The dative alternation: A corpus-based study of spoken British English

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Foreword and acknowledgements

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Finally, I want to thank my parents, partner and friends for their continuous support. In particular I want to mention Julie Van Den Neste, with whom I spent hours, days and weeks in libraries and other working spaces, struggling with our respective theses.
Introduction

As the title clearly shows, the topic of this thesis is the dative alternation. This phenomenon occurs in many languages, including Dutch, yet I study it with respect to the English language only. Essentially, two different constructions alternate in English, both capable of representing a situation of giving (either in a concrete or in a more abstract sense). They will henceforth be called the double object construction (DOC), as in I gave John a book, and the prepositional construction (PC), as in I gave a book to John. What I wish to discover is how speakers make their choice between these two apparently interchangeable constructions, and which factors make either of both options preferable in their eyes in particular circumstances.

Other linguists and entire linguistic paradigms, which will be discussed in further detail in the first part of my thesis, have approached the dative alternation from different perspectives. Certain models in particular base their ideas about the phenomenon on the intuition of individuals only, without taking into account sufficient numbers of actual language productions. It is my purpose to investigate whether these intuition-based hypotheses indeed apply to a larger set of sentences featuring dative expressions in English. In my belief, certain variables – both intralinguistic and extralinguistic – have a certain influence on the choice of speakers between the double object and prepositional construction. It is with particular attention for these variables that I analyse 3,368 sentences from the spoken component of the online British National Corpus, henceforth BNCweb (http://bncweb.lancs.ac.uk/).

This thesis is structured as follows. I first provide some information about the dative alternation in general, the constructions which are part of it and the linguistic constituents which occur in both structures (chapter 1). I then proceed to an extensive overview of existing approaches to the phenomenon of the dative alternation (chapter 2). From that point onwards, my own study of concrete data comes to the fore. In chapter 3, I explain which variables I have focused on in my corpus study and how exactly I have proceeded extracting data from the BNCweb corpus. Chapter 4 presents my findings with respect to the data studied, first in the form of a bivariate analysis,
then by means of a logistic regression analysis. I end with some conclusive remarks with respect to my own research and results.
1. What are direct and indirect objects? What is the dative alternation?

1. Direct and indirect objects

By way of introduction to my discussion of the main topic of this thesis, the dative alternation, this section first briefly discusses the two types of objects featured in it: the direct and the indirect object. Unfortunately, an extensive grammatical discussion of these elements is not possible, yet I attempt to provide some basic information.

The reason why I discuss direct and indirect objects in detail here is of course that these feature prominently in the phenomenon of English which I study in this thesis. Views may disagree (see in this respect chapter 2) as to whether prepositional phrases can equally be considered as indirect objects in certain circumstances. Linguists such as Huddleston and Pullum (2002), for instance, claim that only the double object construction comprises both a direct and an indirect object, and refuse to consider the prepositional to-phrase in the prepositional construction as indirect object. In any case, a certain alternation exists between what will henceforth be called the double object construction (or DOC) and the prepositional (object) construction (or PC).

Before focusing more closely upon direct and indirect objects separately, one should understand what exactly an object is in English. I use the criteria proposed by Quirk et al. (1985: 726-728) as a reference here. According to them, direct and indirect objects of English have five important features in common.

First of all, objects – like subjects – are prototypically encoded by means of a noun phrase or a nominal(-relative) clause. They can, however, also be realized by less usual linguistic elements, such as -ing, wh- and that-clauses. Quirk et al. (1985: 1049, 1058, 1063) provide the following examples in this respect:

(1) He enjoys playing practical jokes.
You should see whoever deals with complaints.

I noticed that he spoke English with an Australian accent.

Syntactically speaking, both direct and indirect objects serve as complements of a verb. Their default position is after the verb, though the respective order of direct and indirect object may vary. Prototypically, however, if both are present in a clause, it is the indirect object which takes postverbal position, followed by the direct object. Naturally, in those cases where a user of English wishes to highlight a particular constituent, it can be fronted – a movement possible in the case of both these objects as well. Examples (4)-(5) both express the same content, but do not both adhere to the default clause pattern of English.

You should give Lauren the necklace.
The necklace, you should give Lauren. (The bracelet, however, you should give to someone else.)

In the latter case, a clause where Lauren is preceded by the preposition to would perhaps sound more natural. In other words, some syntactic contexts seem to make the prepositional construction more appropriate than the DOC. I will of course take a closer look at the interaction between these two clause types later.

When an object, either direct or indirect, is encoded by means of a pronoun, it is of course the objective and not the subjective form of this pronoun that is required.

Finally, both direct and indirect objects can usually become the subject in a passivized version of the original clause. The examples below, for instance, illustrate first how the direct and next the indirect object of a double object construction can be placed in subject position.

The teacher gave all the students a dictionary.
A dictionary was given all the students (by the teacher).
All the students were given a dictionary (by the teacher).
Clearly, direct and indirect objects have quite a few features in common. It is important, however, to distinguish them clearly from one another if we want to correctly describe the dative alternation. In the following paragraphs, I indicate some of the obvious differences between direct and indirect objects.

Ozón (2009) provides a thorough account of the differences between both kinds of objects, starting with one of the earliest descriptive grammars of English. Poutsma (1926: 176) contrasts the objects by stating that the direct object is a “thing-object”. The indirect object, on the other hand, very often refers to animate beings and is therefore called a “person-object”. This largely coincides with the distinction that Hudson (1991) makes between usually human indirect objects and usually not-human direct objects. Certain other criteria from Hudson (1991) with respect to the distinction between direct and indirect objects are reported by Ozón (2009). I add to this set the arguments found in Herriman & Seppänen (1996: 486).

Hudson (1991) describes the direct and the indirect object as following different rules and therefore as different entities. First of all, though passivisation is in principle possible with both the direct and the indirect object as subjects of their own passive clause, in practice it is more difficult to apply passivisation to the direct object. Returning to the example sentences in (6)-(8), one indeed observes that *A dictionary was given all students* does not sound very natural. A native speaker of English is more likely to produce a prepositional construction in this context, i.e. *A dictionary was given to all students*. The sentence in which the indirect object is turned into the subject, however, is much more acceptable.

The inverse applies to the phenomenon of “Heavy Noun Phrase Shift” (Ozón 2009: 24), by which a lengthy constituent is moved to a later position in the clause than would normally be the case. Whereas direct objects are not infrequently moved due to HNPS, this is much less likely for the indirect object, which is normally found in immediately postverbal position. Ozón (2009: 24) provides the following examples; in the first sentence, the indirect object still precedes the direct object, but the latter is postposed with respect to the circumstantial element *on Sunday.*
(9) Paolo gave Harriet on Sunday some lovely flowers that he had bought in the market the day before.

(10) *Paolo gave some flowers the girl he had met at the party the night before.

This is apparently not the only type of movement to which the double object is more sensitive than the indirect object; the same applies to the phenomenon of fronting, for reasons of topicalisation, relativisation or question formation (Herriman & Seppänen 1996: 486). Ozón (2009: 24) also states that the direct object “is always lexically specified in the verb’s valency (i.e. subcategorization), but the indirect object often is not”.

The final criterion that Hudson (1991) uses is that indirect objects are distinct from direct ones in that the latter frequently occur in verb-object idioms. The examples provided in Ozón (2009: 24) are lend someone a hand and give someone the cold shoulder. There are no idioms which feature both a direct and an indirect object, however, in which it is the indirect object which is a fixed element.

Herriman and Seppänen (1996: 486) add to this distinction between direct and indirect object their different default positions with respect to the verb. In unmarked sentences, the indirect object is found in immediately postverbal position, wedged in between the verb and the direct object. The direct object then follows the sequence of verb and indirect object. Herriman and Seppänen (1996) furthermore refer to the obvious correspondence between the indirect object and a prepositional phrase headed by to (or for in the beneficiary construction, which is not investigated here). Finally, they see a clear semantic distinction as well: while the indirect object “typically represents the semantic role of the recipient” (1996: 486), the direct object is typically linked to the “affected” role.

2. The dative alternation

Anttila, Adams & Speriosu (2010: 947) provide a short overview of what precisely alternates in those situations characterised by the so-called dative alternation:
English ditransitive verbs like *give* allow several postverbal constituent orderings. Examples are shown in (1)-(3). We call (1) the double object construction; (2) the prepositional construction [...] Syntactic constituents are indicated by square brackets.

(1) The double object construction:
   (a) Dino impact gave [Earth] [the chill]
   (b) She was recommending [me] [designs] and I gladly listened

(2) The prepositional construction:
   (a) How Western New York Gave [Wings] [to the World]
   (b) I am assigning [it] only [to my advanced 5th graders]

What is investigated in this thesis is how speakers choose between these two constructions, which are semantically very similar. Particular attention will be paid to intra- and extralinguistic variables, which are known to motivate the use of one of both orders. Certain existing studies in this respect will be discussed in the following chapter.

3. Verbs which occur in both constructions

A final topic I would like to introduce is that of the question which verbs allow for the dative alternation; that is to say, which verbs of “giving” can occur in both the DOC and the PC and which cannot.

Opinions differ as to which verbs can occur both in the double object construction and in the prepositional construction. Many of the accounts I will introduce in this section are based on native speakers’ intuitions, which at first sight seem entirely correct. More recent, corpus-based studies, however, have discovered that not all of these intuitions should be accepted straight away. It is exactly the aim of corpus linguists to discover what speakers of English truly do with their language in practice, based on empirical data.

Rappaport Hovav & Levin (2007: 134) provide an overview of “dative verbs” which allow for both the double object construction and the prepositional construction. They
distinguish between a group of verbs which have a caused possession meaning only, and another group of verbs which combine the meaning of caused possession with that of caused motion. I copy their list of verbs, including further subdivisions, here:

Dative verbs having only a caused possession meaning
(a) Verbs that inherently signify acts of giving: give, hand, lend, loan, pass, rent, sell, …
(b) Verbs of future having: allocate, allow, bequeath, grant, offer, owe, promise, …
(c) Verbs of communication: tell, show, ask, teach, read, write, quote, cite, …

Dative verbs having both caused motion and possession meanings
(a) Verbs of sending (send-type verbs): forward, mail, send, ship
(b) Verbs of instantaneous causation of ballistic motion (throw-type verbs): fling, flip, kick, lob, slap, shoot, throw, toss, …
(c) Verbs of causation of accompanied motion in a deictically specified direction: bring, take
(d) Verbs of instrument of communication: e-mail, fax, radio, wire, telegraph, telephone, …

According to Rappaport Hovav and Levin (2007), however, these verbs do not allow for the dative alternation in all possible contexts. If a throw- or send-type verb (in which the caused motion meaning is automatically strongly present), for example, is used such that it only expresses caused motion and that no form of possession transfer takes place, only the to variant would be found (Rappaport Hovav & Levin 2007: 144). In this case, the to prepositional phrase can be considered as some indication of direction, purely spatial, and not as an equivalent to the indirect object of a double object construction. The authors provide the following examples (2007: 144); in the first case, throw does alternate, since the first baseman is clearly a recipient argument:

(11) Smith threw the ball to the first baseman.
(12) Smith threw the first baseman the ball.

1 When confronted with empirical data, this assertion may not hold. A corpus investigation centered on this very topic would have to be carried out in order to verify whether Rappaport Hovav and Levin (2007) are right in excluding the combination of pure caused motion and the DOC construction.
Smith threw the ball to first base.

* Smith threw first base the ball.

While Rappaport Hovav & Levin (2007) only focus on verbs that alternate, other authors suggest a number of verbs which do not occur in the dative alternation. One of these is the prosodic account both of the alternation as such and of the verbs allowed in it proposed by Anttila, Adams & Speriosu (2010). This is based in turn upon an earlier account by Grimshaw (2005). In the chapter introducing different views of the dative alternation in general, I explain in further detail their ideas about the effects of prosody on the choice between dative alternatives.

Anttila, Adams & Speriosu (2010: 956) claim that “the core class of alternating verbs have exactly one foot” while non-alternating verbs are lengthier. Observe that “foot” does not mean the same as “syllable”; some words with multiple syllables still carry stress on only one of them. This would explain why such verbs as give or assign do allow for the dative alternation, whereas donate and explain do not: in the latter, both syllables are stressed. Below, I copy the lists of alternating and non-alternating verbs proposed by the authors. “Feet” are placed in between rounded brackets.

Alternating one-foot verbs (Grimshaw 2005; Levin 1993: 45-46)

a(llot) (give) (lend) (owe) (send)
a(ssign) (grant) (loan) (pass) (show)
a(ward) (hand) (mail) (pay) (teach)
(bring) (leave) (offer) (promise) (tell)

Non-alternating two-foot verbs (Grimshaw 2005)

(con)vey (do)(nate) (pre)(sent) (trans)(fer)
(de)(liver) (en)(trust) (re)(mit)

Once more, one may wonder whether these verbs truly never alternate. A simple Google query for the verbs in question, followed by the recipient pronoun him, yields such results as the following:

(x) Angel Gabriel (Jibra’il) conveyed him the teachings from Allah.
(x) They delivered him the bag in which was …
(x) … and dictated him the Ten Commandments…

Such intuition-based hypotheses as Grimshaw’s (2005) can clearly be falsified by means of such sources as the Internet, easily available to all.
The “non-alternating” verbs, then, would only allow for the prepositional construction, not for the double object construction. In the case of a double object construction, the authors assume a strong connection between the verb and the object that follows it, i.e. the indirect object. Such verbs as *deliver* or *entrust*, when followed by an – equally stressed – nominal or pronominal object, give rise to what is called a “ternary prosodic phrase” (2007: 957). This is a phenomenon which is apparently to be avoided in English. If the construction in question is prepositional, however, the link between the verb and the immediately postverbal (i.e. direct) object is considered less strong. The result, therefore, is not a ternary prosodic phrase; the verb on the one hand and the object noun phrase on the other are considered as different prosodic units.

Not all two-foot verbs are completely excluded from the dative alternation, however. The following list proposes a number of verbs with, at least to some extent, are supposed to alternate (Anttila, Adams & Speriosu 2007: 957). Unfortunately, no further attempt at explanation of this exception is made.

<table>
<thead>
<tr>
<th>Alternating two-foot verbs (Levin 1993: 45-46)</th>
</tr>
</thead>
<tbody>
<tr>
<td>(allo)(cate)</td>
</tr>
<tr>
<td>(cata)(pult)</td>
</tr>
<tr>
<td>(guaran)(tee)</td>
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<tr>
<td>(radi)(o)</td>
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<td>(sate)(llite)</td>
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<tr>
<td>(sema)(phore)</td>
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<td>(tele)(cast)</td>
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<tr>
<td>(tele)(graph)</td>
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<tr>
<td>(tele)(phone)</td>
</tr>
</tbody>
</table>
2. Different views of the dative alternation

This chapter briefly presents different views about the dative alternation. My discussion is largely based on Colléman (2006), who provides a detailed account of both projectionist and constructivist approaches to the dative alternation. Therefore, those two sections of this chapter are largely based on his summaries. At the end of this chapter, I briefly mention some studies that have been carried out with respect to geographic variation within the field of the dative alternation.

1. Descriptive accounts

Linguists in the early twentieth century adopted a strongly descriptive approach to linguistic phenomena, after a period where language accounts were usually prescriptive. Some of the most important early descriptive linguists (in the field of English) were Kruisinga, Poutsma, Jespersen and Sweet (list provided by Ozón 2009). Their early “reference grammars” (Mukherjee 2005: 3) have left their marks upon more modern accounts of, for instance, ditransitive verbs and the dative alternation. I will therefore briefly discuss them here.

