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DIPLOMARBEIT

Titel der Diplomarbeit

„*I meant to have written another 'Wonder Book'*" –
An investigation into various uses of the (double) perfect infinitive construction.

Verfasserin

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1. Introduction

Languages are complex systems and for centuries linguists have tried to explain and simplify them by establishing grammatical frameworks and rules for language use. Grammars, however, at least in their normative and prescriptive occurrence, do not only aim at showing how a certain language is structured, but also try to influence language use in so far as they tend to insist on saying what is "right" and what is "wrong". These accounts fail at grasping the whole range of fascinating phenomena within a language system by concentrating only on its "core" elements. Language speakers challenge these grammars, since they use language much more flexibly and intuitively, which can result in utterances that do not quite fit those core patterns. This thesis therefore is dedicated to such "non-core" cases from English which have caused prescriptive grammarians a headache for centuries but have been neglected also by descriptive linguists.

Central to the structures discussed in this thesis is the perfect infinitive which occurs in several environments, fulfilling several different functions according to these environments. In fact, the perfect infinitive is sometimes used in places where it seems odd and puzzling, as in:

(1) The fire happened two doors down from where Luz Maria Aguilar-Bucio, 32, was shot and killed the night before Valentine's Day, when she **was to have been** married. (COHA)

This is not all, however. Sometimes the use of the perfect infinitive is taken even further and used twice in a row:

(2) She **would have liked to have kissed** him then, but couldn't because they were in the street. (BNC)

Starting point for this thesis was not frustration about the neglect of non-core phenomena in English, but rather Susi Wurmbrand's work on Germanic verb clusters, on parasitic morphology to be more specific. In the course of her research on West Germanic verb clusters, Wurmbrand (2010, 2011) has pointed out that a number of Germanic languages allow for what she calls "parasitic participles" and what she defines as "participles selected by a modal, which normally can only combine with an infinitival complement" (Wurmbrand 2011: 2). This kind of parasitic morphology takes different forms in different languages and is illustrated as follows in (3a-c) (Wurmbrand 2010: 1):

(3) a. German: Skandal construction
ohne es verhindert haben zu können
without it prevent.PART have.INF to can.IPP

b. Norwegian: ParPar
Jeg hadde villet lest boka
I had want.PART read.PART book.DEF
I would have liked to read the book

c. Swedish: Tense Copying
Han prövade o stekte en fisk.
he try.PAST o fry.PAST a fish
He tried to fry a fish.

Briefly summarizing this phenomenon, one might say that even though parasitic participles appear differently in all these languages, they share some common features: first, participles are never the only option, but always alternate with infinitive constructions. Second, they need an appropriate head – mostly an overt or covert auxiliary and third, they are semantically vacuous. Usually, they do not have a perfective meaning, but the meaning of the alternating infinitive (Wurmbrand 2010: 1; Wurmbrand 2011: 2). As illustrated in (3a) above, German also allows for such parasitic constructions and is particularly interesting. Vogel (2009: 308) called this construction the "Skandalkonstruktion" for apparently all verbs in this construction carry wrong morphology.

1.1. Aim and scope of this thesis

The leading question then was whether a similar phenomenon can be found in English too, since, just like German, Norwegian, Swedish and Frisian, it also belongs to the family of West Germanic languages. It could be answered in the affirmative by coming across language material like the examples given above, where the auxiliary *have* and the past participle (together forming the perfect infinitive) show up where they are not expected, where they do not have the perfective meaning and where they alternate with a present infinitive. The English counterparts are not exactly examples of the same phenomenon as observed by Wurmbrand and Vogel, but they pose an intriguing research topic themselves. Consequently, they open up a number of questions. The most immediate question is to ask for what is going on in sentences like the ones quoted in (1) and (2). Where do these perfect infinitives come from? Do they have a certain function in sentences like (1) and (2)? If they do, what is it? Or are they merely redundant? Does the perfect infinitive have a meaning of its own and

therefore changes the meaning of the whole sentence, or is it semantically empty? I.e. Do, for instance, (1) and (2) have the same meanings as (4) and (5) respectively?

(4) The fire happened two doors down from where Luz Maria Aguilar-Bucio, 32, was shot and killed the night before Valentine's Day, when she **was to be** married.

(5) She **would have liked to kiss** him then, but couldn't because they were in the street.

Bolinger (1968: 127) claims that there are no real synonyms in language and that different forms have to be connected with different meanings. One might argue that Bolinger and others sharing his opinion were forerunners to what has come to be referred to under the term 'iconicity' now. Iconicity is a way of explaining the relation between language and reality saying that language is not necessarily arbitrary but a reflection of reality (cf. Haiman 1980, 1985; Fischer/Nänny 1999; Nänny/Fischer 2002; De Cuypere 2008). Another aspect to be investigated will therefore be whether perfect infinitive constructions are iconic in one way or another or whether they present a severe challenge for this concept.

