipient ditransitives. A typical example from EEBO is:

(13) a. if the horse halt, then *make* **him** a shoe fitted to his foote
'if the horse limps, then make him a shoe that is fitted to his foot'
(1566 Blundeville, *The fower chiefyst offices* [EEBO])

b. his sisters didde spinne, and *make* **for him** garmentes of wollen clothe
'his sisters span and made garments of woolen cloth for him'
(1572, Bossewelle, *VVorkes of armorie* [EEBO])

The emergence of the new benefactive alternation can be modeled as in Figure 2. INT.REC is short for 'intended recipient' and TH for theme; the dashed lines show that the links are not yet fully conventionalized.

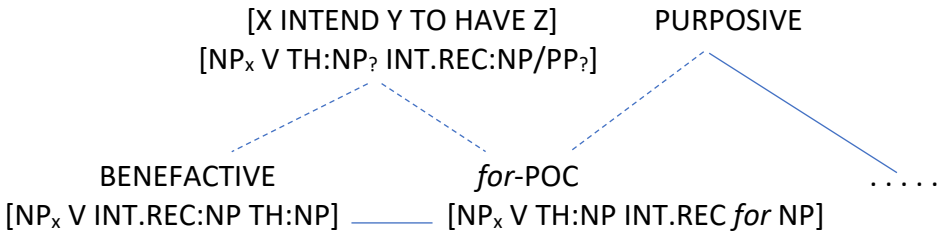

Figure 2. Emerging constructional network of the benefactive alternation in Early Modern English

The stabilization of the benefactive alternation crystalized a distinction between direct recipient (dative) and indirect recipient (benefactive) use of specific verbs in many cases, although neither category is fully discrete. For example, as noted in section 3 above, as a dative alternating verb, ditransitive *send* does not entail reception; if I send someone a letter, they may or may not receive it. However, the readings of the alternation forms are semantically distinct (compare *send X to someone* and *send X for someone*, which have distinct form and meaning and neither of which entails reception.

5.3 Two brief case studies

Here I summarize two brief studies on individual benefactive verbs that illustrate different histories with respect to the ditransitive variant. One, the history of constructions with *open*, illustrates the obsolescence of the ditransitive alternant (section 5.3.1), the other illustrates the stabilization and indeed increase of the ditransitive alternant with the verb *build* (section 5.3.2). I followed the same methods to extract data from EEBO as are described in section 5.1 above, but the data and analysis are new.

5.3.1 Benefactives with *open*

Open appears quite frequently in EEBO in a DOC construction, e.g.:

(14) a. say little to hawkers and hunters, neither be rude, but rather *open* **them** a gap than let them do it themselves
(1688 Holme, *The academy of armory* [EEBO])
b. no man wou'd *open* **me** the door.
(1695 J.D. of Albany, *The banishment of poverty* [EEBO])

The first part of (14a) has a substitutive benefactive meaning: 'open a passage instead of them', and (14b) has an access-enabling meaning. EEBO attests to *open* being used with both *for* and *to*, often with an extended metaphorical meaning where a literal human beneficiary is not mentioned, as in (15a):

(15) a. ther's a commission to be sat vpon this day, to *open* a passage **for imprisoned trueth.**

(1608 Middleton, *The famelie of loue* [EEBO])

b. who shal roll away the stone for vs; to *open* a passage **to our vnderstanding**?
(1615 Adams, *The blacke devil* [EEBO])

As example (14b) above shows, *open* can be used with definite themes. There are 44 hits of *open him the* as opposed to 23 of *open him a* in EEBO. This distinguishes *open* from other benefactives in EEBO such as *build, buy*, which have predominantly indefinite themes (in raw numbers, 153 *built him a* but 0 *built him the*, 38 *bought him a*, but 5 *bought him the*). *Open* is among the benefactives cited in Colleman and De Clerck (2011: 196) as occurring with ditransitive syntax as late as the nineteenth century, but over time it has come to be strongly preferred with *for*-POC and with literal rather than metaphorical meaning. The loss of ditransitive *open* is well illustrated by comparing EEBO, the last year of which is 1700, and COHA 1820-1910. A search in EEBO for the ditransitive string *opened* + pronoun + *a/the* yielded 108 examples. Complements are mainly *door, gate, passage* or close synonyms and *way* used either literally or metaphorically in the sense 'path'. Search for the same string in COHA yielded a total of 3 examples, all with *way* in its figurative sense, e.g.:

(16) the Heavens … *have opened* **us** a way of deliverance!
(1866 Fields, *Good company* [COHA])

Within a hundred years, ditransitive *open* had been restricted to a highly specific niche in American English, and the prepositional variant had become dominant.