An important question concerns the nature of the “indirect object”: which constituents can be considered as indirect objects and which cannot. All traditional grammars appear to agree on a number of characteristics shared by all indirect objects (henceforth IOs) (Ozón 2009). IOs are generally conceived as nominals (though clause form is not excluded) which, if pronominalised, switch from their subjective to their objective form. In general, IOs occur in postverbal position. If an indirect object is combined with a direct object, it is the indirect object that follows the verb immediately, only to be followed itself by the direct object (Kruisinga 1932). This position is thus taken as a means of indicating the different function of the two constituents. These features, however, are purely formal; in other sections of this chapter, it will become clear that certain other paradigms describe the indirect object from a more semantic or functional perspective.
As for the inclusion of prepositional objects in the category of “indirect objects”, Curme (1935) notes that, in those typical cases of the dative alternation, the to-phrase can just as well be considered as an indirect object. He considers to as a sort of inflectional element which indicates that the phrase within which it occurs should be considered as a “dative” – a term which Jespersen (1927) does not wish to use in this context, because such case terms are no longer relevant to English in these days. Curme’s view is not always copied by more recent descriptive grammars; Huddleston and Pullum et al. (2002), for instance, refuse to consider the prepositional phrase in example (15) as an indirect object. They prefer categorizing it as an oblique element.

(15) My sister just sent the invitation to the rest of the family.

Quirk et al. (1985) partially adhere to the views of early twentieth-century grammarians in that they equally consider indirect objects to be encoded most often by means of a noun phrase. They also adhere to the view that indirect objects occur in postverbal position, usually immediately after the verb, and that they take on their objective form when pronominalized. Quirk et al. add to this that the nominal indirect object “prototypically corresponds to a prepositional phrase headed by either to or for” (Ozón 2009: 21), the latter obviously applying to those constructions called benefactives, which are not examined in this thesis.

Returning to earlier accounts of indirect objects and ditransitive verbs, one finds that Jespersen (1927) explains the interrelation between an indirect object and its prepositional paraphrase – though he does not wish to consider the latter as an actual object. He states that the object is “discarded” from the verb (Ozón 2009: 22) by means of the preposition to; a logical movement, according to Jespersen (1927), since it is the direct object and not the indirect object which is most closely connected to the verb in terms of content. This, however, applies not only to the prepositional construction but equally to the “original” double object construction. Jespersen (1927) clearly says, therefore, that these two grammatically different constructions are largely semantically synonymous.
2. **Projectionist accounts**

Those who adopt a projectionist point of view with respect to the dative alternation believe that what defines the difference between both constructions are the semantics of the verb itself. This is what determines a verb’s capability of occurring in the double object construction, the prepositional construction or both. The verb appears to project its own semantic features onto the construction, thus giving it its eventual colouring – hence the term “projectionist”. This projection of a verbal meaning onto a larger scheme implies the coupling of verb arguments with particular slots in the sentence structure. This happens through the application of “(argument) linking rules” or “mapping rules” (Colleman 2006: 20).

Within this projectionist view of the dative alternation, two different options are to be distinguished, based on whether the same verb, with one single meaning, can be projected onto various syntactic constructions, or whether the same verb has two or more different verbal meanings which are used complementarily in different structures (Levin and Rappaport 1996).

The first account holds that the dative alternation can be explained by means of transformational rules. It states that “dative verbs have a single meaning, giving rise to two derivationally-related syntactic structures” (Levin and Rappaport 2001: 1) and is therefore also named the dative shift approach. The second account claims that certain verbs alternate precisely because they exist in different semantic versions and because these versions can each be integrated into a certain construction. Rather confusingly called the dative alternation approach, it leaves from a “non-derivational analysis that assumes that dative verbs have two distinct meanings, each giving rise to its own realization of arguments” (Levin and Rappaport 2001: 1).

Colleman (2006) subdivides the rather large spectrum of projectonist hypotheses into three categories. What determines this distinction is the question whether or not the verb is considered as polysemous, and whether or not there are any transformations involved. I will adhere to the order of discussion used by Colleman, who treats the different approaches in order of chronological appearance. Therefore, I begin with the
explanation of so-called transformational monosemy hypotheses, then continue with polysemy hypotheses, and end with monosemy hypotheses once more, yet this time non-transformational.

1. Transformational monosemy hypotheses

Early transformational generative grammar (TGG) maintains that the so-called “dative shift” is determined by an optional syntactic rule. What alternates is supposed to be the realization of the indirect object, which is encoded either by a bare noun phrase or by a combination of to + NP. One of both realizations is considered as the basic variant, the other being derived from it by means of a transformation. Views differ as to which realization is the original one. Most representatives of TGG (e.g. Jackendoﬀ and Culicover 1971) believe that it is the prepositional one, yet some (e.g. Burt 1971) assume otherwise.

Both constructions are ultimately considered in the end as two different surface realizations of one and the same deep structure. This implies that they may not be identical in form (an essential implication of the concept of transformation), but nonetheless identical in terms of semantics. Some TGG linguists, however, do believe that a certain semantic difference can be found between the ‘original’ construction and its derived form. Larson (1988, 1990), for instance, states that the presence of to in the prepositional construction adds something to its meaning which is, logically, not present in the DOC (which does not feature to).

2. Polysemy hypotheses

These hypotheses differ from the previous one in that they do not assume total semantic equivalence between the double object construction and its prepositional counterpart. Certain criticisms can be formulated with regard to the classical transformational analysis discussed above; Green (1974), for instance, points out that both constructions are not always interchangeable. That is to say, some sentences in the
double object construction do not have an acceptable prepositional counterpart and vice versa. Green (1974: 74-75) provides the following examples:

(16) We transferred some stock to Bill.
(17) *We transferred Bill some stock.
(18) Measle germs give you measles.
(19) *Measle germs give measles to you.3

This automatically decreases the value of the transformational rule formulated earlier: transformational rules do not allow for exceptions such as the ones illustrated in (16)-(19). Therefore, Green (1974) states that what is at work is not so much a single rule, but a complex of multiple different transformations. She subdivides the group of verbs that allow for the dative alternation into some 15 semantic classes, each of which is then linked to a slightly different transformation.

What Green is perhaps most known for is her statement that the double object construction and the prepositional construction are not necessarily semantically equivalent. More precisely, she argues that the DOC implies “success in [one’s] efforts” (1974: 157), whereas no such thing is implied by the prepositional variant. Green provides some examples to make her case (1974: 157):

(20) Mary taught John linguistics.
(21) Mary taught linguistics to John.

The second sentence would imply that Mary taught linguistics to some extent without John learning much from it; Mary’s attempts may thus well have been in vain. The construction where receiver and theme are found closer together, on the other hand, would suggest that the object of the teaching was successfully transferred to the receiver. Oehrle (1976) agrees with this analysis, but argues that the semantic difference only applies to a minority of alternating verbs (Green 1974).

3 Other linguists, however, do not agree with Green. Bresnan (year), for instance, states that many verbs which are usually considered not to alternate actually do occur in both constructions in practice. She argues that, if such occurrences are deemed “impossible”, this is an assertion based solely on (mistaken) intuitions and not on the study of actual language data.
The observation of such semantic differences and exceptions might suggest that a strictly transformational explanation for the dative alternation should be replaced by a more adequate one. Oehrle (1976), for one, proposes to adopt an explanation which is not syntactically but lexically oriented. He states that all alternating verbs comprise two different subcategorisation schemes: \(<._{NP} {NP}\rangle\) and \(<._{NP} \{to\} {NP}\rangle\), neither of which is derived from the other. More precisely, the dative alternation is considered as a lexical rule which adds a second subcategorisation scheme to a verb which already has one; this is restricted by certain semantic criteria.

Perhaps the main representative of the polysemy approach to the dative alternation is Pinker (1989). He believes the phenomenon to be lexical-semantic in nature, yet with certain consequences in the field of syntax. What happens in the case of the dative alternation is the derivation of a new semantic structure from a verb with a certain semantic structure of its own. Linking rules then ensure a fitting connection between the semantic structures in question and different syntactic constructions. In order to further explain his theory, Pinker (1989) draws upon two important types of rules: broad-range and narrow-range rules.

Broad-range rules basically determine which alternations can take place in the given language. They remain abstract, theoretical, and can be countered by practice, as will be discussed later. The broad-range rule which matters to the dative alternation is the following. The starting point are verbs that contain the substructure “X causes Y to go to Z” in their semantics. From these verbs, new verbs are derived whose semantics are characterised by the structure “X causes Z to have Y”. These notions are very similar to the concepts of caused motion and caused possession respectively, which will recur in several other theories with regard to the dative alternation. This main broad-range rule explains how of all verbs implied in the alternation, two variants exist. The meaning of the first is paraphrased by Colleman (2006: 34) as “to act on something, causing it to go somewhere” and is usually associated with the prepositional construction. The second, on the other hand, can be rephrased as “to act on somebody, causing them to have something” (Colleman 2006: 34) and is automatically connected to the double object construction. It is this second possibility that Pinker (1989) calls the dative shifted variant. This variant represents the receiver as “causally affected” (Colleman 2006: 35)
by the action carried out by the agent. The non-shifted variant, on the other hand, does not focus in particular on the effects of the action on the receiver.

Whereas such broad-range rules indicate the theoretical possibilities of a language, i.e. with respect to the dative alternation, more information is required to understand which verbs alternate and which do not. Many verbs, for instance, would accordingly be characterised by the substructure “X causes Y to go to Z” in their semantics, but for some reason do not allow for a “shift” towards the double object construction – i.e., they do not produce a second verb variant with a caused possession meaning. What is required then are so-called narrow-range rules, which complement the basic broad-range rule and impose all sorts of restrictions onto it. Colleman (2006: 36) provides the example of verbs such as shout and whisper, verbs of “manner of speaking” which – according to this theory – cannot occur in the double object construction. The narrow-range rule applying to these examples could be that communication verbs do not combine with nominal indirect objects if they carry a component of manner in their semantics. Since an essential part of the semantics of shout and whisper is indeed the aspect of manner, this is supposed to explain their incapacity of occurring in the DOC (example (22)). Verbs with no additional manner meaning at all, such as teach or ask, may very well occur in both constructions (example (23)).

(22) *John whispered Bill the news. (Pinker 1989: 112)\(^4\)
(23) John told Bill an interesting story. (my example)

What these lower-scale lexical rules do is limit the large group of “dativizable” words to a rather limited number of semantic classes, named in Colleman (2006: 36) “dativizable conflation classes”. Verbs which allow for the dative alternation do not only comply with the broad-range rule of English formulating this possibility, but equally have to be part of one of the semantic classes defined by the narrow-range rules. Colleman (2006: 37) provides an overview of dativizable conflation classes and some of the verbs comprised in them.

\(^4\) I disagree with Pinker on this topic; a sentence such as John whispered Bill the news sounds perfectly acceptable to me. This is, once more, an example of a theory which takes into account only intuitions, without controlling whether its assumptions are indeed reflected in concrete language usage.
Pinker clearly believes that the dative alternation is determined by verbal semantics. This is exactly what explains the semantic difference between the double object and the prepositional construction: two variants of the verb present minor semantic differences and are thus both linked to a different syntactic construction.

3. Non-transformational monosemy hypotheses

I now return to certain hypotheses which assume that alternating verbs are not polysemous but monoseumous.

Colleman (2006) argues that the hypotheses discussed in the section above assume that, e.g., two different verbs with the form give exist, the semantics of which differ to a limited extent. These different semantics are then connected through the same set of linking rules to two different syntactic constructions.\(^5\) In any case, the hypotheses discussed in this section differ strongly from the previous in that they assume the existence of only one give verb, with one meaning of its own. According to the monosemy hypotheses viewed earlier, this verb is always encoded in the same depth structure, yet can occur in different constructions at surface level. These different encoding possibilities are then due to the application of syntactic rules or transformations. What the non-transformational monosemy hypotheses argue in favour of, however, is obviously not a set of transformations; they rather assume more flexible linking rules. I will now elaborate on this kind of view on the dative alternation.

An example of a linguistic model that adopts this type of perspective is Role and Reference Grammar, represented a.o. by Van Valin and La Polla (1997). This theory states that every verb is recorded in the speaker’s mental lexicon along with a metalinguistic paraphrase of its “grammatically relevant” meaning elements (Colleman 2006: 40). Generally, RRG linguists assume that the “undergoer” of an action, or the participant that is most strongly affected by it, will occur in a position closer to the verb than non-undergoer participants. In practice, this means that the dictionary is the

\(^5\) I disagree, however, with Colleman (year: 40) describing the theories in question in this way and then naming them polysemy hypotheses. If we are dealing not with one verb with multiple meanings, but (as the author literally states) with “two give verbs” (year: 40), we could hardly speak of polysemy but should be using the term homophony.
undergoer and most affected participant in (24), whereas the same applies to the professor in the double object construction in (25):

(24)  John\textsubscript{ACT} gave the dictionary\textsubscript{UND} to the professor.
(25)  John\textsubscript{ACT} gave the professor\textsubscript{UND} the dictionary.

(based on Van Valin and La Polla 1997: 336)

In other words, the syntactic difference between the prepositional and the double object construction can apparently be explained by means of semantics: if the most affected participant is the theme, what is usually chosen is the prepositional structure; the double object structure, then again, is produced when the receiver is most strongly affected.

Another model in which elements of monosemy can be found with respect to the dative alternation is Functional Grammar (e.g. in Dik (1997)). This model holds that ditransitive verbs such as give are associated with a certain natural, automatic hierarchy. Thus, for give: giver > gift > receiver. This means that a giver does something to a gift and that as a consequence the gift arrives in the ownership of a receiver. Though Dik (1978, 1997) proposes a theory very similar to the RRG theory discussed above, he opts for a different and perhaps confusing terminology: he speaks of subject and object assignment. The notions of subject and object are not to be interpreted purely syntactically; rather, they are “perspectival functions” (Dik 1997: 27), based upon which an event can be represented from different perspectives. It is exactly through these two perspectival functions that variation upon the basic perspective (giver > gift > receiver) above is made possible. The subject function is usually assigned to the agent, both in the double object and the prepositional construction; the two structures differ, however, in terms of the participant to which object status is assigned. In the construction considered as basic in this theory, i.e. the prepositional option, it is the goal that is made object (e.g. (26)). The double object construction, then, assigns object status and thus a certain perspective to the role of recipient (e.g. (27)). This means that the transfer event is represented in the DOC from the point of view of both agent and recipient.

(26)  The man (AgSubj) gave the book (GoObj) to the boy (Rec).
(27) The man (AgSubj) gave the boy (RecObj) the book (Go). (Dik 1997: 253)

Role and Reference Grammar and Functional Grammar thus seem to agree that the essence of the dative alternation is an indication of perspective: in the double object construction, what is foregrounded is the recipient, whereas the prepositional construction foregrounds the theme. In other words, the dative alternation allows speakers of English to represent each of both “more passive” (Colleman 2006: 45) participants in a transfer event as the most affected one.

Finally, functional linguistic models are not the only ones which incorporate flexible linking rules into their account of the dative alternation. Within the field of formal linguistics as well, it is sometimes stated that the application of the same set of linking rules onto one verb can result in multiple possible outcomes. Levin and Rappaport (2002), for instance, argue that two different linking rules are applied to the receiver role of transfer verbs such as give. One general linking rule of English states that the goal argument of a verb is to be connected to the complement of the “allative preposition” (Colleman 2006: 45) to, i.e. in the prepositional construction. This is the case for e.g. the receiver of give, since the participant to whom something is given may well be considered as some kind of goal: something is transferred, either physically or in an abstract way, in the direction of this participant. Another general linking rule of the English language links the possessor argument of a verb to the indirect object in the double object construction. The same receiver role of give can undergo not only the first linking rule mentioned above, but this one as well; the person to whom something is given, after all, is a possessor. In conclusion, exactly because the receiver of give can be considered both as a goal and as a possessor, the different linking rules related to each of these concepts can both be applied to the verb in question. Give, thus, has only one meaning in its own right, but can be interpreted in two different ways thanks to a flexible linking mechanism, with as a result two different constructions featuring the same verb.