Many linguists seem to have avoided these pressing questions by merely saying that the perfect infinitive in such sentences is a marker of counterfactuality. This is, however, not a satisfying answer at all because these same linguists usually do not provide any clues for *why* the perfect infinitive would mark counterfactuality. Of course this substantiates the suspicion that the counterfactuality argument does not tell the whole story – if anything at all. This thesis will therefore not pick up this lead but will suggest a different explanation. I argue that, contrary to common opinion, the perfect infinitive does not express counterfactuality of an event but is to be analysed in terms of temporal relations. The underlying hypothesis of this paper thus is that the perfect infinitive in these occurrences is a matter of "hypercorrect marking of past" (Görlach 1991: 111). Thereby speakers feel the urge to place the proposition and the matrix verb on the same temporal level. For instance, in (1) this would mean that the speaker assumes that if the plan (*was to*) was in the past, the planned event should be in the past too. However, the only option for doing this after verbs which only take non-finite complements is by using the perfect infinitive.

This hypothesis will be tested by means of an analysis based on Construction Grammar, a theoretical framework which sees constructions as the central units of language. Construction Grammar was developed as a response to the grammatical theories posited in the tradition of generative grammar arguing that constructions themselves carry meaning and that this

meaning is not compositionally made up of the different components of the construction (e.g. Goldberg 1995). This framework seems especially suitable for discussing the problem in question since it aims at describing all possible structures of language, also the non-core cases because of "the belief that fundamental insights can be gained from considering such non-core cases, in that the theoretical machinery that accounts for non-core cases can be used to account for core cases" (Goldberg 1995: 6). Thus, this thesis argues for the existence of a "perfect infinitive construction" as well as a "double perfect infinitive construction" and deals with the problems arising from them. Moreover, Construction Grammar is a usage-based approach to language. It is therefore ideal for working with 'real language material' from corpora, as "much of actual corpus data involves such non-core cases" (Goldberg 1995; cf. also Fried & Östman 2004: 24; Fischer & Stefanowitsch 2006). For this thesis therefore a corpus-driven approach was chosen, using data retrieved from corpora for the analysis of the structures introduced above. The corpora used are available for free online. These are the British National Corpus (BNC), the Corpus of Contemporary American (COCA) and the Corpus of Historical American (COHA). The latter corpus brings in historical data and therefore adds a historical component to the thesis and might allow for some conclusions about the historical development of the constructions. In some cases, a simple Google search was carried through in order to get more recent, additional and complementary data.

There has been some previous research on the perfect infinitive in utterances like (1), especially focussing on a counterfactual interpretation (cf. Molencki 1999, 2003; Larreya 2003; Berezowski 2004). They all fail, however, at presenting a plausible explanation for this phenomenon by not being exhaustive and only scratching the surface. Regarding the double perfect constructions there actually have not been any serious accounts to this point, even though they are considered "not uncommon" (Quirk et al. 1995: 155). Visser (1984: 2452) even thinks this construction type "one of the commonest features in English", which "has been frequently and inintermittently employed since the beginning of the fifteenth century". This thesis therefore provides an attempt to compensate for this lack of attention and to fuel the scientific discussion about single as well as double perfect infinitive constructions.

1.2. Structure of this thesis

The present thesis is divided into two parts: the first deals with theoretical preliminaries and presents previous research on perfect infinitive and double perfect infinitive constructions

(Section 2) as well as the concept of iconicity (Section 3) and a basic introduction to Construction Grammar (Section 4). In the second part the data found in the various corpora will be presented (Section 5) before the theoretical issues will be applied in the analysis of the various constructions (Section 6). All the issues presented above will be addressed and discussed in Section 7. In the conclusion (Section 8) the results of the analysis will be summarized and an outlook on possible future research will be undertaken.

I. Theoretical preliminaries

2. The perfect infinitive

As its name already suggests, the infinitive is a non-finite form of the verb. It appears as a 'bare infinitive' (e.g. *go*) or as a '*to*-infinitive', which, obviously, has the infinitive marker *to* (e.g. *to go*). When talking about the infinitive, one usually refers to its present form. However, there is also an infinitive form that is formed with the infinitive of the auxiliary *have* + a past participle. Similarly to the present form, this kind of the infinitive can also appear in its bare form as well as with the infinitive marker *to*; for instance (*to*) *have gone*. This form is usually called the 'perfect infinitive', which will also be the term used throughout this paper. Like the other forms of the perfect (present and past perfect, and non-finite *having* + past participle), it is used to express anteriority. This means that it indicates an event in the past of a certain reference point which can be in the present or the past (or even in the future) (Bowie & Aarts 2011: 2; Elsness 1997: 18).