5.3.2 Benefactives with *build*

I also conducted a study of uses of the past tense of *build* to gain some insight into the steps by which stabilization of the benefactive alternation occurred, at least with respect to one verb. This is spelled *builded* throughout EEBO, and *built* from the mid-sixteenth century on. The spellings are generalized here as BUILT. The past tense form was chosen because it can also be used as the past participle, and allowed investigation of whether recipients in ditransitives could be passivized, unlike in contemporary English. There is no evidence in EEBO that the constraints on passive were any different in earlier English.

BUILT turned out to be preferred in DOC throughout EEBO, but a search of *BUILT for/on/(un)to Pro* yielded several examples. No example of *BUILT on Pro* can be interpreted as benefactive, i.e. paraphrased by *for Pro*. *On Pro* is locative, often figurative, and not benefactive, as in:

(17) he (Christ) is a sure rocke, they who *are builded* on him shall not sinke
'he is a reliable rock; those who are built on him shall not sink'
(1656 Grosse, *The buddings and blossomings of old truths* [EEBO])

With respect to *BUILT to Pro*, in EEBO intended recipients of *BUILT on/ (un)to* are typically gods, emperors, or those who aspire to be gods or emperors, and the themes are typically churches, temples, or monuments.

(18) there be more temples *built* **to her** [Virgin Mary] and the other saints, and many more dayes kept to their memory, then what are consecrat for the honour of god.
'there are more temples built in her and the other saints' honor, and many more days are set aside for their memory than are consecrated to the honor of god'
(1696 Cockburn, *Jacob's Vow* [EEBO])

The structure of (18), in which *built* is used with *to* introducing an intended recipient coordinated with *kept to their memory* and compared with *consecrat for the honour of god,* suggests adjunct use of *to her* with literal purposive meaning. Such examples are marginal benefactives, possibly a special subclass involving benefaction with the aim of honoring.

By contrast, collocations of *BUILT for* are significantly less restricted. *BUILT for* is found in institutional records as well as religious works, and objects that are built include houses for schoolmasters as well as monasteries and churches. Intended recipients in *built for* expressions can be lepers, the poor, and ordinary people as well as gods and emperors, and the objects range from *a pair of gallows* to *a laboratory,* and *a small cottage* as well as temples, and lofty places. From the 1650s on *BUILT for* is the default prepositional expression for benefactive building events of any kind. In sum, there was semantic generalization of NPs functioning as themes of *build*, but formal narrowing of the choice of preposition. This shift is similar to the weakening of goal semantics associated with *to* and strengthening of the link to human recipients that McFadden (2002) identified in the development of the direct recipient POC. It appears that the purposive adjunct construction *for X* had been functionally neoanalyzed as an argument in the context of the verb of benefactive creation *build* by the mid-seventeenth century, while *on* and *to* adjuncts that had collocated with benefactive verbs continued to be used as adjunct constructions with restricted collocations. This neoanalysis is likely to have been motivated by analogy to the direct recipient based on both form and the recipient meaning. However, unlike the direct recipient POC, the benefactive POC did not come to be fully integrated syntactically, and benefactive recipients are still not used in passives (**She was built a house*). In other words, the direct recipient schema is more abstract and schematic than the benefactive one (see Hoffmann 2007 et passim on continua from adjunct to complement; also Zehentner 2019: 341).