3. Constructivist accounts
What matters most to constructivist theories about the dative alternation is not so much the meaning of the alternating verbs, but that of the constructions implied.

The first construction, called the double object construction or DOC in this thesis, realizes both the recipient and the patient in a giving event as noun phrases. Both are found in postverbal position, with the recipient preceding the patient. This means that the following pattern underlies all potential realizations of the DOC:

[Subj V Obj₁ Obj₂]

In the prepositional construction (or PC), on the other hand, the recipient and patient arguments are not realized in the same way. Whereas the patient is encoded by means of an immediately postverbal noun phrase, the recipient takes on a more oblique form, i.e. that of a prepositional phrase introduced by to. The construction in question can thus be presented as such:

[Subj V Obj Obl], with “Obl” standing for “oblique constituent”

Both structures are recorded in the speaker’s mental lexicon as abstract patterns, which are said to carry a meaning of their own; consequently, a verb is inserted into a construction with its own basic meaning(s), come to “underdetermine” (Colleman 2006: 52) both form and meaning of the clause. A verb can only be inserted into particular constructions if its semantics are compatible with that of the construction in question; cf. “Semantic Coherence Principle” (Goldberg 2002).

The Semantic Coherence Principle “ensures that the participant role of the verb and the argument role of the construction must be semantically compatible” (Goldberg 2002: 342-343). For instance, the verb lend can fill the verb slot in the double object construction because its roles are consistent with the slots reserved by the construction; a lender, a lendee and an element which is lent can be distinguished. Other verbs are at first sight not entirely compatible with the construction in question, e.g. the monotransitive verb kick; one can, however, imagine a situation in which an agent kicks an element to a receiver. Some feature within the semantics of the verb still
allows for a connection with the double object construction. It is, then, the construction which provides the general meaning of reception in the end.

While Goldberg rephrases the meaning of the double object construction as “X causes Y to receive Z”, very similar to Pinker’s analysis, she associates with the prepositional construction the meaning “X causes Y to move Z”. Once more, the respective notions of caused possession and caused motion are represented here. Very often, the event of handing over something to someone goes hand in hand with a literal movement of the object being handed over (Colleman 2006: 60). This would explain why many verbs are compatible with both constructions and why such sentences as (x) and (x) can be used to refer to the same real-world situation. According to Goldberg (2002), however, this does not mean that they have exactly the same meaning: whereas the double object variant focuses more strongly on the concept of possession, the prepositional variant encodes a stronger emphasis on the idea of motion. In other words, what is emphasized in (28) is the eventual possession by Tom of the book; in (29), it is the trajectory that the book follows when passing from the giver to the possessor.

(28) Lisa gave Tom a book.
(29) Lisa gave a book to Tom.

Goldberg also distinguishes a third type of construction, which she calls the “transfer-caused-motion” structure (Colleman 2006: 60). It is supposed to be a special subtype of the caused motion construction and more precisely to have generated from it through a form of metaphorical extension. Goldberg explains it as follows (as quoted by Colleman 2006: 60):

There is a metaphor that involves understanding possession as the “possessed” being located next to the “possessor”, transferring an entity to a recipient as causing the entity to move to that recipient, and transferring ownership away from a possessor as taking that entity away from the possessor. (Goldberg 1995: 69)

Though I understand Goldberg’s reasoning to a certain extent, I disagree with her about the impossibility of semantic equivalence between both constructions.
Though one can still metaphorically consider this construction as a realization of the caused motion meaning, no such thing as literal movement of the transferred entity takes place here. This brings the transfer-caused-motion construction slightly closer to the double object construction in terms of non-locative meaning: not coincidentally, even Goldberg agrees that the two constructions in question are almost synonymous. That is to say, the constructivist “Principle of No Synonymy” (Colleman 2006: 63) excludes the perfect meaning equivalence of two syntactic structures, yet distinguishes between semantic and pragmatic synonymy. Semantically speaking, the transfer-caused-motion structure and the double object structure could even be considered identical, but this necessarily implies that they are pragmatically different. More precisely, it is the newness or givenness of information that has an impact on the choice speakers of English make between alternative dative options. Colleman (2006: 64-65) states that new recipient identity and given theme identity usually imply a choice for the (transfer-)caused-motion construction, since this structure places the recipient in final position. This complies with the principle that given, ‘old’ information usually occurs in informational structure before new information. For this reason, the double object construction (placing the new recipient in immediately postverbal position and the given theme in final position) would be less appropriate in this context. In case of a given recipient and a new theme, then again, the DOC would be the best option. In other words, in the double object construction, the theme is part of the focus whereas the recipient remains outside of it. The inverse applies to the transfer-caused-motion or prepositional construction: the recipient is focused upon informationally, the theme is not.

So far, I have said that the meaning of the double object construction can be rephrased as “X causes Y to receive Z”; this is, however, somewhat too limited a formulation. In reality, many different yet related meanings can be linked to this construction, as constructions are taken as polysemous elements. The central meaning is defined as: “through instigation by an agent, a transfer takes place of the possession or control of an object to a recipient” (Colleman 2006: 66). Colleman refines the previous by stating that not all sentences with a double object pattern encode actual transfer; sometimes, for instance, what is meant is purely the intention of transfer. Whereas there can be no doubt about the concrete transfer taking place in (30), this is not the case for (31) or (32).
(30) John gave Chris the ball.
(31) Bill promises his son a car.

This is not the only additional semantic aspect that can occur when one uses a double object construction. I present the different meanings that Goldberg (1995) distinguishes below; (b)-(f) are taken as semantic extensions of (a). Basically, the construction always maintains its central meaning, to which certain other semantic aspects can be added according to the specific kind of verb inserted into the verb slot.7

(a) Agent successfully causes recipient to receive patient
   - Verbs that inherently signify acts of giving: give, pass, hand, serve, feed, …
   - Verbs of instantaneous causation of ballistic motion: throw, toss, slap, kick, poke, fling, shoot, …
   - Verbs of continuous causation in a deictically specified direction: bring, take

(b) Conditions of satisfaction imply that agent causes recipient to receive patient
   - Verbs of giving with associated satisfaction conditions: guarantee, promise, owe, …

(c) Agent causes recipient not to receive patient
   - Verbs of refusal: refuse, deny

(d) Agent acts to cause recipient to receive patient at some future point in time
   - Verbs of future transfer: leave, bequeath, allocate, reserve, grant, …

(e) Agent enables recipient to receive patient
   - Verbs of permission: permit, allow

(f) Agent intends to cause recipient to receive patient
   - Verbs involved in scenes of creation: bake, make, build, cook, sew, knit, …

7 This contradicts Goldberg’s assertion that what determines the meaning of a “dative” sentence is the construction used; here, she states that the semantics of the verb have a strong influence on the meaning of the whole.
The caused motion construction is similarly conceived as a polysemous construction. Its central meaning is qualified as “X causes Y to move Z” (Colleman 2006: 71). Its extended meanings are very similar to the categories listed for the caused transfer construction above. This leads Goldberg (1995) to stating that the constructions in question are not so much associated with a single abstract meaning, but rather with a group of different but related senses.

Certain other constructivist analyses, however, do postulate one single meaning for all possible occurrences of, in any case, the double object construction.

Wierzbicka (1986: 135), for instance, equally accepts the existence of various semantic subtypes with regard to the DOC, but sees no reason not to regroup these together under a more general heading. She formulates the following umbrella meaning for the double object construction:

- person X did something to Y
- because he/she wanted to cause something to happen to person Z
- (it could be expected to be good for Z)
- something happened to Z because of that
- Y didn’t become a different kind of thing because of that
- saying this, I am more interested in what happened to Z than in what happened to Y

The double object construction is accordingly taken to focus more strongly on the recipient than on the transferred entity. It is assumed that the exact opposite applies to the prepositional construction, which would indicate that the most strongly affected participant is the goal (Levin & Rappaport 2002). Goldberg (1995) disagrees with Wierzbicka’s analysis (1986) for several reasons. First of all, she states that the recipient is definitely not always more strongly affected by the transfer than the goal in DOC contexts. This is illustrated in (33), about which one could even say that the recipient does not undergo any effect at all:
The fact that Chris baked a cake and had the intention to deliver it to Pat, does not always imply that Pat received the cake in the end (Goldberg 1995). Apart from functioning as an intended target in Chris’ thoughts, Pat is by no means affected by the process of baking itself. Secondly, Goldberg (1995) argues that Wierzbicka’s hypothesis is not precise enough. That is to say, she does not accept the idea that the only semantic effect of the DOC is to represent the targeted person as “affected”; if this was the case, one would expect sentences such as (34) to potentially have meanings which do not comply with reality:

(34) Chris kicked Pat the ball. (Goldberg 1995: 34-35)

One could say, for instance, that Pat received the ball and more precisely received it straight in the face. However, according to Goldberg (1995) this is not the way in which a sentence like (34) is generally interpreted. If Wierzbicka’s limited “affectedness” hypothesis was correct, however, there would be no reason whatsoever to exclude this interpretation. To Goldberg, this is a clear indication that the semantic difference between the double object and prepositional construction should not be reduced to a difference in receiver affectedness.

Another “abstractionist” hypothesis discussed by Goldberg (1995) is the one stating that the double object construction represents the indirect object as a “prospective possessor” (Colleman 2006: 75). In practice, this can be realized by an actual possessor (with give), a potential future possessor (with promise), or even a deprived possessor (with refuse) (Colleman 2006: 75). One of the linguists who adhere to this view is Kay, who states (1996) that there is no need for such complex semantic subdivisions as Goldberg’s; Kay posits not one construction with six interrelated meanings, but two separate monosemous constructions (Colleman 2006: 76). The first, which comprises nearly all subtypes posited by Goldberg, is the “recipient construction” (Colleman 2006: 76), with a meaning like “Agent intentionally causes someone to (modal) receive something” (Kay 1996: 7). Only what Goldberg describes as “agent intends to cause recipient to receive patient” (1995: 38) is classified as a separate construction by Kay, called the benefactive ditransitive construction.
4. Cognitive accounts

The perspective of cognitive grammarians on indirect objects and on the dative alternation is perhaps best represented by Langacker (1991). He states that the alternation between the double object and the prepositional construction should simply be viewed as “a matter of coexisting constructions” (Langacker 1991: 326). He does not believe, in other words, that one of both constructions results from a transformation of the other.

The fact that these two constructions are to be distinguished from one another syntactically apparently excludes their potential semantic equivalence as well – a view which seems to be in accordance with that of transformational grammar. More precisely, Langacker claims that the to element in the prepositional construction (e.g. (35)) more strongly emphasizes the path followed by the transferred object. The double object construction, on the other hand, places transferred object and receiver more closely together and thus would emphasize the possessive relation between the two, as in (36) (Ozón 2009).

(35) John sent the book to Mary.
(36) John sent Mary the book. (Ozón 2009: 64)

Naturally, this does not imply that the notion of path is entirely absent from the second sentence, or the notion of possession from the first; the difference lies in the emphasis placed on either of these concepts. This way, the speaker can “present the (same) scene through different images” (Ozón 2009: 64).

5. Valency theory accounts

Valency theory holds that verbs (and other elements such as nouns or adjectives) govern a number of other elements in the clause. More precisely, the verb “govern[s]
its syntactic environment because of the valencies that are inherent in [it]” (Mukherjee 2005: 26). These valencies are at the same time quantitative and qualitative. Quantitative valency means that a verb determines the number of complements that should accompany it. Ditransitive or dative verbs like give are, then, called “trivalent” (Mukherjee 2005: 26). They require the presence – though ellipsis is not always impossible – of a subject and two objects, i.e. three necessary complements to the verb and to the clause. Qualitative valency, on the other hand, focuses more closely on the semantics of the required complements, which should be more or less compatible with those of the verb.

Another binary distinction to be made in this field is that between syntactic and semantic valency. Syntactic valency means “the range of syntactic structures which are permitted with specific verbs at the level of formal realisations of obligatory clause elements” (Mukherjee 2005: 27). The dative alternation provides a perfect example for this concept: one of the objects required by dative verbs represents the functional (or semantic) category of recipient. This object can be realized by more than one formal type of structure in English. Whereas it features by default as a noun phrase in the double object construction, it takes on the form of a prepositional to-phrase in the equivalent prepositional construction, all other things (especially the verb) remaining equal. Klotz (2000: 14) provides the following examples, stating that both sentences are not only semantically equivalent, but also syntactically:

(37) John gave Jenny a bunch of roses.
(38) John gave a bunch of roses to Jenny.

This means that a certain analogy can be posited between different formal structures in English, which have more in common in terms of their featuring in constructions than one might expect. Semantic valency, on the other hand, is obviously related to the inherent semantics of both the governing verb and its complements. Syntactic and semantic valency are not considered to be on the same hierarchical level; semantic valency is actually the primary kind, which is required for syntactic valency to be able to occur. This is why Mukherjee (2005: 28) calls syntactic valency a “secondary phenomenon”. The inherent semantics of the verb are exactly what determines the
number and form of complements that it requires, and syntactic elements encode through words the more abstract semantic roles which underlie the clause.

6. **Prosodic accounts**

Prosody is another factor said to play a part in the choice speakers make between the two dative constructions discussed here. Anttila et al. (2010) even attempt to explain some of the variables generally accepted to influence the dative alternation through prosodic criteria.

It is generally known that the double object construction rarely encodes its theme by means of a pronoun, e.g.:

(39) He can, he can sell it to the council. (KDY451)
(40) ?? He can, he can sell the council it.

The second, constructed, sentence does not sound very natural. According to Anttila et al. (2010), this is due to the prosodic characteristics of the objects involved: a prosodic phrase should not consist solely of a lexically unstressed pronoun, yet this is exactly the case in this context. Though this does not seem problematic in case of a recipient pronoun (e.g. (41)), it does constrain the dative construction if it is the theme which is represented pronominally.

(41) [...] she gave me her phone number [...] (KST3242)

Thus, what is usually simply considered as the factor of pronominality has not so much to do with the pronoun character of the theme itself, but with certain prosodic constraints imposed upon English productions.

The principle of end weight, i.e. length and heaviness of the object constituents involved, is equally explained by Anttila et al. (2010) as due to prosodic influences. They agree that “heavier” constituents are usually placed in final position, whereas “lighter” objects occur more frequently in immediately postverbal position. They do
not agree, however, that this is simply the effect of word length: it is derived, on the contrary, from the interaction between lexical and sentence stress. Sentence stress in English usually falls on the “rightmost constituent” (Anttila et al. 2010: 954), i.e. the theme in the double object construction and the recipient in the prepositional construction. Sentence stress ideally coincides with lexical stress; that is to say, all lexically stressed elements should occur within the constituent carrying sentence stress. Naturally this constraint can be violated, yet it does imply that lexically unstressed forms such as personal pronouns will rarely occur in this final position. Though not all lexically stressed items can realistically be contained in the final constituent, it is rare for not a single lexical stress at all to be part of it.

A final interesting aspect of the dative alternation is the question why certain verbs can occur in both constructions, while certain others – though semantically compatible – cannot. I have mentioned Anttila et al.’s (2010) views on this in the section about alternating verbs (pp. 13-16).

7. Corpus-based accounts

This is a more recent way of approaching linguistic questions and problems, and also the branch within which this thesis is to be included. I will provide some general information about corpus linguistics and its advantages first, then briefly discuss some corpus-based studies which have concentrated on the dative alternation.