In their recent account, Bowie & Aarts (2011: 5) point out two contexts in which the perfect infinitive occurs. On the one hand, it is used as a bare infinitive after modal verbs; on the other hand, it is used in *to*-infinitival constructions. Molencki (1999: 91) specifies these contexts in her description and identifies six possible constructions where the perfect infinitive is found in Present-day English (PDE):

I. after modals: e.g. *She may have left*, *you should have told me* and future perfect tense *I will have finished by Monday*
II. in the complements of linking verbs (*pretend, seem, appear, happen* and copula *be*): e.g. *they appear to have lost, she was to have arrived yesterday*
III. in the accusative with infinitive (ACI): *we believe him to have done it*
IV. in the nominative with infinitive (NCI): *Columbus is known to have discovered America*
V. as subject and subject complement: *to have loved and lost is better than never to have loved at all*
VI. as complement of some adjectives: *I am glad to have met you*.

The examples above illustrate that the primary function of the perfect infinitive in these constructions is to express a reference to the past, anteriority of an event or perfectivity. However, after the copula *be* and in constructions with modals it is sometimes said to express counterfactuality or to refer to unreal events (Molencki 1999: 91).

Now, James (1985: 78) argues that the perfect infinitive is a structure which has developed fairly recently in the history of English, but some early instances can be traced back to the Old English period. In the following, I will therefore briefly sketch the historical development of the construction, also in relation to the different functions it might have.

2.1. The history of the perfect infinitive

2.1.1. From Old English to Early Middle English

Molencki (1999: 92) claims that the structure of the perfect infinitive had not yet existed in Old English (OE). The OE equivalent to the perfect infinitive *amavisse* in Latin ('infinitivus perfecti') thus was the simple OE (present) infinitive *lufjan*. Similarly, Latin *docuisse* was translated by OE *tæcan*. To express perfect aspect, OE mostly made use of the past tense (Mitchell/Robinson 1992: 109). Nevertheless, its development must have commenced already, since occasionally, early (pre)forms of what "were to become the perfect and passive infinitives do occur" (Mitchell 1985: 388). The following examples taken from Molencki (1999: 92) illustrate such occurrences, even though she also points out that *habban* should not yet be treated as an auxiliary in these cases. Instead, the actual ancestral construction for the perfect infinitive was one where the verb *habban* functioned as a full verb expressing possession (cf. also Hogg 2002: 78).

(6) Forðæm wæs swiðe ryhtlice beboden Ezechiele ðæm witgan ðæt he scolde ðone Godes alter **habban** uppan **aholodne**

CP 217.19

'Therefore the prophet Ezekiel was very rightly commanded to have God's altar hollow above' (translation by Henry Sweet)

(7) þa he ðæs caseres mycclan hreowsunge geseah ... he ... hine þa na lenge **ahwænedne habban** nolde

ÆLS 510. 400

'When he saw the emperor's great grief, he would no longer keep him afflicted'

The first instances of perfect forms of *habbe(n)* + past participle marking past time reference Molencki dates in the early Middle English (ME) period (1999: 93). At the same time, these instances are said to be the first examples for the perfect infinitive since they occur together with modal verbs, especially after *mihte* ('might'). It is further stressed that the majority of these early instances of the structure do not necessarily refer to an event in the past but rather stress the non-actuality of an event or an action. This is not surprising though, since they

appear in combination with modals, which usually refer to possibilities and hypothetical events and hardly ever to facts. Although only rarely, the original use from OE, where the *have* of the perfect infinitive structure is used for past time reference, is still to be found in the 13th century, especially in combination with *wolde* (Molencki 1999: 93-95).

Moreover, the development of the perfect (infinitive) is assumed to have been a consequence to the loss of preterite morphology, a "natural therapeutic development" (Molencki 1999: 94). When the modal verbs *wolde*, *mihte*, *sceolde* and *ahte*, which were originally past tense forms, were already used for present tense purposes, OE needed new options to refer to past time events. The auxiliary *have* was then added to the dependent verb to compensate for the no longer used past forms of the modals. Examples from ME seem to be rare, however. Most of the ones that are found follow a modal verb, which is also the case in the following examples from the 12th and the early 13th century. In (8) and (9) the perfect infinitive is said to mark counterfactuality, whereas (10) exemplifies the less common past time reference (quoted in Molencki 1999: 94):

(8) Ich mihte **habbe** bet **i-don**, hefde ich þen i-selðe
'I might have done better if I had had good sense then'
Poema Morale 13 a1200 (c1150)