To match the search for *open* + pronoun + *a/the*, I searched in EEBO for the ditransitive string *built* + pronoun + *a/the.* This search yielded 365 examples, of which only 5 had definite complements. A search for the same string in COHA yielded 281 examples, of which only 3 had definite complements. As stated at

the beginning, the *built* spelling is not attested in EEBO with any frequency prior to the mid-sixteenth century. This means that *built* appears in data consisting of a little over 720 million words (not the full 755 words of EEBO). At 4 million words, COHA is 55% the size of this part of EEBO, but 281 examples of the search string is 77% of the 365 examples found in EEBO. Therefore, unlike the use of *open* in the DOC pattern, the ditransitive use of *built* remained stable with indefinite complements and in fact increased between EEBO and COHA. The POC variant is consistently preferred with definite complements.

6 Discussion

In this section I discuss how the changes outlined in sections 4 and 5 both support and challenge the hypotheses put forward in DS regarding analogy (section 6.1), attraction (section 6.2), and differentiation (section 6.3) in situations of functional overlap.

By way of reminder, De Smet et al. (2018: 198) understand functional overlap to occur when distinct forms can be used "more or less interchangeably in the same discourse contexts because their semantic extensions cover overlapping areas of conceptual space" (cited in section 2.1 above). As mentioned in section 4.2, there was a rich history in Indo-European of ditransitive verbs. The range of verbs in early Indo-European was extensive and the meaning has been described as "indirect affectedness" (Malchukov et al. 2010). The range of verbs used with ditransitive syntax was narrowed in early Germanic to transfer, both literal and metaphorical (Vásquez-Gonzáles and Barðdal 2019). The set of verbs used with ditransitive syntax was further narrowed in Old English to verbs of direct affectedness, such as reception (e.g. *gif-* 'give) and indirect reception (*atimbr-* 'build'). In Old English *gif-* and other verbs of "transfer of possession" are not found with the preposition *to*. However, verbs of communication (*secg-* 'say') and of caused-motion (*bring-* 'bring') are (De Cuypere 2015: 5).

The observations below pertain to prototype developments. For example, as discussed in section 4.2, in the case of the direct reception/dative construction, *give* is the prototype verb. There are some reception verbs that are favored in DOC (*cost, tell, allow*) others in POC (*present, extend, take*). Some verbs that are used with *to*-POC are more closely aligned to the prototype verb *give* than others, e.g. *sell*, but not *send*, which does not entail completed reception.[9]

6.1 Analogization

Changes motivated by analogical thinking by hypothesis led to the development of both dative alternation and benefactive alternation, but the model was different in each case.

[9] As De Smet et al. (2018: 219) observe, "isomorphic code optimization" between functionally similar expressions often does not occur.

Using the *York-Toronto-Helsinki Parsed Corpus of Old English Prose* (YCOE), De Cuypere (2015: 6) shows that in Old English verbs of communication with three NPs (e.g. [X TELL Y Z]) occur significantly more frequently with a *to*-preposition than in DOC. For example, *cweð-* 'say' appears only 18% of the time in DOC and 82% of the time with a *to*-prepositional phrase. The preference for the prepositional syntax is illustrated in (19):

(19) *sprec* **to Israhela bearnum** and *cweþ* **to hiom** …
spoke to Israel's children and said to them …
(c1000 HomU 35.2 (Nap 44) B3.4.35.2 [DOEC])

Here the complement of *to* is understood as the recipient of the message (see Reddy's 1993[1979] discussion of communication in terms of the conduit metaphor and information transfer). There is, however, some syntactic variation, as in:

(20) *sprec* **to mannum** and **hiom** *sede* fela wundra.
spoke to people and them recounted many wonders
(c1000 HomU 35.2 (Nap 44) B3.4.35.2 [DOEC])

By hypothesis, verbs of communication were construed as entailing 'addressee receives the message directly', and analogical thinking led to the alignment of ditransitives of direct reception such as *gif-* with verbs of communication such as *sprec-* 'speak'. Syntactic analogization followed for verbs of recipient possession, enabling the use of *gif-* with *to*-PP as well as in DOC, like *sprec-, secg-,* which could be in both.[10]

Further analogical thinking presumably aligned *to*-PP in its literal, goal sense, with more abstract, metaphorical meanings, as in *sprec to mannum* 'spoke to people', leading to the neoanalysis of *to* as a marker of a recipient argument in the environment of verbs that could occur with DOC syntax (see McFadden 2002). This in turn enabled the development of the dative alternation constructeme (by about 1650).