Corpus linguistics has been developing strongly over the past years. It implies a more concrete approach towards linguistic phenomena and allows the researcher to test his or her hypotheses based on a large set of real-life language data. In less empirical attempts at explaining the dative alternation or other language phenomena, one often comes to conclusions that do not necessarily comply with actual language usage. As Bresnan & Ford (2010: 170) state, “intuitive judgments of decontextualized examples [can be] surprisingly inconsistent with actual usage”. Corpus linguistics allows for the study of what speakers of a language produce in reality.
Hunston & Francis (2000: 15) list a number of advantages of corpus linguistics when compared to more traditional forms of linguistic study:

- The data is authentic;
- The data is not selected on linguistic grounds;
- There is a lot of data;
- The data is systematically organised;
- The data is not annotated in terms of existing theories.

As mentioned earlier in this section, Bresnan is one of the modern linguists who strongly believes in the value of corpus linguistics. She studies actually produced sentences, both in spoken and written English (Bresnan & Nikitina 2003, Bresnan et al. 2007) and from different geographical varieties of the language (Bresnan & Hay 2007, Bresnan & Ford 2010), in order to come to an explanation for the dative alternation. Some of the factors that prove to be relevant to speakers’ choice between dative alternatives, and which will equally be used in this thesis, are definiteness, pronominality, animacy, length and accessibility.

Similar variables can be found in Collins (1995), who equally supports his claims by means of concrete corpus data. He focuses especially on the factors of accessibility, end weight, pronounhood and definiteness (1995: 35), linking them all in some way to the informational structure of sentences and texts. Collins investigates in particular the more or less sharp differentiation between what he terms “receiver” and “entity” (i.e. theme in my terminology). These two objects appear to differ more strongly from one another, in terms of the variables mentioned above, in the double object construction than in the prepositional. Speakers, therefore, potentially select the double object construction if they wish to differentiate communicatively between these two participants.

A third study, which uses data from the BNC corpus, is Hollmann (2007). Hollmann argues that the discussion of the dative alternation should not be limited to English, but that an account of dativisability is to be developed that applies to all languages. Certain universal constraints will play an important part in this. Hollmann (2007) makes use of a corpus sample of N = 277 sentences, both of active and of passive
nature, which pattern either according to the DOC structure or to the PC. He finds that such factors as nature of transfer, punctuality and volitionality have an impact on the choice speakers make between dative alternatives. More precisely, if the transfer described is punctual and concrete, and the agent can be considered as volitional, speakers are more likely to opt for the DOC than for the PC. Other factors investigated by Hollmann (2007), such as volitionality of the recipient or “spatiotemporal contiguity” (2007: 70) appear to be insignificant.

Other linguists who base their discussion of ditransitives and the dative alternation upon English corpus data are Sinclair (1990) and Biber et al. (1999); their respective descriptive grammars pay great attention not only to abstract “rules”, but equally to concrete observations in spoken and written English.

8. Diatopic variability

Speakers’ choices between dative alternatives have been found to be associated with the variety of English used by the speaker. In U.S. English, for instance, the double object construction less often features an animate recipient than in New Zealand English (Bresnan & Hay 2007). Australian English seems to be more strongly influenced by such factors as end weight than American English (Bresnan & Ford 2010). Generally speaking, both speakers of the Australian and of the British variety of the language seem to use the prepositional dative construction more often than American speakers (Bresnan & Ford 2010). A similar constatation applies to the comparison between Indian and British English: the prepositional construction is more popular in the first variant than in the second (Mukherjee & Hoffmann 2006).

Kendall et al. (2011) have attempted to come to similar conclusions with respect to the difference between African American and “standard” American English, yet were forced to acknowledge that the two varieties are not distinct in this field.
3. Methodology and variables studied

In this section, I present the way in which I have proceeded with the goal of selecting an appropriate corpus sample. I explain in further detail which queries I have used and which parts of the original larger corpus I have in- or excluded in my sample creation. I deployed the online version of the British National Corpus (henceforth BNCweb) as a basis for my corpus investigation.

The first task was, then, to find in this collection of sentences a sufficient number of so-called dative constructions – i.e. double object and prepositional constructions. Unfortunately, the BNC is only tagged for part of speech, not for syntactic function or construction; that is to say, I could not simply use for instance [Subject Verb IndirectObject DirectObject] as a query and see all appropriate sentences delivered immediately. To overcome this problem, I performed lexical searches based on the verb in combination with a Query Syntax, which allows one to look for specific syntactic combinations. I used the list of verbs provided by Bresnan et al. (2007). A complete overview of the verbs I searched for is provided in Table 1:

<table>
<thead>
<tr>
<th>accord</th>
<th>afford</th>
<th>allocate</th>
<th>allot</th>
<th>allow</th>
<th>assess</th>
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<tbody>
<tr>
<td>assign</td>
<td>assure</td>
<td>award</td>
<td>bequeath</td>
<td>bet</td>
<td>bring</td>
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<td>cause</td>
<td>cede</td>
<td>charge</td>
<td>cost</td>
<td>deal</td>
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<td>deny</td>
<td>extend</td>
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<td>fine</td>
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<td>pay</td>
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<td>present</td>
<td>promise</td>
<td>quote</td>
<td>read</td>
<td>refuse</td>
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<tr>
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<td>repay</td>
<td>resell</td>
<td>run</td>
<td>sell</td>
<td>send</td>
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<tr>
<td>serve</td>
<td>show</td>
<td>slip</td>
<td>submit</td>
<td>supply</td>
<td>swap</td>
</tr>
<tr>
<td>take</td>
<td>teach</td>
<td>tell</td>
<td>tender</td>
<td>trade</td>
<td>vote</td>
</tr>
</tbody>
</table>

8 More information on the Syntax Query possibilities of BNCweb can be found in the help pages provided by BNCweb: http://bncweb.lancs.ac.uk/bncwebXML/Simple_query_language.pdf.
Each verb could now be investigated separately. The following step depended upon the construction I was searching for. In the case of the prepositional construction, a minor yet very helpful element could be used in the queries: the preposition to. This resulted in the following type of BNC query:

\[ _{V} + \text{to}_{\text{PREP}} \left( \left( _{\text{ART}} \right)? \left( \left( _{\text{ADV}} \right)? \left( _{\text{A}} \right) \right)* \left( _{\text{N}} \right) \right) \]

This rather abstract query consists of a number of important elements. “V” stands for the specific verb investigated at a certain point – the addition of curly brackets meaning that any form of the verb can be intended. In other words, \{give\}_{V} would yield instances of give, gives, giving, gave and given.

The plus sign represents another – any – word. The query above requires one word and one word only in between the requested verb form and the preposition to. Of course, not only structures with, in this case, a direct object of only one word were investigated. For reasons of convenience, however, I decided not to take this aspect of my research any further than four sequential words (i.e. ++++). Naturally, “to\_\{PREP\}” intends any occurrence of the element to in its function as a preposition. The following part of the query is placed in between rounded brackets, meaning that it is not an obligatory element of the structures searched for. An article (_\{ART\}) is very frequently present in a noun phrase, but does not have to be. This applies to an even greater extent for adverbs (_\{ADV\}) and adjectives (_\{A\}). Their optionality is, indeed, indicated either by means of a question mark symbol or by means of an asterisk. Finally, an essential element is of course the head noun (_\{N\}) of the noun phrase following the preposition to.

This type of query yielded rather accurate results for the prepositional construction. Data still had to be scanned manually in order to eliminate results which did not fit the structure I was searching for, but the number of inappropriate sentences returned was altogether limited. An example of an eliminated sentence yielded by the query illustrated above is (42):

(42) Nigel of course didn’t give in to blackmail. (AC3100)
The requirements of the abstract query are all fulfilled; both the preposition to and the head noun of the following noun phrase are present, and only one word is featured in between the dative verb and the preposition. However, the observed construction is not a prepositional dative construction.

In terms of the double object construction, matters were a bit more complicated. Since no such concrete lexical elements as to are automatically available for this construction, queries were necessarily more general and also required much more “cleaning up”. An example query for the double object construction was simply the following:

\[ \text{[V], e.g. } \text{send}_{V} \]

This indeed means that the corpus search then yielded all occurrences of the verb send, in all its possible forms, for the corpus user to filter manually in terms of the construction he or she needed. In practice, this often meant that an enormous number of results were yielded by the corpus, only a minority of which were actually instances of the double object construction (featuring an immediately postverbal indirect object, followed by a direct object) and could therefore be retained in my search.

In many cases, the number of results related to a certain query was simply too high for the BNC to yield all at the same moment. (This applied not only to the double object construction, but equally to the prepositional.) That is to say, even if for instance 8,147 relevant results are present in the BNC, the corpus automatically and arbitrary selects 5,000 of these and offers them to the user as such. In this hypothetical case, this would mean that 3,147 potentially interesting sentences would be excluded from my research from the very beginning. To avoid such pre-elimination by the corpus, I had to work around this problem. One option, which I often used, was to search not just for all forms of a verb (e.g. \{send\}_{V}), but to make a subdivision between the different possible verb forms. In other words, in this case the following queries would be inserted, if what was being searched for was a prepositional construction with three arbitrary words behind the verb:

\[ \text{send}_{V} +++ \text{to}_{PREP} (_{ART})? (_{ADV})? (_{A})^{*} (_{N}) \]
In those cases where such an approach still yielded over 5,000 results, I used the option offered by the BNC to specify queries for age and sex of the speaker. I searched independently for all instances of sent, for instance, pronounced by men, women and people whose sex had not been determined more precisely at the time of speaking. The addition of these three separate sets of results then provided me with all the relevant sentences available, both from the corpus of written English and from the corpus with spoken data.

A total number of N = 47,623 sentences was thus retrieved from the BNCweb. In order to delimit the number of sentences to be studied in further detail, I decided to concentrate only on the spoken component of the corpus. This meant that certain verbs, which did appear to alternate in the data yielded by a more extensive corpus search, were no longer found to alternate in the spoken component of the corpus I intended to study. For methodological reasons, I deleted these verbs from my new sample of spoken British English.

The following verbs, which were included at first in my corpus search, were accordingly excluded from further investigation: accord, allot, allow, assess, assign, assure, award, bequeath, bet, cede, deal, extend, fine, flip, float, funnel, guarantee, lease, loan, mail, net, permit, prepay, promise, quote, refuse, reimburse, repay, resell, run, submit, take, tender, trade, vote, wish. Since many of these verbs are rather formal, it is not all that surprising that they do not occur very often in – even non-spontaneous – spoken English. This, of course, by no means implies that the verbs in question do not alternate at all in English, as the more elaborate search within the written portion of the BNC proves. Another selection which I applied was the deletion of those sentences in which not all relevant objects were found in postverbal position, e.g. passive variants of the constructions studied, as in the (constructed) example in (43). Finally, sentences which contained a non-nominal or non-nominal-relative object were excluded. In practice, this usually meant the deletion of cases in which the direct object was realised by a clause, as in (44).
(43) The book was given to Nancy.

(44) I told him that I wasn’t coming back.

This reducing operation brought me to a total of $N = 10,256$ sentences: $9,174 \ (88\%)$ DOC sentences and $1,082 \ (12\%)$ PC sentences. It would not have been possible to annotate all these data in detail in the time span available for my thesis preparation. For this reason, the number of data to be analyzed was further reduced to a more feasible sample, maintaining the original proportion between the DOC and the PC found in the full set of spoken data. A random sample of $N = 3,400$ sentences was accordingly retained, with $3,000$ DOC sentences and $400$ PC sentences. Of this sample, a few observations were ultimately removed because the speaker’s dialect or accent was American, Indian, German or European. Since we are interested in the dative alternation in British English these observations were also dropped. My final sample thus contained $N = 3,368$ sentences, with $2,973 \ (87\%)$ DOC sentences and $395 \ (13\%)$ PC sentences.

These sentences were then annotated manually for a number of intralinguistic variables, based on Bresnan et al. (2007). These include the main verb featuring in the dative structure and its use or sense in this specific construction. The other variables pertain directly to the two objects involved and are presented schematically in the following table.
Table 2: Intralinguistic variables used in this study

<table>
<thead>
<tr>
<th>theme</th>
<th>recipient</th>
</tr>
</thead>
<tbody>
<tr>
<td>animacy</td>
<td>animacy</td>
</tr>
<tr>
<td>animate vs. inanimate</td>
<td>animate vs. inanimate</td>
</tr>
<tr>
<td>pronominality</td>
<td>pronominality</td>
</tr>
<tr>
<td>pronominal vs. nominal</td>
<td>pronominal vs. nominal</td>
</tr>
<tr>
<td>definiteness</td>
<td>definiteness</td>
</tr>
<tr>
<td>definite vs. indefinite</td>
<td>definite vs. indefinite</td>
</tr>
<tr>
<td>concreteness</td>
<td></td>
</tr>
<tr>
<td>abstract vs. concrete</td>
<td></td>
</tr>
<tr>
<td>person</td>
<td>person</td>
</tr>
<tr>
<td>local vs. nonlocal</td>
<td>local vs. nonlocal</td>
</tr>
<tr>
<td>number</td>
<td>number</td>
</tr>
<tr>
<td>singular vs. plural</td>
<td>singular vs. plural</td>
</tr>
<tr>
<td>length in number of words</td>
<td>length in number of words</td>
</tr>
</tbody>
</table>

As the table shows, most of these variables apply to both objects involved in any dative construction, i.e. both theme and recipient. Concreteness, however, has been measured only for the themes in my data.

Further extralinguistic information with respect to the sentences investigated is provided automatically by the BNC corpus. Some of the factors for which the corpus already annotates its data will equally be investigated here. These include the type, genre and domain of the text from which the sentence was drawn, its period of recording and the region where it was captured, but equally certain pieces of information about the interlocutors involved. Age, gender and social class of both interviewer (named somewhat confusingly ‘respondent’ in the BNC annotation) and interviewee (or ‘speaker’) are indicated. Other factors which might be involved in the dative alternation are the speaker’s first language, dialect or accent, and level of education.

I will now discuss each of these factors in further detail, starting with the intralinguistic ones.
1. Intralinguistic predictors

1. Verb and verb sense

The effect of verb sense on the dative alternation is well documented in the literature (Levin 1993, Gries 2005). Particular alternating verbs are supposed to favour either the double object construction (DOC) or the prepositional construction (PC), depending on some of their semantic characteristics. Some authors relate this effect to the semantic compatibility between the verb in question and the meaning associated with the particular construction in which it is used. (Not all linguists, however, accept the idea that the to-construction and the DOC have specific semantics of their own; this is discussed in my theoretical introduction to the dative alternation.)

In order to verify whether certain verbs indeed favour one construction over the other, I have indicated the infinitive form (e.g. give, send) of the main verb occurring in a dative construction in the sample.

With respect to verb sense, I have maintained the subdivision of alternating verbs made by Bresnan et al. (2007). Below, I illustrate the five subcategories they distinguish by means of examples drawn from my own data. These show how give, perhaps the most frequently occurring dative verb, can be used in several different ways.