(9) Mo ðanne fif ðusende besantes of gode þohtes, and of gode wordes, and of gode woerkes, ðu mihtest **habben biȝeten**, ȝif ðu woldest
Vices&Virtues 1 17 c1225 (c1200)

(10) wepð and woneð ðat he æure was to manne iscapen, ðat he scolde swa Michel **habben misdon** aȝean his sceppend, for hwat he fearneð helle pine
Vices&Virtues 1 63 c1225 (c1200)

The auxiliary *have* + the past participle seem to have formed one unit from very early on, since they always occur in directly neighbouring positions. There is the possibility (also still in PDE) that another element breaks the unit, but then the structure is no longer a perfect infinitive. In such cases *have* is used as a full verb and is to be interpreted with a causative meaning (Molencki 1999: 96).

2.1.2. From Late Middle English to Early Modern English

In the Late Middle English period, the perfect infinitive became increasingly common with verbs of will, intention, purpose, expectation, fear or hope in their past tense forms. In these

constructions, the perfect infinitive is believed to serve as an indicator for the non-fulfilment of the intention (Molencki 1999: 97). The earliest examples were found around 1200 but the construction did not become frequent until the 14th century. In many cases, however, the perfect infinitive construction was accompanied and supported explicitly by a clause introduced with the conjunction *but*, which indicated that the intended event did not take place (Molencki 1999: 97-98). Molencki has to admit that the present infinitive was used occasionally as well, but does not deviate from the argument that "the perfect infinitive was preferred when one wished to express an unfulfilled plan, whereas the simple infinitive usually referred to facts" (1999: 100). As evidence for this argument, Molencki (1999: 100-101) quotes sentences where the perfect infinitive complements the verb *to be*:

(11) Iudas Scarioth, oon of hise disciplis, that **was to bitraye** him
Wycliffe *John* 12.4 c1380

(12) Mr. At. Gen. Mr. Oates **was** about **to have made** him a Priest, but it seems he hath a Wife and Children, and so is out of danger
The Trial of Titus Oates N 83 C2 1685

(13) I **was to have dined** to-day with Lord Keeper, but would not
Swift *Journal to Stella* 492 c1710

The author thus tries to exemplify that in (11) the simple infinitive is used because Judas did indeed betray Jesus, whereas in (12) and (13) the perfect infinitive is used because the events did not occur.

Moreover, the popularity of the perfect infinitive caused the use of the structure to be extended to complements of nouns denoting unfulfilled plans, purposes or hopes as shown in the following examples also quoted in Molencki (1999: 100)

(14) theyr ententis **were to have taken** lande
Berners *Froiss*. I, 33 1523-5

(15) My purpose **was not to have seen** you here
Shakespeare *MerchVen* III.ii.228 1596

(16) All her hope **was to have had** her daughter married before it [journey] took place
Fanny Burney *Evelina* 1778

As a consequence, the use of the perfect infinitive was also extended to infinitival complements of present tense verbs. Such sentences usually occurred together with more explicit statements about the unreality of the events (Molencki 1999: 101).

Around the year 1500 other uses of the perfect infinitive emerged and seem to have become quite frequent during the 16th and 17th century. These uses include points II – VI introduced in section 2.1., where the perfect infinitive marks anteriority/past time reference and which are still commonly used and found in PDE (cf. Molencki 1999: 107-116). As these uses are rather unproblematic and straightforward, they are not considered any further in this thesis. The focus remains on these instances, where the perfect infinitive complements a past tense verb and where it seems more problematic.

2.2. The counterfactuality of the perfect infinitive

In most cases where someone refers to the perfect infinitive, its functions and uses, it is stressed that it has counterfactual meaning in the environment of a past tense governing verb (cf. Molencki 1999, 2003; cf. also guides to language use such as Swan 2005). Authors seem to be convinced of this argument; they take it for granted, never question its source and never ask where this specific interpretation might have come from. The notion that the perfect infinitive carries counterfactual meaning must have developed quite a long time ago, however.

An early explanation was formulated by Kellner (1924: 233 quoted in Molencki 1999: 99), who holds psychological factors responsible. From this point of view it is argued that the speaker or writer has the "desire to keep such a contemplated but unrealised action out of the sphere of the present and retain it within the limits of the past". Mustanoja (1960: 518) thinks it possible that it was influenced by Latin and French and ascribes the phenomenon to

> the common tendency of the popular psyche to anticipative thinking, more interested in the outcome than in the course of the action. The fulfilment of desire is awaited with such eagerness and impatience that the perfect tense is felt to be more appropriate for the infinitive than the present. Likewise one tends to imagine that a feared event has already happened.