While verbs of communication appear to have been the model for the development of the dative (recipient construction) alternations, it is the dative alternation that was presumably the model for the rise of the benefactive alternation. Just as *to*, which expressed goal, came to be neoanalyzed as a marker of recipient relationship, so the preposition *for*, which expressed purpose, by hypothesis came to be neoanalyzed as the marker of indirect reception (benefactive). This enabled analogization to the prepositional syntax and development of the benefactive constructeme (by about 1800).

[10] In Early Middle English, verbs of communication came to be favored in DOC (Zehentner 2019: 163). As Zehentner says, it is unclear exactly how these data relate to De Cuypere's findings, but analogical thinking seems plausible.

6.2 Attraction

DS conceptualize attraction as actualization—the tiny steps by which an established change spreads. They hypothesize that attraction "results from analogy" (p. 207), in this case from what I have called analogization.

By late Middle English there were two constructions available for verbs of direct reception: the old ditransitive (DOC) and a newer prepositional form (POC); they overlapped functionally since they had approximately the same meaning (prototypically 'transfer something to someone') and were used in approximately the same contexts. The attraction to POC, manifested by higher frequency of POC uses at the time, was doubtless supported by the systemic shift from synthetic (case) to analytic (prepositional) syntax; this illustrates attraction in a wider context than the development of functional overlap.

The members of the benefactive alternation likewise involved functional alignment as they had similar meaning ('intend to cause someone to receive something'). From the perspective of analogization, they were attracted to POC syntax, which was harmonic with increasing analyticity in Middle English. Obsolescence of certain subtypes of ditransitive (e.g. manner of communication *whisper,* "pure" benefactive *open*), can be interpreted as attraction of the subtypes to either prepositional variants or transitive constructions. From the perspectives of speakers' knowledge of a construction, however, this obsolescence entails differentiation from the prototype *give* construction. Attraction and differentiation are not "opposites [that] rule each other out" (De Smet et al. 2018: 205).

6.3 Differentiation

The overall histories of the two alternations both show differentiation. The history of dative alternation shows two episodes of differentiation:

a) The attraction mentioned above of ditransitive verbs expressing reception and transfer of possession to verbs of communication entails a shift in use of ditransitive verbs with *to* away from membership of a literal directional construction to a more abstract recipient construction.
b) In Early Modern English there was a shift away from increased analyticity toward partial syntheticity (DOC syntax).

As Zehentner (2018) argues, these and other changes are intertwined and feed each other. It is a "story of co-evolution of grammatical structure and mutual adaptation" (Zehentner 2018: 170) that is still ongoing.

With respect to the rise of benefactive alternation, three kinds of differentiation may be noted, all involving differentiation from the direct recipient alternation:

c) Speakers who in Early Modern English made choices leading to the rise of benefactive alternation picked out a subset of ditransitives: those that typically implicate only intended reception, and

differentiated this set from the reception ditransitives by selecting *for* as the prototype preposition associated with alternation. This choice is striking as *(un)to* was used as well as *for* with verbs that later were used as part of the distinct benefactive subset (e.g. *build*). We may hypothesize that the *to*-POC alternation, being networked with caused-motion, prototypically foregrounded goal and entailed reception, and therefore was pragmatically and semantically not a conceptually good match for benefactive meaning, which is more closely networked with purpose and indirect reception.

d) The stabilization of the dative-alternation with preference for DOC constitutes non-alignment with broad-scale systemic increase in analyticity. By contrast, the stabilization of the benefactive alternation with preference for *for*-POC on the one hand constitutes alignment with broad-scale systemic analyticity and at the same time further differentiation from direct recipient constructions.
e) Unlike the direct recipient constructeme, the benefactive constructeme is not productive. Although the benefactive alternations involve verbs of fairly high frequency, such as *build*, the pattern is not used as the basis of new word formations (e.g. *me* in *She emailed/faxed me a proposal this morning* is understood as 'to me', not 'for me').