Transfer of possession
(45) Give us a cigarette, girl! (KPG4457)
(46) You can’t give anything by mouth to an unconscious casualty because they’ll, you’ll choke them, they can’t swallow. (F8C174)

Abstract transfer of possession
(47) The whole purpose of our exercise was to give the staff a better feeling of security. (FUJ2696)
(48) Well hopefully music will not die, but will continue to give joy and meaning to the lives of millions. (KRR92)

Communication of information
(49) [...] I gave him a few tips on what to revise on. (KCL1256)
(50) [...] I’d like to pay congratulations to Councillor X […] (JJE352)

Future transfer
(51) Can’t remember whether I owe Madge a letter or she owes me one. (KC92104)
(52) [...] you’ve got to offer more struggle fruits to the peasants […] (JJL538)

Prevention of possession
(53) But he said we won’t charge you the daily rate, we’ll just charge you for the job. (KBF6797)
(54) That it is inadequate for trade unions to […] deny rights to UK workers that are enjoyed by every one of our European colleagues. (HUE290)

2. Animacy of theme and recipient

Both the theme and recipient objects were coded according to their animacy. The distinction between animate and inanimate entities is quite straightforward; the category of animates basically consists of human beings and animals, referred to either by means of a noun phrase or a pronoun. All other entities were then included in the inanimates category.

Very often, the recipient argument in a ‘giving’ configuration will be an animate being. This means that the immediately postverbal NP position in the double object construction and the prepositional object in the prepositional construction will frequently be filled in by an animate entity. Example (56) shows, however, that this need not always be the case:
Well I did a quick trip to our Arthur’s cos I lent him some money today. (KCX1438)

Erm, but, you know, which lent a certain point to the whole argument. (K6V371)

A positive effect has been observed of this factor: inanimate recipients usually favour the prepositional construction (Hollmann 2007, Bresnan & Ford 2010).

3. Pronominality of theme and recipient

It has long been observed that the dative alternation is motivated by the (pro)nominality of the objects, in that pronominal objects clearly tend to occur before nominal ones; that is to say, if the recipient in a dative configuration is expressed as a pronominal object and the theme an NP headed by an actual noun, the double object construction is very likely to be selected. Conversely, if the theme is realized as a pronoun, the double object construction is avoided (Bresnan and Nikitina 2003): the sequence of a lexical NP and a personal pronoun is considered “unnatural” (e.g. (57)).

??Ann gave John it.

In general, recipients – either in the prepositional or in the double object construction – appear to be expressed more frequently by means of a pronoun than a full noun phrase (Collins 1995, Rappaport Hovav & Levin 2007). As opposed to themes, receivers are usually animate; this may explain why they are referred to much more often through a personal pronoun.

Practically speaking, I have regarded as pronominal those noun phrases headed by (or consisting solely of) the following types of pronouns; the examples provided, once more, are drawn from the sample studied in this thesis. The first example sentence, if available for this type of pronoun, contains a pronominal theme and the second a pronominal recipient.
Personal pronoun
(58) You got about five of them went round giving them to other people just so you could say that to Chris didn’t you? (KDA4748)

(59) Send her a Christmas card. (KBE1353)

Reflexive pronoun
(60) And how you feel yourself, that’s how you present yourself to other people […] (FL850)

(61) The district council has no objections and of course the county’s granted themselves planning permission on it. (KM8783)

Reciprocal pronoun
(62) Right, we’re going to have an exercise in giving each other positive feedback. (K74617)

Demonstrative pronoun
(63) Dad gave me that ages ago didn’t he? (KBF12177)

(64) Shall we give these a ring right. (KBE6959)

Possessive pronoun
(65) And then I could have shown mine to this lady, cos I mean the only difference is is the black and white isn’t it? (KB02773)

Indefinite pronoun
(66) Can you tell me anything about that? (K6188)

(67) And you want to tell someone something about it […] (K6J1036)

Universal pronoun
(68) Yes, you showed me everything in there. (KD23728)

(69) Gave everyone a kiss. (KSW421)
4. Definiteness of theme and recipient

I followed Theijssen’s (2010) annotation criteria in marking themes and recipients as either definite or indefinite. Naturally, noun phrases initiated by a definite article (as in (70)-(71)) were considered as definite, but this was not the only case. Proper nouns (72)-(73) were marked as definite as well, just like many types of pronouns, viz. demonstratives (74)-(75), possessives (76)-(77), reciprocals (78), reflexives (79)-(80) and of course personal pronouns (81)-(82). Their equivalent demonstratives equally mark noun phrases as definite.

NP with definite article
(70) Honey give me the midday paper please dear (KD62783)
(71) Just give it to the lassie and she’ll put you through straight away. (FXD96)

Proper noun
(72) I wish you hadn’t sent me Jane Eyre! (K60214)
(73) Maybe she’ll give it to Savina as a wedding present. (KP17641)

Demonstrative pronoun
(74) But not just redundancy, we’ve taken initiatives in lots of other areas, we’ll show you those as well. (HYE24)
(75) Just give this a quick whizzo. (KBE6959)

Possessive pronoun
(76) If I show you mine will you show me yours? (KDV2538)
(77) It’s a normal thing to do, to teach your children everything from the time they’re born […] (KRH1191)

Reciprocal pronoun
(78) We’d given each other eyes over the bar in this pub […] (KP62708)

Reflexive pronoun
(79)  [...] Jesus was presenting himself to God [...] (KBX1593)

(80)  That’s right trying to find work these days can be demanding and extremely frustrating so you want to make sure that you give yourself the best chance of getting a job [...] (HMA124)

Personal pronoun

(81)  So I went over and I bought two necklaces, I gave them to Julie who made the shirt, and she took them apart. (KPU2650)

(82)  He sold me the caravan. (KCN4583)

Indefinite objects are those which are initiated by an indefinite article (83)-(84) and those headed by either the pronoun “one” (85) or by an indefinite pronoun (86)-(87).

NP with indefinite article

(83)  Ron X has sent us a copy then. (KP11049)

(84)  When we offer a child a symbol, we expect a response. (KRG16)

“One”

(85)  Erm he wrote to Photo Gallery and asked them for er an exhibition date and they gave him one in nineteen ninety. (HEN459)

Indefinite pronoun

(86)  I’ve just come to tell you something else. (KCL4531)

(87)  [...] it’s not very personal to give someone a voucher though is it? (KB712850)

Collins (1995) observes that recipients, no matter in which of the two constructions studied, are predominantly definite. When looking at both structures in particular, he finds that nearly all receiver NPs in the double object construction are definite; he relates this to the fact that they are “strongly associated with given information status” (1995: 46). I will briefly discuss givenness at a later point in this variable overview, though unfortunately I have not been able to study it for this thesis. Themes appear to be less extreme with respect to their definite/indefinite distribution (Bresnan 2007).
5. Concreteness of theme

The distinction between concrete and abstract objects is applied to themes only. I found this a very difficult distinction to make, since the noun phrases which are clearly and prototypically concrete or abstract are rare; therefore, I have created some guidelines of my own.

In the first place, those objects which are obviously concrete in nature, i.e. physical objects, were classified as concrete (e.g. (88)). I also decided to include themes in this category which may not be tangible objects, but which can be perceived in some way by means of the senses (e.g. (89)-(90)). A separate mention is required for those phrases headed by the word “money”; I considered this as a concrete noun at all time, despite the fact that very often it is implied that the money transferred is only virtual (for instance through a bank transfer).

(88) No er sorry that you’re always sending them duplicate letters aren’t you? (KLV652)
(89) He, he was a treat before, just used to take him up, give him a cuddle, say night-night and that was it (KCG1570)
(90) Then tape it over with duck tape (sic), make sure it is real nice and tight then when you see a geek walking down the street give it a good throw you will have a blast. (KCE5557)

I considered a theme as being “abstract” in all other cases, which did not comply with the criteria above. A few examples from my sample are provided here:

(91) [… ] would it cause a client a problem if we gave them back some money? (FUK2303)
(92) And then I said we were coming to Sarah’s, so she sends you her love. (KCB960)
(93) We’d have mixed appetites […] if you’d given it any thought. (KBK6549)
I included such expressions as “give someone a hand with something” in the category of abstracts, since what is being dealt with here is clearly not a physical hand, but the concept of “help”:

(94) Aye he wanted, he offered to give us a hand though. (KD988)

A concrete theme usually implies a concrete transfer, e.g. the physical handing over of an object. Hollmann (2007) suggests that situations of concrete transfer will be encoded more easily by means of the DOC than through a prepositional construction; abstract themes, however, would equally prefer the double object construction (Bresnan et al. 2007). This implies that the DOC would always be preferred over its prepositional counterpart.

6. Person of theme and recipient

What is intended by the term “person” is in fact the presence or absence of objects in the speech environment. This means that personal pronouns in the first and second person (i.e. me, you and us) will be separated from all other personal pronouns and noun phrases; members of the first category will be marked as “local” (e.g. (95)-(98)), all other elements as “nonlocal” (e.g. (99)-(100)). This distinction appears to be relevant especially to recipients: Bresnan et al. (2007) found that nonlocal recipients show a preference for the prepositional construction.

(95) So I’ll er leave you to Mike X to take things further. (H47143)
(96) And so we’ve said life is it’s gonna bring us problems, it’s gonna bring us storms, it’s tempests, and some of them are gonna be very, very fierce! (KJV96)
(97) He’s decided to sell it to Phil now! (KCU4793)
(98) […] if we do give them work to do it’s got to be stuff which they don’t feel inadequate to do. (KLT544)
(99) And then she kept saying they owed her some money you know (KB2728)
7. Number of theme and recipient

Both themes and recipients can be classified not only according to their “person”, but equally according to their number; the two are not necessarily correlated to one another. Here I simply made the distinction between singular and plural objects, which is quite easy to make for most pronouns and noun phrases; in some cases, however, certain problems came to the surface.

The personal pronoun you, is ambiguous without further contextual information, as it can be used to refer to both the second person singular and the second person plural. The single sentences often don’t make clear which of both is the case. In those cases where it was not possible to guess which number was intended by you, I once more used the notion “na”. One example of a sentence where both singular and plural could be intended is provided in (101).

(101) Right well, I think I can show you a way on how to go about that. (JK8194)

In general, I decided to label those noun phrases which were grammatically marked as singular as singular, and those marked as plural as plural. This, of course, seems logical, yet examples such as the following show that the formal labeling of nouns as singular or plural can be quite arbitrary. In both cases, the exact same thing is intended, yet one representation does add a plural –s and the other does not, as illustrated in (102) and (103).

(102) Is my dad gonna give me a hundred pound? (KCU3348)

(103) […] I have had to pay a hundred pounds to Mr Butcher the plumber to put in a new shower thing […] (KBF2703)

Number of both theme and recipient has been found to affect the dative alternation; in that plural themes favour the prepositional construction. Plural recipients, in contrast, show a preference for the double object construction. (Bresnan et al. 2007)
8. Length of theme and recipient

It is well acknowledged that, due to what is generally called the principle of end weight (Kendall et al. 2011: 238), longer constituents tend to be placed towards the end of the sentence. Applied to the dative alternation, this means that long recipients will usually favour the prepositional construction, since this allows them to be placed in clause-final position along with the preposition to. In the case of a lengthy theme, on the other hand, the double object construction will be preferred: here, the shorter recipient is placed in immediately postverbal position and followed by the ‘heavier’ theme constituent. The inverse is not impossible, but would sound rather unnatural, as in the (constructed) second variants in the following examples:

(104) We asked the Home Office to appear in this program, but they refused, instead they sent us a letter full of encouraging noises about how seriously they took the question of data protection. (HE7352)

(105) We asked the Home Office to appear in this program, but they refused, instead they sent a letter full of encouraging noises about how seriously they took the question of data protection to us.

(106) Certain member states, Denmark, the Netherlands and Portugal grant such voting rights only to those expatriate nationals who are living in another EC member state. (JSG5)

(107) Certain member states, Denmark, the Netherlands and Portugal grant only those expatriate nationals who are living in another EC member state such voting rights.

Recipient NPs are clearly lengthier in the prepositional construction, where they are placed in final position, than in the DOC, where they occupy an immediately postverbal position (Collins 1995, Biber et al. 2007).

Following Bresnan and Ford (2010), the difference in length between recipient and theme was calculated as the difference between the natural logarithm of the number of graphemic words of the recipient and the natural logarithm of the number of graphemic words of the theme.
2. Extralinguistic predictors

1. Text type

As explained before, the language data used in this thesis were all drawn from the British National Corpus, more precisely from its spoken component. The texts featured in the BNC corpus are collected in two different ways, referred to (both by the BNC itself and in this thesis) as “context-governed” and “demographically sampled”. Each sentence is supplemented with information about the way in which it was recorded. Context-governed data were not elicited by BNC staff. Rather, they were produced by one or multiple speakers in a given context which was not created by the BNC, but at which staff did assist. Some examples are parliamentary speeches, conversations in the classroom or news broadcasts. Demographically sampled data, on the other hand, were created in part through staff working for the BNC. They deliberately sought out people in everyday situations, of different groups in terms of age, sex and social class, and engaged in conversation with them. Of these conversations, obviously including both the BNC interviewer and the person interviewed, only speech produced by the latter was retained.

2. Genre of text

Another factor which is annotated in the BNC is the genre of every text included in the corpus. The main distinction to be made goes hand in hand with the distinction between context-governed and demographically sampled data (see above). Whereas the demographic sampling method implies that the type of text resulting from the interaction is usually a conversation between interlocutors, this need not be the case for context-governed data. The latter category contains, for instance, debates broadcast on television, news reports, speeches and language produced by teachers in classroom settings. This means that the annotation of genre is much more diverse for context-governed than for demographically sampled texts, though of course not all conversations are similar. In order to simplify matters and to make the level of detail
more equal for both types of data, I regrouped all non-conversational texts together in a category named “other spoken material”, allowing for a binary opposition between groups.

A related opposition is that between dialogic and monologic spoken texts. Though all conversational texts in the sample are logically of the dialogue type, this naturally does not mean that all non-conversational data are monologic. Some of them are, for instance speeches or news broadcasts; others, such as business meetings or debates, are just as well dialogic. Perhaps this distinction has an influence on speakers’ choice between dative alternatives, that is to say, potentially more double object constructions will be found in dialogue than in monologue (or vice versa). I hope that the quantitative analysis of my data will shed some light on this question.

3. Domain of text

In the case of context-governed data, a further elaboration can be made with respect to the so-called domain in which the data are to be situated. This means that, for instance, certain texts will be classified as part of the domain of business, whereas others have more to do with the public atmosphere or are intended as informative (e.g. news reports). Once more, every (context-governed and therefore non-conversational) sentence in the sample is accompanied by a brief indication of the domain with which it is associated. The options are business, leisure, educational/informative and public/institutional.

4. Region of recording

One more general piece of information provided by the BNC corpus is the geographical region in which the corpus texts were captured. Though this is not known in every single case, most sentences in the sample are accompanied by a mention of the (large) area in which they were recorded. The subdivision made is one between the North of England, the South and the Midlands. The BNC equally includes information about the dialect or accent of speakers; since this information nearly
always matches that about the region of recording, I have decided to investigate only the latter.

5. Age of speaker

Potentially, younger speakers make different choices than older speakers with respect to the possible dative options in English. In order to investigate this, we must take into account the age of the speakers in all texts contained in the sample. For reasons of convenience, what is maintained is not the exact age of all speakers. The BNC regroups speakers into the following age groups: younger than 15, 15-24, 25-34, 35-44, 45-59, and 60 or older. Some sentences do not provide information about the age of the person who spoke them, potentially because the person questioned did not feel comfortable revealing his/her age.

6. Sex of speaker

Whereas, confusingly, the BNC annotation uses the biological term “sex” when talking about interviewers and the term “gender” when talking about the actual subjects of the data, the same binary opposition is made in both cases. Speakers are classified as either male or female, though in some cases no information was provided in this respect at the time of recording. One then finds “unknown” or “na” instead of an actual marking of the person’s gender.

7. Social class of speaker

Speakers whose productions are included in the BNC are categorized according to their social class. This classification appears to be based especially on the level of education and on the profession of the speakers. A distinction is made between higher management, lower management, skilled manual workers and semi- or unskilled
workers. Unfortunately, in many cases, no information with respect to the social class of the speaker was available. The code “na” was then used in my data.