There also are two fairly recent attempts to explain the counterfactual meaning of the perfect infinitive (Larreya 2003; Berezowski 2004). They present two very different approaches to

the problem at hand – one arguing that the counterfactuality meaning is inherent to the perfect infinitive and the other one claiming that it comes from pragmatic inference – and will both be briefly sketched and discussed in the following.

2.2.1. Larreya's (2003) explanation

In his article about connections between irrealis[1], past tense and modality, Larreya (2003: 21) points towards a strong link between irrealis and past time reference. According to the author, these two concepts share the same markers in many languages. Furthermore, he extends his argument about past tense and irrealis to similar connections between irrealis and some uses of perfect HAVE + -EN[2] (Larreya 2003: 21). In this account, modal verbs, especially the past tense forms of modals, play a significant role. It is admitted that they can be either used to refer to past time or to express a hypothetical meaning. In regard to his own claim, Larreya (2003: 21), however, poses the following hypothesis:

> the fundamental meaning of the –ED morpheme is not the expression of past time reference but rather the expression of a particular type of presupposition. More precisely, I will make the claim that, in all its uses, -ED expresses some type of presupposed unreality.

Thus, past tense modals with hypothetical meaning are often found in combination with the perfect in its infinitive form, which, for Larreya, also raises the question of how past time reference and irrealis are connected. He points out that there is not only a close link between the perfect infinitive and expressing irrealis, but that in some cases the perfect infinitive itself is the means of expressing irrealis (2003: 30).

Then Larreya proceeds with his analysis by pointing out the distribution of the functions of the different elements when there is a perfect infinitive after the past tense form of a modal verb. Thus, in sentences like *I might have seen it* (but I didn't) HAVE + -EN usually functions as a marker for a past event; the modal marks either counterfactuality or tentativeness (Larreya 2003: 30-31). Sometimes, however, these functions are distributed differently, namely vice versa. Larreya (2003: 31) claims that with sentences like *John was to go on a trip to Italy*, it is not clear whether they are factual or counterfactual. Hence, from this sentence it

[1] *Irrealis* is defined as a potential mode that expresses unreality, counterfactuality or extreme unlikelihood. (cf. Chalker/Weiner 1994: 213)
[2] This is the notation used for the perfect infinitive in Larreya (2003) and will be maintained in this section for the purpose of presenting the author's position.

is impossible to say whether John actually went to Italy or not. If one wants to clearly give the information or presupposition that John did not go to Italy, one has to add the perfect HAVE + -EN in order to get *John was to have gone on a trip to Italy*, which supposedly tells us more about the (counter-)factuality of the event of going to Italy than the example without the perfect marker. In this case, modal -ED is argued not to indicate hypothetical meaning but past time reference, whereas HAVE + -EN is assumed to mark irrealis (Larreya 2003: 31).

The answer to the question of why the perfect infinitive is able to mark irrealis Larreya cleverly avoids by putting the semantic reasons outside his study. Instead, he offers a functional reason:

> the –ED marker is already fulfilling one of its two potential functions (the expression of past time reference), and it cannot at the same time, without a risk of ambiguity ensuing, fulfil the other function (the expression of irrealis), so that another marker (a marker of somewhat similar meaning – namely HAVE + -EN) has to be used as a substitute. (Larreya 2003: 31)

Utterances like *He had the key*. *He could have opened the door* (but he didn't) present a problem for Larreya's analysis because the distribution of functions is less clear and therefore he has to leave this question open (2003: 31).

Larreya's approach is not a hundred percent convincing. He summarizes his account in three points, which are not consistent, however. They seem to reflect the author's own insecurity about his arguments. While in I and II it is stated that the perfect infinitive can only mark counterfactuality in combination with a past tense form, in III it is claimed that the perfect infinitive itself is a full marker of irrealis.

> I. HAVE + -EN cannot, in itself, express hypothetical meaning: it can only do so in association with –ED.
> II. While –ED can express either counterfactuality or tentativeness, HAVE + -EN necessarily expresses counterfactuality when it has a "hypothetical" function.
> III. It is only in its infinitive form that the English perfect can be regarded as a full marker of irrealis. (Larreya 2003: 32)

2.2.2. Berezowski's (2004) explanation

The second attempt at explaining what is so unreal about the perfect infinitive is presented by Berezowski (2004). Similar to my statement above, Berezowski criticises the lack of explanations for this special interpretation of the perfect infinitive and decries that other authors take the issue as a fact and avoid further investigation of it.

While Larreya (2003) discusses the problem by means of constructions with past modal + perfect infinitive, Berezowski (2004) focuses on constructions with the matrix verb *to be*, as in:

(17) They **were to have met**.