As the histories of the dative and benefactive alternations show, (non)attraction may occur at different levels of the grammar. They may occur locally within a subschema, cf. a), e) and the discontinuation of using *open* as a member of the ditransitive benefactive subschema, or globally within a systemic change, cf. b), d), and the favoring of benefactives in *for*-POC rather than in DOC. They may also occur at the intermediate level of the constructeme, cf. c).

Differentiation is the inevitable outcome of attraction. Attraction to one part of the network entails differentiation from the original network relationship. In the cases discussed here, the relevant networks can be relatively easily identified.[11] One problem with DS's notion that differentiation is accidental can be how to identify the relevant network. An example of such difficulty is given in Christie's (2011) detailed account of similarities and differences between the *way*-construction and the "fake resultative", which have been considered to be intertwined historically (e.g. by Mondorf 2010). It appears that, as Christie (2011) suggests, which networks are relevant ultimately depends on a detailed analysis of multiple factors. Interpreting differentiation as the expected rather than accidental outcome of alignment allows for a principled and nuanced account of the changes.

[11] However, the relationship with caused-motion, e.g. to three-NP constructions with *bring, bear*, could raise issues not discussed here.

7 Conclusion

I have shown that the rise of direct recipient and benefactive alternations reveals that attraction and differentiation are closely intertwined. They are two sides of the same coin.

The rise of the alternations supports DS's hypothesis that differentiation is a type of realignment but suggests it was not merely the "accidental by-product of the relations in a bigger constructional network" (p. 223). Rather, attraction and differentiation are intertwined because differentiation inevitably arises from attraction. This two-sided, Janus-like strategy appears to be typical of changes regarded as "sharpening of categories" such as are discussed by Warner (1993) on the development of auxiliaries and by Denison (2006) and Sommerer (2015) on the development of the category determiner. The term "sharpening" reminds us that the categories are somewhat fuzzy and gradient. Likewise, attraction and differentiation are not absolute.

Given the importance of differentiation argued for here, it may be well to revisit the role of analogy in change. Fischer (e.g. 2007) and De Smet (e.g. 2007, 2013) are entirely correct that ignoring and indeed in some cases rejecting analogy in earlier work on grammaticalization (e.g. in Lehmann 2004) was mistaken. However, it needs to be remembered that every analogization resulting from a partial match of an expression X with an expression Y is likely to be correlated with disassociation of X from an earlier usage profile W.

Corpora and data bases

ARCHER *A representative corpus of historical English registers*, version X. 1990-1993/2002/2007/2010/2013/2016. http://www.manchester.ac.uk/archer

BNC *British national corpus,* 1980-1990, version 3 (BNC XML edn.). 2007. 100 million words collected 1980s-early 1990s. Distributed by Bodleian Libraries, University of Oxford, on behalf of the BNC Consortium. http://www.natcorp.ox.ac.uk/.

CLMET *The corpus of late Modern English texts,* compiled by Hendrik de Smet. https://perswww.kuleuven.be/~u0044428/clmet.htm (accessed June -October 2019).

COCA *Corpus of contemporary American English*. 1990–2017. Compiled by Mark Davies. Brigham Young University. https://www.english-corpora.org/coca/ (accessed May 4th 2020).

COHA *Corpus of historical American English*. 1810–2009. Compiled by Mark Davies. Brigham Young University. https://www.english-corpora.org/coha/ (accessed May 4th 2020).

DOEC *Dictionary of Old English corpus*. 2009. Compiled by Antonette diPaolo Healey, Joan Holland, Ian McDougall & David McDougall, with Xin Xiang. University of Toronto. http://www.helsinki.fi/varieng/CoRD/corpora/DOEC/index.html.

(accessed June 2019).

EEBO *Early English Books online*. 1475 to 1700. Corpus created as part of the Text Creation Partnership. https://www.english-corpora.org/eebo/ (accessed May 4th 2020).

Old English aerobics glossary. http://www.oldenglishaerobics.net (accessed May 4th 2020).

PPCEME *The Penn-Helsinki parsed corpus of Early Modern English*, first edn., release 3. Compiled by Anthony Kroch, Beatrice Santorini & Lauren Delfs. 2004. http://www.ling.upenn.edu/ppche/ppche-release-2016/PPCEME-RELEASE-3.

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