8. Variables which were not included

There are a number of variables which I decided not to include in my thesis. I will briefly introduce them here and explain why exactly they were excluded.

An interesting parameter with respect to the nominal participants in dative constructions is volitionality, as discussed by Hollmann (2007). The agent in a dative structure can either be volitional or non-volitional, though Hollmann correctly states that in the latter case it should perhaps not be called a true “agent”; he provides the following examples, the first of which comprises a volitional agent, the second of which does not (Hollmann 2007: 66).

(108) “With his left hand he snatched the gun from the Pole’s hands, and with the right he gave him a violent blow to the ear.” (BNC A051455)

(109) In either case, the absence of colour gave an incentive to the authors to provide evocative descriptions. (BNC A04713)

The agent is not a participant I have studied in this thesis. This is not the only participant to whom the notion of volitionality is applied, however; the recipient as well can be either volitional or not, meaning that it is willing or not to receive the given thing. This is usually not the case with inanimate recipients, as illustrated in (110) (once more an example from Hollmann 2007: 66):

(110) This gave greater depth to most of the patterns, but often made the dancers appear earthbound. (BNC A121768)

Volitionality, both of agent and recipient, appears to lead to a preference for the double object construction (Hollmann 2007). Because no other linguists include this parameter in their model for predicting the dative alternation, I doubt whether it would truly be that influential. Therefore, I have not included it in my own thesis.
The effect of modality, i.e. spoken vs. written, could not be determined in this study because I only studied spoken texts.

Another variable with a well-documented effect is that of discourse status, i.e. whether the referent of the object has been referred to in the previous context or whether it is newly introduced (with many possible statuses in between). Given objects are found to occur in the sentence before non-given or new information; therefore, recipients in the DOC are in the large majority of cases given (Collins 1995). They are then potentially followed by a theme which is new. Obtaining sufficient information to do this kind of labeling would have proven a very daunting task; it requires a thorough investigation of the preceding cotext. This was not feasible within the time limits of this study. Note, however, that information associated with discourse status may also be derived from other variables. A ‘given’ referent is frequently referred to with a pronominal object, which is by definition also a short object. Therefore, even if the discourse status of the objects was not separately annotated, this information is at least partly examined.

The same restriction applies to the notion of structural parallelism. This notion boils down to the idea that a certain dative construction is more likely to appear at some point in a text if the same construction has already been used in the text before. Again, the annotation of this variable was not feasible within the confines of my research thesis, and was accordingly left out.

Finally, there are a number of variables which are automatically included by the BNC in all data it provides along with queried sentences, but which are not relevant to my current research. The first is the level of education of the speaker. This could be a very interesting factor to investigate and may even have an influence on speakers’ dative choices. Unfortunately, however, available data in this respect seem very limited; the only options to be seen in my sample are “unknown” and “na”, that is to say, no relevant information whatsoever can be drawn from this. The same applies to the speaker’s first language; once more, this would be an interesting factor to look at in further detail, yet there is no possibility for contrast in the current sample. Either the reply to the first language question is “British English” or it is simply not given. This does not exactly allow for any relevant conclusions with respect to language either. The
BNC equally annotates data for the chronological period in which they were recorded. This could be an interesting factor, yet not relevant to my research, since 99% of the sentences were recorded in the same period (1985-1993).
4. Presentation and discussion of results

1. Bivariate analysis

I first discuss the results yielded by an initial bivariate analysis of all data; these are given in Table 3.

We notice, first of all, that for nearly all variables, the double object construction is the preferential option in this corpus sample. Remember, however, that the total data set studied does not comprise two quantitatively equal subsets; 88.3% of all sentences are realizations of the DOC, leaving only a proportion of 11.7% to the PC.

The imbalance in number between both constructions does not imply, however, that the bivariate analysis carried out for these data is useless or irrelevant. It simply indicates that, at least in spoken British English, speakers tend much more strongly towards using the DOC than the PC.

1. Intralinguistic variables

Table 3: Bivariate results

<table>
<thead>
<tr>
<th>REALIZATION</th>
<th>NP</th>
<th>PP</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td>Animacy of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>animate</td>
<td>25 (64%)</td>
<td>14 (36%)</td>
<td>39</td>
</tr>
<tr>
<td>inanimate</td>
<td>2948 (89%)</td>
<td>381 (11%)</td>
<td>3329</td>
</tr>
<tr>
<td>Animacy of recipient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>animate</td>
<td>2847 (92%)</td>
<td>255 (8%)</td>
<td>3102</td>
</tr>
<tr>
<td>inanimate</td>
<td>126 (47%)</td>
<td>140 (53%)</td>
<td>266</td>
</tr>
<tr>
<td>Pronominality of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>nominal</td>
<td>2444 (91%)</td>
<td>231 (9%)</td>
<td>2675</td>
</tr>
<tr>
<td></td>
<td>pronominal</td>
<td>nominal</td>
<td>pronominal</td>
</tr>
<tr>
<td>--------------------------------</td>
<td>------------</td>
<td>---------</td>
<td>------------</td>
</tr>
<tr>
<td>Pronominality of recipient</td>
<td>529 (76%)</td>
<td>164 (24%)</td>
<td>693</td>
</tr>
<tr>
<td>nominal</td>
<td>228 (37%)</td>
<td>393 (63%)</td>
<td>621</td>
</tr>
<tr>
<td>pronominal</td>
<td>2745 (100%)</td>
<td>2 (0%)</td>
<td>2747</td>
</tr>
<tr>
<td>Definiteness of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>definite</td>
<td>910 (82%)</td>
<td>201 (18%)</td>
<td>1111</td>
</tr>
<tr>
<td>indefinite</td>
<td>2063 (91%)</td>
<td>194 (9%)</td>
<td>2257</td>
</tr>
<tr>
<td>Definiteness of recipient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>definite</td>
<td>2906 (91%)</td>
<td>304 (9%)</td>
<td>3210</td>
</tr>
<tr>
<td>indefinite</td>
<td>67 (42%)</td>
<td>91 (58%)</td>
<td>158</td>
</tr>
<tr>
<td>Person of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>local</td>
<td>0 (0%)</td>
<td>5 (100%)</td>
<td>5</td>
</tr>
<tr>
<td>nonlocal</td>
<td>2973 (88%)</td>
<td>390 (12%)</td>
<td>3363</td>
</tr>
<tr>
<td>Person of recipient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>local</td>
<td>1961 (100%)</td>
<td>0 (0%)</td>
<td>1961</td>
</tr>
<tr>
<td>nonlocal</td>
<td>1012 (72%)</td>
<td>395 (28%)</td>
<td>1407</td>
</tr>
<tr>
<td>Number of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>2426 (88%)</td>
<td>320 (12%)</td>
<td>2746</td>
</tr>
<tr>
<td>plural</td>
<td>524 (88%)</td>
<td>73 (12%)</td>
<td>597</td>
</tr>
<tr>
<td>missing</td>
<td>23 (92%)</td>
<td>2 (8%)</td>
<td>25</td>
</tr>
<tr>
<td>Number of recipient</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>singular</td>
<td>1272 (82%)</td>
<td>273 (18%)</td>
<td>1545</td>
</tr>
<tr>
<td>plural</td>
<td>702 (85%)</td>
<td>122 (15%)</td>
<td>824</td>
</tr>
<tr>
<td>*missing</td>
<td>999 (100%)</td>
<td>0 (0%)</td>
<td>999</td>
</tr>
<tr>
<td>Concreteness of theme</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>concrete</td>
<td>1827 (88%)</td>
<td>244 (12%)</td>
<td>2071</td>
</tr>
<tr>
<td>abstract</td>
<td>1146 (88%)</td>
<td>151 (12%)</td>
<td>1297</td>
</tr>
<tr>
<td>Semantic class of verb</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>abstract</td>
<td>496 (87%)</td>
<td>74 (13%)</td>
<td>570</td>
</tr>
<tr>
<td>communication</td>
<td>599 (92%)</td>
<td>55 (8%)</td>
<td>654</td>
</tr>
<tr>
<td>future</td>
<td>130 (92%)</td>
<td>12 (8%)</td>
<td>142</td>
</tr>
<tr>
<td>prevention</td>
<td>170 (99%)</td>
<td>2 (1%)</td>
<td>172</td>
</tr>
<tr>
<td>transfer</td>
<td>1578 (86%)</td>
<td>252 (14%)</td>
<td>1830</td>
</tr>
</tbody>
</table>
* in those cases where an annotation for number is missing, it is impossible to
determine whether a form is to be interpreted as singular or plural. This is especially
the case for the personal pronoun you.

**Semantic class of the verb**

If one looks at both constructions from a different perspective, i.e. comparing all
double object constructions and investigating the different verb meanings potentially
represented in them, one comes to interesting conclusions. Independent of the specific
construction, the meaning of transfer is the one which is most often encoded (in 53% of
DOC cases and 64% of PC cases). For this and most other meanings, the distribution of
both constructions is consistent with the general distribution of the two constructions.
One meaning, however, presents us with an interesting deviation. Only two sentences
encoding a meaning of prevention (with verbs such as deny or cost) are construed
according to the PC pattern; many more instances of this meaning are to be found in
the DOC data. This suggests that the semantic class of prevention favours the DOC.

**Pronominality of recipient**

This is one of the cases in which the DOC is less strongly preferred. That is to say,
pronominal recipients indeed prefer the DOC, with only two sentences with
pronominal recipients not presenting this pattern. The inverse is true for nominal
recipients; despite the much smaller number of PC sentences to begin with, this
construction is still in the majority if the recipient is not encoded by a pronoun. More
precisely, the PC is used in 63% of cases in which the recipient is nominal. It should
equally be noted that, in general, many more sentences were found – independent of
the construction used – in which the recipient is pronominal (82%) than nominal.

**Animacy of recipient**

Inanimate recipients occur in only 8% of the corpus cases. Since both the double object
construction and the prepositional construction are essentially used to encode an event
of giving, this is not surprising. In most cases, after all, the recipient in a giving event is
a conscious being who is capable of accepting a gift. This is especially true for such
semantic subcategories as “transfer”; one can imagine otherwise for more abstract
ways of giving, as in *He promised to give the matter some thought*. If the latter is the case,
i.e. if the recipient is for some reason not animate, speakers are slightly more likely to use the prepositional construction (in 53% of cases in this sample) than the double object construction.

**Definiteness of recipient**

Only 5% of the sentences studied comprise an indefinite recipient. In those rare cases where the recipient *is* indefinite, it is usually the prepositional construction which is selected (58% of indefinite recipients).

**Person of recipient**

There are no prepositional constructions in the sample in which the recipient is local. In other words, if the recipient is a personal pronoun such as *I, you* or *we*, what is selected is automatically the double object construction. Naturally, this means that all 395 sentences with a PC structure have a nonlocal recipient. The opposite applies to the set of double object constructions in my sample, yet in a less extreme manner; whereas the majority of DOC sentences has a local recipient (1961 sentences, or 66%), there are still slightly over thousand sentences which combine a nonlocal recipient and a DOC structure. In summary, it is the DOC which is preferred both by local and nonlocal recipients, yet the contrast with the PC is much more salient in the first case.

**Number of recipient**

Both singular and plural recipients show a preference for the double object construction. Generally speaking, recipients tend to be singular (in 46% of cases) rather than plural (25%). As discussed before, certain sentences could not be annotated for number of recipient, as this information could not be deduced from the immediate context. This is especially true in the case of the pronoun *you*, which can be both singular and plural. Unfortunately, quite a large number of data fell into this category, which means that 999 sentences in total could not be marked for this variable. All these sentences are instances of the double object construction. Seeing as there are no prepositional constructions with local pronouns as recipients in the sample, and *you* is obviously local, this is only logical.
Pronominality of theme
No matter whether the theme is realized by means of a pronoun or by means of a full noun phrase, the double object construction is always the preferred option. In the large majority of cases (79%), the theme is nominal, i.e. almost the opposite of what applies to recipients.

Animacy of theme
Themes in this sample are practically always inanimate. In 39 sentences only, i.e. in 1.2% of all data, the theme is a human or otherwise animate being. It seems logical that the “thing given” in a giving event is usually not conscious; only in some cases, e.g. in They’ve just sold a player to Leicester (K61291), it is possible for the theme to be animate. It is usually the double object construction which is chosen, whether with an animate theme or not.

Concreteness of theme
A variable which was not included for the category of recipients is the factor of concreteness. Since nearly all recipients are animate, it would not be very useful to label them as abstract or concrete, considering they would all fall into the latter category. For the function of theme, however, such a distinction does make sense: an inanimate entity can be either a concrete object or an abstract concept. Generally speaking, at least in this sample, themes are more often concrete (in 61.5% of cases). Unfortunately, this is another variable which is found to be irrelevant to the choice between DOC and PC. No matter what the degree of concreteness of the theme, it is always the double object construction which is the preferential choice.

Definiteness of theme
As discussed before, themes are more likely to be new pieces of information introduced in a discourse than recipients. It is not surprising, therefore, that the majority of themes in this sample (67%) is indefinite. A striking observation can be made with respect to the distribution of definite and indefinite themes across the independent constructions. Whereas more than two thirds (69%) of DOC data contain an indefinite theme, the proportion of definite and indefinite themes in the PC is practically fifty-fifty. This suggests that the DOC prefers to be construed with
indefinite themes whereas this distinction plays no part for the prepositional construction.

**Person of theme**

Only five sentences in the entire corpus sample of 3,368 sentences have a local theme. Themes in giving events are indeed rarely animate and therefore unlikely to be construed by means of a personal pronoun which is literally personal, i.e. referring to an animate being. Since the only elements to be marked as local are forms of the pronouns *I, you* and *we,* “given objects” will indeed rarely – if ever – be labeled as local. Nonlocal themes, just like nonlocal recipients, prefer the double object construction; those few cases which do comprise a local theme, on the other hand, are all instances of the prepositional construction.

**Number of theme**

Just as recipients are usually singular, themes as well are more often of the singular number (in 82% of cases) than of the plural. Both appear to favour the double object construction. An important difference with the category of recipients is that only a very small percentage of themes could not be marked for number; since the most ambiguous element in terms of number is the pronoun *you,* and this hardly ever occurs as a theme in a giving construction, such ambiguity is largely excluded within the category of themes.