He questions the role of the perfect infinitive in such constructions, since it does not always allow for counterfactual readings. In fact, it is argued that the only matrix verb that allows for such a reading is the verb *to be* as used in the example above; in all other contexts events expressed by means of the perfect infinitive are considered factual. Therefore, there is no reason to act on the assumption that the meaning stems from the perfect infinitive itself (Berezowski 2004: 90). Basically, as Berezowski (2004: 89-90) argues, the structure is neutral and does not give any information about whether the event took place or not – it is just "claimed in one way or another that the unreality of the event referred to evidently follows from the use of the perfect form of the infinitive".

Moreover, it becomes evident that Berezowski (2004) is not a big fan of Larreya's (2003) account. The earlier approach is, according to Berezowski (2004: 93), of limited value for the following reasons:

> For one thing there is nothing inherently wrong with one verb form exercising two functions at the same time (cf. joint tense and aspect forms in many languages) and, secondly, the solution does not offer any independent evidence for attributing a counterfactual meaning to the perfect besides the failure to find any other account for the construction under consideration, which is not much.

In his paper, Berezowski therefore offers an alternative explanation. He leaves the boundaries of syntax and semantics behind and introduces pragmatics, namely Grice's cooperative principle, in order to provide a more valued answer.

Grice (1975) assumes that this so called cooperative principle underlies most conversations. It implies that people assume that their partner in a conversation does not want to confuse or trick them or withholds relevant information. The cooperative principle is summarized, or rather specified, by four maxims:

1. *Quantity*: Be as informative as required from the present purpose, but don't be more informative than necessary
2. *Quality*: Try to tell the truth
3. *Relation*: Be relevant.

4. *Manner*: Be clear – try to avoid obscure expressions and ambiguity. Be brief and orderly.
   (after Yule 1996: 37)

As already noted, for Berezowski (2004: 99) neither the perfect nor the perfect form of the infinitive carries counterfactual meaning when they occur on their own; however, apparently it opens up room for inferring this sense. The main argument of this approach is that utterances using constructions of a past form of *to be* + the perfect infinitive violate the Gricean maxim of quantity by not giving any further information about whether a certain plan, schedule and arrangement which was completed (indicated by the past of *to be*) was actually realized (Berezowski 2004: 97). The author further supports his claim by saying that an interactant would expect to get at least some information about the further progress of such arrangements but that nothing of the kind is hinted at and that therefore Grice's maxim of quantity is violated. The hearer is then left to make a guess about the non-actualization of the event:

> In Grice's terms it is obviously not informative enough and flouts the maxim of quantity but, at the same time, it gives the hearer some food for thought on how to reconcile this fact with the assumption that speakers are cooperative. An easy way out of this predicament is drawing the implicature that no progress in materializing the event is reported because the event simply failed to materialize at all and is now indirectly reported as counterfactual. (Berezowski 2004: 96-97)

It also seems to be the case quite often that constructions of the kind in question are followed by an explicit statement that the plans, arrangements, etc. did not take place. For Berezowski (2004: 97-98) this is yet another confirmation, but just a confirmation and not a reason, for the implicature of counterfactuality that stems from the grammatical structure. Berezowski's approach is quite interesting because it is the first to say that the counterfactuality does not come from the perfect infinitive itself but lies beyond the morphosyntactic level. However, especially the last point mentioned challenges Berezowski's hypothesis. By saying that most perfect infinitive constructions are followed by an explicit statement about the non-actuality of an event he contradicts his own statement about the violation of the Gricean maxim of quantity since these statements give all the required information.

2.3. Double perfect infinitive constructions

Due to the lack of previous research on double perfect infinitive constructions, there is only little to be mentioned about it. Double perfect infinitive constructions appear in clusters of

five verbs in which the perfect infinitive form of *have* + past participle is used twice – the first usually being a bare infinitive complementing a modal verb, the second being preceded by the infinitive marker *to* (cf. example (2) in the introduction).

The existence of this construction type can be traced back to the beginning of the 15th century (Visser 1984: 2452). From then to approximately the middle of the 20th century, it was frequently the cause of controversies and subject to rejection by prescriptivists. Just when the structure was spreading and used abundantly, especially in the 18th and 19th century, committed language purists wanted to condemn it.

2.3.1. Prescriptivists' arguments against the construction

Visser (1984: 2452-2453) lists a number of voices against this construction. Interestingly, the severest attacks against it were not made in the 18th and 19th century but in the first half of the 20th century: Millington Ward (1957: 29) simply labelled it as "incorrect" and somewhere else stated more specifically that "a Perfect infinitive … is incorrect after the perfect expression '…have liked to…'." (Millington Ward 1965: 49). F.T. Wood (1954: 190) called it "a very common error". However, not all the prescriptive grammarians attacked it. Some more liberal opinions said it was "very clumsy, but strangely enough quite commonly heard" (Allen 1947: 197) or that "the construction is so common in standard usage that it can hardly be considered a serious mistake" (L.M. Myers 1953: 184).