## 2. Extralinguistic variables

**Table 4: Bivariate results with the extra-linguistic predictors**

<table>
<thead>
<tr>
<th>REALIZATION</th>
<th>NP</th>
<th>PP</th>
<th>TOTAL</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Text type</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>context-governed</td>
<td>1334 (84%)</td>
<td>255 (16%)</td>
<td>1589</td>
</tr>
<tr>
<td>demogr. sampled</td>
<td>1639 (92%)</td>
<td>140 (8%)</td>
<td>1779</td>
</tr>
<tr>
<td><strong>Type of interaction</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>monologue</td>
<td>347 (84%)</td>
<td>66 (16%)</td>
<td>413</td>
</tr>
<tr>
<td>Domain</td>
<td>2626 (89%)</td>
<td>329 (11%)</td>
<td>2955</td>
</tr>
<tr>
<td>-------------------------</td>
<td>------------</td>
<td>-----------</td>
<td>------</td>
</tr>
<tr>
<td>business</td>
<td>356 (86%)</td>
<td>57 (14%)</td>
<td>413</td>
</tr>
<tr>
<td>educ./informative</td>
<td>418 (87%)</td>
<td>61 (13%)</td>
<td>479</td>
</tr>
<tr>
<td>leisure</td>
<td>294 (86%)</td>
<td>47 (14%)</td>
<td>341</td>
</tr>
<tr>
<td>public/institutional</td>
<td>266 (75%)</td>
<td>90 (25%)</td>
<td>356</td>
</tr>
<tr>
<td>missing</td>
<td>1639 (92%)</td>
<td>140 (8%)</td>
<td>1779</td>
</tr>
<tr>
<td>Region of recording</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>North</td>
<td>937 (91%)</td>
<td>97 (9%)</td>
<td>1034</td>
</tr>
<tr>
<td>Midlands</td>
<td>708 (90%)</td>
<td>80 (10%)</td>
<td>788</td>
</tr>
<tr>
<td>South</td>
<td>1253 (86%)</td>
<td>198 (14%)</td>
<td>1451</td>
</tr>
<tr>
<td>missing</td>
<td>75 (79%)</td>
<td>20 (21%)</td>
<td>95</td>
</tr>
<tr>
<td>Age of speaker (in years)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>0-14</td>
<td>160 (92%)</td>
<td>14 (8%)</td>
<td>174</td>
</tr>
<tr>
<td>15-24</td>
<td>261 (92%)</td>
<td>23 (8%)</td>
<td>284</td>
</tr>
<tr>
<td>25-34</td>
<td>493 (91%)</td>
<td>47 (9%)</td>
<td>540</td>
</tr>
<tr>
<td>35-44</td>
<td>447 (92%)</td>
<td>37 (8%)</td>
<td>484</td>
</tr>
<tr>
<td>45-59</td>
<td>662 (94%)</td>
<td>43 (6%)</td>
<td>705</td>
</tr>
<tr>
<td>60+</td>
<td>411 (91%)</td>
<td>39 (9%)</td>
<td>450</td>
</tr>
<tr>
<td>missing</td>
<td>539 (74%)</td>
<td>192 (26%)</td>
<td>731</td>
</tr>
<tr>
<td>Sex of speaker</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>male</td>
<td>1448 (88%)</td>
<td>198 (12%)</td>
<td>1646</td>
</tr>
<tr>
<td>female</td>
<td>1344 (92%)</td>
<td>120 (8%)</td>
<td>1464</td>
</tr>
<tr>
<td>missing</td>
<td>181 (70%)</td>
<td>77 (30%)</td>
<td>258</td>
</tr>
<tr>
<td>Social class of speaker*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>higher management</td>
<td>282 (90%)</td>
<td>32 (10%)</td>
<td>314</td>
</tr>
<tr>
<td>lower management</td>
<td>327 (93%)</td>
<td>24 (7%)</td>
<td>351</td>
</tr>
<tr>
<td>skilled manual</td>
<td>362 (93%)</td>
<td>26 (7%)</td>
<td>388</td>
</tr>
<tr>
<td>semi-/unskilled</td>
<td>224 (86%)</td>
<td>21 (8%)</td>
<td>245</td>
</tr>
<tr>
<td>missing</td>
<td>1778 (86%)</td>
<td>292 (14%)</td>
<td>2070</td>
</tr>
</tbody>
</table>

* higher management includes administrative or professional functions, lower management includes supervisory or clerical tasks.
Region where the recording was made
In all three regions of the United Kingdom distinguished by the BNC, i.e. North, Midlands and South, the double object construction is the preferential option for speakers. However, its proportion of use compared with the prepositional construction is not equal for all regions. In the North only 9% of all possible dative constructions are prepositional, in contrast to 14% in the South. Only a 3% of all sentences were not annotated for region.

Text type
Texts in the BNCweb corpus are either “demographically sampled” or “context-governed”. In the first case, they are the result of unprepared interviews with speakers of English, carried out by interviewers at the service of the BNC; context-governed texts, on the other hand, were only recorded by BNC staff, not elicited. This category includes broadcasts, lectures, debates, speeches and other forms of spoken language in which the recording person does not participate personally. Both types of texts make use more often of the double object construction than of the prepositional construction; a certain difference can be observed, however, if one looks at each construction independently. Whereas the majority of double object sentences can be found in the “demographically sampled” category, the majority of PC data (65%) were retrieved from the context-governed part of the corpus.

As will be discussed in more detail later, this difference may be due to the fact that spontaneous conversation is less formal than many of the context-governed forms of speech in the sample. The prepositional construction would then be associated with a higher degree of formality than the DOC. This would explain, for instance, why the subset of data recorded in parliament shows a much higher number of prepositional constructions than double object constructions, despite the fact that PCs are altogether limited in number in this corpus.

Type of interaction
Most of the data in my sample (88%) are dialogic in nature. This is the case for those texts that were retrieved by means of interviews, but it can equally apply to some apparently more formal genres. Debates, for instance, are not monologues, just like certain classroom conversations or transcriptions of business meetings. Some categories which are usually monologic in nature are sermons and news broadcasts.
No difference is to be observed between monologues and dialogues in terms of dative choice; both types of interactions appear to favour the double object construction.

**Domain**
This variable only applies to context-governed texts, as no particular domain could be determined for informal conversations. For all four large domains distinguished by the BNC, the double object construction is the preferential choice.

**Age of speaker**
Speakers are divided by the BNC into six different age categories. Sufficient texts by speakers from every age group are present in my sample; no specific age group is very clearly in the majority. Certain speakers did not disclose their age; 22% of data were not annotated for age of speaker. Once again, speakers from all age groups distinguished show a preference for the double object construction.

**Sex of speaker**
Both men and women tend to use the double object construction more frequently to encode a giving event. The sentences contained in my sample were spoken slightly more often by men than by women; the difference was especially big in the case of the prepositional construction (198 sentences versus 120).

**Social class of speaker**
Unfortunately, it was not possible to determine the social class of a rather large number of speakers in the BNC corpus; a total of 2070 sentences, or 61.5% of the full data set, was not annotated for this variable. As for the data which were, all social classes showed a preference for the dative alternation.
2. Logistic regression analysis

An analysis of the data by means of logistic regression was carried out for all 3,368 sentences in the sample. Two models were fitted to the data. The first contains all possible predictor variables described in chapter 3. This includes the variable length, which was not looked at in the bivariate analysis. The second model, the so-called “minimally adequate model”, limits down the number of variables taken into account and only regards those which are significant on a 5% significance level.

The full model is given in Table 5. The Prepositional Construction is taken as the reference category for the outcome variable.

Table 5: Logistic regression analysis: full model (with B = estimated coefficient; SE = estimated standard error; Exp(B) = estimated odds ratio; CI = confidence interval)

<table>
<thead>
<tr>
<th>variable</th>
<th>B</th>
<th>SE</th>
<th>P-value</th>
<th>Exp(B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PronRecipient(Pron)*</td>
<td>-7.478</td>
<td>0.734</td>
<td>0.000</td>
<td>0.001</td>
<td>0.000</td>
</tr>
<tr>
<td>AnimRecipient(An)</td>
<td>-1.553</td>
<td>0.262</td>
<td>0.000</td>
<td>0.212</td>
<td>0.127</td>
</tr>
<tr>
<td>PronTheme(Nom)</td>
<td>-2.133</td>
<td>0.317</td>
<td>0.000</td>
<td>0.119</td>
<td>0.064</td>
</tr>
<tr>
<td>DefRecipient(Def)</td>
<td>-0.112</td>
<td>0.259</td>
<td>0.664</td>
<td>0.894</td>
<td>0.536</td>
</tr>
<tr>
<td>NumberRecipient(na)</td>
<td>0.984</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NumberRecipient(Pl)</td>
<td>-14.475</td>
<td>1186.363</td>
<td>0.990</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>NumberRecipient(Si)</td>
<td>-0.043</td>
<td>0.239</td>
<td>0.858</td>
<td>0.958</td>
<td>0.600</td>
</tr>
<tr>
<td>ConcreteTheme(Abst)</td>
<td>-0.003</td>
<td>0.257</td>
<td>0.990</td>
<td>0.997</td>
<td>0.603</td>
</tr>
<tr>
<td>DefTheme(Def)</td>
<td>0.598</td>
<td>0.236</td>
<td>0.011</td>
<td>1.819</td>
<td>1.144</td>
</tr>
<tr>
<td>PersonTheme(Local)</td>
<td>19.265</td>
<td>16203.636</td>
<td>0.999</td>
<td>.</td>
<td>0.000</td>
</tr>
<tr>
<td>NumberTheme(na)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>NumberTheme(Pl)</td>
<td>-2.005</td>
<td>1.665</td>
<td>0.228</td>
<td>0.135</td>
<td>0.005</td>
</tr>
<tr>
<td>NumberTheme(Si)</td>
<td>0.138</td>
<td>0.258</td>
<td>0.593</td>
<td>1.148</td>
<td>0.692</td>
</tr>
<tr>
<td>LengthDifference</td>
<td>0.397</td>
<td>0.148</td>
<td>0.007</td>
<td>1.487</td>
<td>1.113</td>
</tr>
<tr>
<td>TextType(cg)</td>
<td>0.963</td>
<td>0.235</td>
<td>0.000</td>
<td>2.619</td>
<td>1.652</td>
</tr>
<tr>
<td>SemClass(Transfer)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SemClass(Abstract)</td>
<td>-0.566</td>
<td>-0.295</td>
<td>0.055</td>
<td>0.568</td>
<td>0.319</td>
</tr>
</tbody>
</table>
In this full model, a number of the variables are found not to be significant, i.e. when the P-value exceeds 5 percent. These include definiteness and number of recipient, concreteness, person and number of theme, and the semantic verb class of communication. These factors are also left out in the minimally adequate model, given in Table 6. This model retains seven significant variables.9

Table 6: Logistic regression analysis: minimally adequate model (with B = estimated coefficient; SE = estimated standard error; Exp(B) = estimated odds ratio; CI = confidence interval)

<table>
<thead>
<tr>
<th>variable</th>
<th>B</th>
<th>SE</th>
<th>P-value</th>
<th>Exp(B)</th>
<th>95% CI for Exp(B)</th>
</tr>
</thead>
<tbody>
<tr>
<td>PronRecipient(Pron)*</td>
<td>-8.027</td>
<td>0.733</td>
<td>0.000</td>
<td>0.000</td>
<td>0.000</td>
</tr>
<tr>
<td>AnimRecipient(An)</td>
<td>-1.528</td>
<td>0.253</td>
<td>0.000</td>
<td>0.217</td>
<td>0.132</td>
</tr>
<tr>
<td>PronTheme(Nom)</td>
<td>-2.083</td>
<td>0.304</td>
<td>0.000</td>
<td>0.124</td>
<td>0.069</td>
</tr>
<tr>
<td>DefTheme(Def)</td>
<td>0.620</td>
<td>0.233</td>
<td>0.008</td>
<td>1.859</td>
<td>1.176</td>
</tr>
<tr>
<td>LengthDiff</td>
<td>0.408</td>
<td>0.146</td>
<td>0.005</td>
<td>1.504</td>
<td>1.129</td>
</tr>
<tr>
<td>TextType(cg)</td>
<td>0.998</td>
<td>0.223</td>
<td>0.000</td>
<td>2.714</td>
<td>1.752</td>
</tr>
<tr>
<td>SemClass(Transfer)</td>
<td></td>
<td>0.000</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>SemClass(Abstract)</td>
<td>-0.585</td>
<td>0.259</td>
<td>0.024</td>
<td>0.557</td>
<td>0.335</td>
</tr>
<tr>
<td>SemClass(Commun)</td>
<td>0.438</td>
<td>0.312</td>
<td>0.161</td>
<td>1.549</td>
<td>0.840</td>
</tr>
<tr>
<td>SemClass(Future)</td>
<td>-0.807</td>
<td>0.461</td>
<td>0.080</td>
<td>0.446</td>
<td>0.181</td>
</tr>
<tr>
<td>SemClass(Prevention)</td>
<td>-3.654</td>
<td>0.861</td>
<td>0.000</td>
<td>0.026</td>
<td>0.005</td>
</tr>
</tbody>
</table>

* The reference category is given between brackets.

Positive figures under B indicate a preference for the PC. Negative figures, on the other hand, indicate that the variable in question is “negatively associated” with the PC and that thus the double object construction is the preferable option in this context. I will now discuss the relevant variables in turn.

9 Model diagnostics indicate that the quality of the model is good: $R^2$: from 40% (Cox & Snel) to 80% (Nagelkerke). The classification table shows that 96% of the data in the sample can be correctly predicted by the model at hand.
Pronominality of theme and recipient
The logistic regression analysis indicates that pronominal recipients very strongly favour the double object construction. As its estimated odds ratio shows, a pronominal recipient nearly never occurs in a prepositional construction – in this sample.\textsuperscript{10} The 95% confidence interval indicates that a small deviation from this extreme figure is possible, yet the odds that in such circumstances the prepositional construction would be selected are still extremely small. Nominal themes appear to favour the DOC, with only a 12% chance for the prepositional construction to be selected if the theme is nominal.\textsuperscript{11} This means that, while pronominal recipients usually occur with the DOC, the opposite applies to pronominal themes, as expected.

Animacy of recipient
Another factor which is found to motivate the speaker’s choice of the double object rather than the prepositional construction is the animacy of the recipient. The odds of an animate recipient taking a prepositional construction are 22% of those of inanimate recipients.

Definiteness of theme
While the definiteness of the recipient was not found to be significant, I did find a significant effect of the definiteness of the theme. More precisely, the odds for definite themes to occur in the prepositional construction are nearly twice the odds for indefinite themes to occur in one. I believe this to be linked to the factor givenness, which was not separately investigated in this thesis; I will elaborate on this supposed connection in the discussion chapter.

Length of theme and recipient
A variable which was not included in the bivariate analysis is the difference in length between theme and recipient. If the recipient is lengthier, in number of graphemic

\textsuperscript{10} The odds ratio not only allows for a comparison between the two constructions, but equally between different influencing factors. A factor such as text type, for which the odds ratio is 2.7 (i.e. nearly 3), has about twice as much impact on the choice between alternative constructions as the factor length difference (odds ratio 1.5).

\textsuperscript{11} To be completely correct, we should say that a nominal theme reduces the odds of a prepositional construction to 12% of that for a pronominal theme (cf. Faraway 2006: 33).
words, than the theme, the PC appears to be the favoured construction\textsuperscript{12}. This ties in with the principle of end weight, which states that lengthier constituents are placed after shorter ones.

**Semantic class of the verb**

The meaning most frequently associated with verbs in this sample is the basic meaning of transfer, which was here used as the reference category. Two semantic classes were found to be significant: “abstract” and “prevention”. There is a particularly strong effect for the meaning of prevention; the odds that the PC will be selected by a prevention verb are only 3\% of the odds for the DOC (in comparison to the transfer class).

**Text type**

The only extralinguistic factor which was found to motivate the choice between dative alternatives is the text type to which the data belong, as defined in Bresnan et al. (2007). Sentences from context-given productions show a preference for the prepositional construction, with odds 2.7 times greater than in case of demographically sampled data.

### 3. Classification tree analysis

A classification tree was additionally fitted to the data. This statistical tool is often used as a simple tool to find interacting effects of multiple predictor variables on an outcome variable. The classification tree algorithm that was used here (the CHAID method, implemented in SPSS) also suggests particular splits between subcategories of one variable, and may thus shed a specific light on the data. In the tree provided on p. 75, the first split is (unsurprisingly) associated with the variable “pronominality of recipient”.