One of the most severe language critics of the early 20th century was H. W. Fowler. While he grants the perfect infinitive some legitimacy (even though he considers it wrong anyways), he is less generous regarding the double use of perfect infinitives:

> After past tenses of hope, fear, expect and the like, the perfect infinitive is used, incorrectly perhaps, but so often and with so useful an implication that it has become idiomatic. (…) After past conditionals such as should have liked, would have been possible, would have been the first to, the present infinitive is (almost invariably) the right form, but the perfect often intrudes (Fowler 1965: 444).

Apparently, this obsession with pure and what they thought to be correct language use did not only concern grammarians but had a more extensive impact. In one of his short stories, the American writer and drawer James Thurber parodies Fowler's notes on the perfect infinitive. In the story, a gentleman and his wife want to pay a visit to a befriended couple but they are not at home. The gentleman wants to leave a note and writes:

(18) We would have liked to have found you in.

The man is, however, not happy with the note because he thinks that there are too many *haves* in there but does not want to use the present infinitive either because he thinks that it is usually used to imply success. Then Thurber picks up Fowler's use and tells the reader that "[Y]ou don't have to shade the infinitive to get a nice note of frustration", since the unreality is expressed by the governing verb itself and wittily concludes that the double perfect infinitive is nothing but dangerous: "That's what it is – a fascination – like a cobra's for a bird. Avoid the perfect infinitive after the past conditional as you would a cobra." (Thurber 145)

Double perfect infinitive constructions are still subject in PDE prescriptive guides to language use. Swan, for example, points out that "a double perfect infinitive is sometimes used in informal speech" (2005: 264). Even though there is no negative judgment in this statement, it shows that it is still thought informal and that it is not accepted in more formal language. Even though the double perfect constructions were exposed to such severe criticism, grammarians and prescriptivists did not have as negative an influence on the double perfect infinitive's actual use in language as they did with double negation, future auxiliaries or relative pronouns (Molencki 1999: 105). They are still frequently found in Victorian literature and texts (cf. Molencki 2003: 190) and even in PDE they "occasionally occur" (Molencki 2003: 194); Visser even attests them to be "one of the commonest features in English" (1984: 2452).

2.3.2. Previous scholarship on the construction

While on the one hand it might seem inappropriate to quote a literary source at this place, Thurber's story captures the essence of the perplexity caused by double perfect infinitives quite well. It becomes clear that it is especially the second perfect infinitive which seems problematic as its use is similar to the use of the perfect infinitive as presented in Section 2.1 above. Thus, the most puzzling aspect is that there seems to be no actual difference between constructions with a double perfect infinitive and constructions with a single present infinitive, but there still must be a reason for why the more complex constructions like (18) are used instead of the less complex constructions as in (19).

(19) We would have liked to find you in.

This apparent lack of semantic value of the second perfect infinitive in such constructions has led to them being called 'pleonastic', 'illogical' and 'superfluous' (Quirk et al. 1995: 155; Molencki 1999: 103). As already mentioned, double perfect infinitive constructions have not been studied and analysed extensively. A few researchers have, however, communicated their ideas about the nature of their existence.

The early examples of double perfect infinitives are instances of what Molencki (1999: 103) terms "discontinuous grammaticalization", a special case of verb form agreement. Thus, verb agreement can be applied across clauses and the multiple cases of *have* are copies of another. Such cases of multiplied *have* were frequently found in counterfactual conditionals

(20) they went always in Cloaths, though in their Frollicks they would **have chosen** sometimes to **have gone naked**, if they had not feared the people
(Gilbert Burnet. *Biography of John, Earl of Rochester* 23 1680 quoted in Molencki 2003: 187)

and were also found in clauses with the main verb in the past perfect. An explicit statement about, let alone an explanation of, this multiplication is not offered, however.

(21) I **had thought to have written** unto him aboute it, but finding myself an ill scribe I have left it undone
(R. Oxindens letter to his son, 14 June 1626 quoted in Molencki 2003: 187).