\textsuperscript{12} The interpretation of the influence of this variable is not straightforward, as we transformed the length difference to the log scale. However, the direction of the influence is clear, which is what we are interested in here.
In 82% of data from the full sample of 3,368 sentences, the recipient is pronominal. It is realized in practically every case in immediately postverbal position within a DOC construction, with only two sentences displaying the PC pattern. In the remaining 18% of cases, the recipient is encoded as a full noun phrase. Within this group, it occurs most frequently (63% of cases) within the to-phrase in the prepositional construction. Pronominal recipients, thus, appear to favour the double object construction very strongly, even almost exclusively. Nominal recipients, on the other hand, show a preference (though not as extreme as in the case of pronominals) for the prepositional construction. Indeed, such sentences as *I have given a present to him*, though of course not unacceptable, sound less natural than *I have given him a present*.

This category of sentences with pronominal recipients serves as a basis for the following node in the decision tree. Of the 621 sentences of this nature, the majority has a nominal theme (435 as opposed to 186 sentences); it is rather rare for both the recipient and the theme to be pronominal, as in *I will give you it*. If this is the case, however, what is selected is usually the prepositional construction, as in *I will give it to you* (87%). If the theme is nominal, on the other hand, no clear preference can be seen; the prepositional construction is selected slightly more often, yet the distribution of both constructions is nowhere near extreme (53% vs. 47%).

The final step takes the 435 remaining sentences with a pronominal recipient and a nominal theme as its basis and investigates how different genres are distributed across this group: the variable of text type. A first difference can be observed between the larger groups of “context-given” and “demographically sampled” data. The first appears to favour the prepositional construction (the option chosen in 63% of cases), the second (with 72% of cases) the double object construction. This asks for a more detailed investigation. The analysis automatically subdivides all possible genres into three large groups, depending on their preference for either of both constructions studied. A first category comprises such contexts as meetings, courtroom interactions, documentaries, debates, parliamentary discussions and tutorials. This category shows a clear preference (in 76% of cases) for the PC, which – as will be discussed later – may be related to the fact that these genres are rather formal. The opposite applies to the unity of (medical) consultations, sermons, sports broadcasts and primarily a large group of conversations. In this group, 73% of all giving events are realized by means of a DOC,
potentially because these situations are characterized by rather informal speech. In the middle we find a category consisting of speeched, classroom interactions, most types of broadcasts and lectures. Here, the distribution of DOC (47%) and PC (53%) is fairly even.
4. Discussion

In this chapter, I will discuss in more detail the results of the statistical analysis of my data.

First of all, it should be repeated that the number of DOC data in this sample is much larger than the number of PC sentences. This means that, in absolute numbers, the double object construction usually (in 88% of cases) has the upper hand in spoken British English. I believe this to imply that the choice of speakers between both constructions is largely determined by the modality (i.e. spoken versus written). If nearly all possible variables seem to favour the double object construction, this is perhaps just the structure most strongly favoured by the modality of the data in question: spoken language. A similar result is found in Bresnan et al.’s (2007) study of American English telephone conversations; there, 79% of data display the double object construction. Overall, the large proportion of double object constructions may be due to the fact that informal language, in telephone or real-life conversations, features many recipient pronouns, which – as shown in the statistical analysis – favour the DOC. Perhaps this effect is slightly less strong in American English than in British English; this could account for the fact that Bresnan et al.’s research (2007) features a less extreme proportion of DOCs. Grimm and Bresnan (2009) argue that American English displays a more frequent use of double object constructions than British English. However, the results of my study indicate that the opposite might actually be true; at least for what concerns the spoken variant of the language.

Regardless of the effect of modality, the other variables that are found to be significant also influence the choice that speakers make between dative alternatives. Making abstraction of the preferences of the spoken mode for now, I will now describe and attempt to explain the effects of the variables in question.

The results of my study corroborate the earlier view that pronominal recipients very strongly favour the double object construction (Collins 1995, Bresnan & Nikitina 2003, Rappaport Hovav & Levin 2007). In fact, pronominal recipients hardly ever occur in the prepositional construction. I believe this phenomenon to be related to certain other
variables, such as definiteness, givenness and length.\textsuperscript{13} Personal pronouns, which make up the large majority of the pronoun category in this study, are nearly always definite and often do not correspond to new information in their context. Since old information is usually expected to precede new, it is not surprising for the known referent of the pronoun to occur in immediately postverbal position, followed by the probably “unknown” theme. To this is added the principle of end weight, which states that shorter constituents usually precede longer ones. Since personal pronouns are very limited in length, they will often be shorter than the constituent encoding the patient in a giving event; prosody may play a part in this, as suggested by Anttila et al. (2010). These factors, in cooperation, may explain the large-scale occurrence of pronominal recipients in the double object construction. A similar explanation can be applied to the field of themes. Nominal themes favour the DOC, whereas pronominal themes show a preference for the PC. Once again, the pronominal theme is usually definite, given and short and therefore occurs before the lengthier (and potentially new) recipient.

The same principle of givenness, which was not separately included as a variable in this thesis, may also account for the results for definite and indefinite themes. As stated before, a definite constituent (e.g. a noun phrase containing a determiner like \textit{the} or \textit{that}, or a proper noun) is usually given and already known within its context. The fact that given constituents are supposed to precede new ones may explain, once again, why definite themes favour the prepositional construction. The new information in the \textit{to}-construction is not the theme noun phrase that immediately follows the verb, but the recipient, which logically occurs in final position.

Another principle which recurs in my explanation of the results is the notion of end weight, associated with the dative alternation in e.g. Collins (1995), Bresnan et al. (2007), Kendall et al. (2011). The results of my study confirm empirically what is generally accepted in the literature. Not only does the principle of end weight play a role in the preferences of pronominal constituents; it equally helps to determine the choice between DOC and PC based on the length of both theme and recipient. More precisely, if the recipient is the lengthier of the two, it will be placed after the theme

\textsuperscript{13} This brings us to the problem of collinearity, which makes it difficult (or even impossible) to distinguish between the effects of the different variables. The technical statistical details are left out of the discussion here.
and thus favour the prepositional construction. If it is the theme which is lengthier, on the other hand, the preferred option is the double object construction, which mentions first the recipient and next the theme.

As for the animacy of the recipient, my results appear to be in accordance with earlier research (Hollmann 2007, Bresnan & Ford 2010). Inanimate recipients favour the prepositional construction, whereas animate recipients show a preference for the double object construction. Bresnan and Ford (2010: 181) explain this preference on the grounds of what they call “harmonic alignment”: “all else being equal, animate, definite, pronominal, discourse-accessible, and shorter arguments tend to precede inanimate, indefinite, nominal, less discourse-accessible, or longer arguments” (2010: 181). This may account for the immediately postverbal position of animate recipients (preceding the usually inanimate theme) and the later position, in the PC, of inanimate recipients.

A final intralinguistic variable to be discussed is the semantic class of the verb, well present in the literature (Levin 1993, Gries 2005, Bresnan et al. 2007). Most classes distinguished appear to favour the double object construction. This may be due to the fact that the number of DOCs in the sample is simply much larger than the number of PCs; for the meaning of prevention, however, this does not seem to be the only factor at play. As found by Bresnan et al. (2007), this meaning has a very strong preference for the prepositional construction; hardly any sentences involving verbs such as deny or cost are construed according to the DOC pattern. This may be the result of a historical evolution. Another interesting point to mention is not so much the sense of the verbs featured in the corpus, but the verbs in their own right; give is clearly the verb most strongly associated with dative constructions. More precisely, 57% of all sentences in my sample are centered around the verb give. This was also observed by Bresnan et al. (2007), in whose study 51% of all data featured the verb in question.

In terms of text type, finally, those texts classified as “context-given” yield many more PC structures than those called “demographically sampled”. The demographically sampled data included in this thesis were derived from interviews carried out by BNC staff. In the case of context-given data, on the other hand, staff members were merely present in the situation where spoken text was produced; they observed and recorded
what was said, without intervening in person. I believe this to imply that the “context-
given” situations were in general of more formal nature than everyday conversations
between two partners. This can be seen in the kinds of texts included in this category,
as illustrated in Table 4 on page x. The decision tree provided on page x analyzes the
effect of text type in further detail. This model suggests that, in such situations as
parliamentary discussions, news broadcasts and tutorials, the prepositional
construction is used much more frequently. In less formal situations, this preference is
less obvious or even inversed, as in the large group of recorded conversations, medical
consults and sermons. The double object construction is apparently considered as more
informal, the prepositional construction as more formal and perhaps also more
prepared. This complies with what Bresnan et al. (2007) observed with respect to the
difference between spoken American English, from telephone conversations, and
written American English, from journalistic writing. The latter is characterized by a
much greater chance for the prepositional construction.
Conclusion

The purpose of this thesis was to examine how speakers of English make their choice between two constructions which can both realize events of “giving”: the double object construction and the prepositional construction. In both structures, two important participants in the giving event are realized in different ways: a theme and a recipient. Based on a random sample of over 3,300 sentences from the online British National Corpus, I carried out a statistical study of empirical data. I discovered that certain factors have predicting capacities as to which construction is more likely to be chosen by the speaker.

I chose to investigate this topic by means of a corpus study because I wished to study actual language, produced in reality by speakers. All too often, models are proposed with respect to the dative alternation (and other phenomena) which are based solely on the linguist’s intuitions and on a number of constructed examples. It is my belief, however, that not all generally accepted intuitions correspond to linguistic reality. Based on evidence of how speakers of British English actually use their language, I hoped to come to certain conclusions which do not necessarily comply with theories proposed before.

In this thesis, I first gave a general introduction to the notion of “object” and to the alternation between double object construction and prepositional construction (Chapter 1). This was followed in Chapter 2 by an extensive overview of other studies and theories with respect to the dative alternation. The most recent type of approaches, i.e. within the field of corpus studies, was most relevant to my own research; several corpus studies have been carried out before with the dative alternation as their subject, and I was able to largely confirm the tendencies found in these earlier studies. Certain factors, however, receive greater attention in my thesis than has been the case so far. This applies in particular to the notions of modality (spoken vs. written English) and formality.
Chapter 3 explicited the variables to be studied in this thesis, while Chapter 4 presented and discussed the results of the statistical analysis of my data. The factors I have found to be relevant to the choice between DOC and PC are mainly intralinguistic, and corroborate the existing literature on the topic. More precisely, these are the pronominality of both theme and recipient, the definiteness of the theme, the animacy of the recipient, the difference in length between both constituents, and the semantic class of the verb used in the construction. Pronominal recipients show a very strong preference for the double object construction, just like nominal themes; pronominal themes, complementarily, favour the prepositional construction. This prepositional construction is the preferential option for both inanimate recipients, rare though they may be, and definite themes. As lengthy constituents are usually placed after shorter ones, long themes appear to create a preference for the double object construction, and long recipients for the prepositional. As for the semantic class of the verb, there is one class which proves especially important to the choice between both structures: a meaning of prevention is nearly always expressed by means of a prepositional construction.

Only one extralinguistic factor was found to play a role: the text type to which the text from which the data were drawn belongs. A primary distinction was made, by the BNC, between two large text types, based on the way in which the data were collected. The category of demographically sampled texts contains interviews which were carried out on-the-spot by BNC staff, who were thus personally involved in the conversation. So-called context-given data, on the other hand, were only recorded by the staff members, who did not participate in the act of speaking themselves. A further subdivision is made between different genres within each large category; the majority of genres within the context-given group reaches a higher level of formality than the more or less spontaneous demographically sampled conversations. This may explain why the double object construction, as “less formal” of both options, is associated to a greater extent with the demographically sampled category. It could be interesting to investigate in further detail the difference between these two types of texts, something I have not been able to do within the boundaries of my thesis, and which – to my knowledge – has not been done extensively so far. One could focus, for example, on an equal number of sentences from both categories, and attempt to discover whether the interaction between DOC and PC functions differently in the text types contrasted.
Perhaps the difference in formality goes hand in hand with variation with respect to other predictors. One may equally study one of both categories only, for instance demographically sampled conversations, and investigate the impact and interaction of specific variables within this type of speech.

Finally, it should be borne in mind that these results only apply to one particular variant of the language: spoken British English. The scope of this thesis does not permit me to investigate in further detail, for instance, other geographical varieties of English, while a mixed corpus including data from different varieties could definitely yield interesting results. It has been shown in the literature that certain differences between English varieties exist with respect to the dative alternation, yet undoubtedly there is more to be discovered in this field. The same applies to the question of how the choice between double object and prepositional construction is guided in the written modality. Maybe the variables which have proven significant in my study have a less strong effect on written language, or perhaps entirely other factors are at work in this field. It could be interesting to carry out a corpus study of the same size as this thesis, taking into account the same predicting factors, but studying only the written component of the BNC (or some other corpus). This should not be problematic in terms of available data: even for the BNC only (i.e. British English), my initial searches yielded over 45,000 sentences, which leaves a great amount of data still to be studied, both for spoken and for written English.
Appendix 1: Bivariate results for specific genres

<table>
<thead>
<tr>
<th>Genre</th>
<th>REALIZATION</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>NP</td>
<td>PP</td>
<td>TOTAL</td>
<td></td>
</tr>
<tr>
<td>broadcast: discussion</td>
<td>108 (77%)</td>
<td>33 (23%)</td>
<td>141</td>
<td></td>
</tr>
<tr>
<td>broadcast: documentary</td>
<td>7 (64%)</td>
<td>4 (36%)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>broadcast: news</td>
<td>36 (77%)</td>
<td>11 (23%)</td>
<td>47</td>
<td></td>
</tr>
<tr>
<td>classroom</td>
<td>199 (95%)</td>
<td>10 (5%)</td>
<td>209</td>
<td></td>
</tr>
<tr>
<td>consult</td>
<td>57 (97%)</td>
<td>2 (3%)</td>
<td>59</td>
<td></td>
</tr>
<tr>
<td>conversation</td>
<td>1639 (92%)</td>
<td>140 (8%)</td>
<td>1779</td>
<td></td>
</tr>
<tr>
<td>courtroom</td>
<td>9 (64%)</td>
<td>5 (36%)</td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>demonstration</td>
<td>10 (91%)</td>
<td>1 (9%)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>interview</td>
<td>57 (95%)</td>
<td>3 (5%)</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td>interview: oral history</td>
<td>184 (91%)</td>
<td>18 (9%)</td>
<td>202</td>
<td></td>
</tr>
<tr>
<td>lecture: humanities/arts</td>
<td>4 (57%)</td>
<td>3 (43%)</td>
<td>7</td>
<td></td>
</tr>
<tr>
<td>lecture: natural science</td>
<td>2 (100%)</td>
<td>0 (0%)</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>lecture: politics/law/education</td>
<td>10 (67%)</td>
<td>5 (33%)</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>lecture: social science</td>
<td>52 (93%)</td>
<td>4 (7%)</td>
<td>56</td>
<td></td>
</tr>
<tr>
<td>meeting</td>
<td>224 (76%)</td>
<td>72 (24%)</td>
<td>296</td>
<td></td>
</tr>
<tr>
<td>parliament</td>
<td>3 (18%)</td>
<td>14 (82%)</td>
<td>17</td>
<td></td>
</tr>
<tr>
<td>public debate</td>
<td>28 (74%)</td>
<td>10 (26%)</td>
<td>38</td>
<td></td>
</tr>
<tr>
<td>sermon</td>
<td>18 (86%)</td>
<td>3 (14%)</td>
<td>21</td>
<td></td>
</tr>
<tr>
<td>speech: scripted</td>
<td>35 (67%)</td>
<td>17 (33%)</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>speech: unscripted</td>
<td>141 (88%)</td>
<td>19 (12%)</td>
<td>160</td>
<td></td>
</tr>
<tr>
<td>sports live</td>
<td>4 (67%)</td>
<td>2 (33%)</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>tutorial</td>
<td>6 (55%)</td>
<td>5 (45%)</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>unclassified/missing</td>
<td>140 (91%)</td>
<td>14 (9%)</td>
<td>154</td>
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Bibliography