Quirk et al. (1995: 155) take the position that the second perfect infinitive is just a repetition of the first and that it is semantically vacuous. By means of the example sentence *If you had done that, we would have had to have arrested you* they want to point out that in constructions like this the duplication is due to the semi-auxiliary (*have to)* which apparently allows for syntactic but not for semantic doubling (Quirk et al. 1995: 155)[3]. This might be an explanation but the objection here is that double perfect constructions do not only appear with

[3] Quirk et al (1995: 155) base their argument about syntactic doubling after semi-auxiliaries on constructions of the following kind:
(1)*Sarah and I are going to be leaving tonight.*
(2)*The walls were supposed to be repainted.*
They, however, seem to be aware of the limitations of this argument themselves and admit that these constructions do not really represent double progressive and double passive constructions because "'are going to' in (1) is not truly progressive, and 'were supposed' to in (2) is not truly passive, because these constructions do not contrast (in the relevant sense) with a nonprogressive and an active construction respectively."

semi-auxiliaries but also with main verbs such as *like*, *prefer*, *want*, etc and therefore cannot be the sole reason.

Visser chooses a different approach and seems convinced that the second perfect infinitive in these constructions is not semantically vacuous but adds the impression of unreality (cf. Section 2.2):

> To interpret this construction correctly it is imperative to be aware of the fact that here the verbal forms have are distinctly not time-indicators and their combination with a past participle does not form a perfect (…). Their function in the sentences is almost exclusively to be a means to express modality, in other words to suggest that in e.g. 'I should have liked to have seen him' the reality of the action is negated. (Visser 1984: 2452)

He admits that the meaning of the corresponding constructions using a present infinitive is similar but insists that the repetition of the perfect infinitive stresses the fact that an event did not take place and adds that therefore the double infinitive construction is to be preferred over the construction with the present infinitive for stylistic reasons (Visser 1984: 2452).

The only more elaborate analysis and discussion of the double perfect construction was undertaken by James (1985). This account is based on Thurber's 'problem sentence', quoted in (18) above and focuses on the temporal relations expressed by the verbs in the sentences. Thus, it is argued that the use of the second perfect infinitive in such double perfect constructions is not intended to place the event expressed anterior to the event denoted by the governing verb phrase, but to locate it as contemporaneous with this event. James also compares this reading with the interpretation of the back-shifted tense in indirect speech (1985: 77). In sentences like *We found that they were in*, the past tense verb of the subordinating clause usually does not place the state of 'being in' before the event of finding but expresses their simultaneity (even though the former reading would be possible too, of course). The use of the perfect infinitive is reasoned accordingly: the speaker "wants a form which is comparable to a back-shifted tense, yet his syntax requires an infinitive and the only way to put the notion of past time into an infinitive is to add the perfect auxiliary" (James 1985: 77). Another interesting aspect of this account is that the author tries to find a semantic difference between the constructions of (18) and (19) without simply adopting the usual counterfactuality reading. In James's alternative suggestions, the time of speaking plays a crucial role. While other accounts claim that the present infinitive implies success and the perfect infinitive the opposite (e.g. Molencki 1999: 100), James (1985: 78) thinks that the

present infinitive allows for a contemporaneous interpretation with the time of speaking and the perfect infinitive for a contemporaneous interpretation with the time of the event expressed by the governing verb phrase. Hence, for sentence (19) James's reading would be that the time of finding extends to the time of speaking, whereas in (18) the time of finding is contemporaneous with the time of wishing. This argument is developed further by suggesting that there are two possible ways of interpreting the temporal relations in such constructions: the perfect infinitive can either be seen in relation to the time of the governing verb or to the time of speaking (James 1985: 79).

In comparison to all the other attempts of an explanation, James's is quite convincing, not least because in this account, the arguments are supported with plenty of examples. Nevertheless, it has also some limitations. James focuses entirely on the sentence from Thurber's short story and also sees a problem in the phrase *would like*, which

> has apparently acquired the status of an idiom. It has been reinterpreted as a present indicative, and has in fact evolved into a toned-down and polite variant of the verb *want*. (James 1985: 76).

There is, however, no reason to assume that the modal construction *would like* can be held responsible for the occurrence of the following perfect infinitive since it is also used after *would have preferred*, *would have been able to*, *would have expected*, etc (cf. Section 5 below). Still, this approach offers great potential for the analysis not only of the double perfect constructions but also for the type of construction introduced in Section 2.2.

3. Iconicity

De Cuypere (2008: 1) calls it "one of the oldest issues in linguistic research", namely the question about the nature of the relation between language and reality. Up until the 1980s there was the prevalent Saussurean assumption that this relation is mainly of a symbolic and arbitrary nature. Then Haiman entered the stage and claimed that language is not all arbitrary but that its system reflects reality[4], i.e. it is iconic (1980: 515). The term 'iconicity' was derived from semiotics, from Charles S. Peirce's term 'icon' or 'iconic sign' to be more specific, which is about the similarity or natural resemblance of a sign and its object in the world or rather the perception of this object in the world (http://www.iconicity.ch/en/iconicity/index.php?subaction=showfull&id=1197027781&archi

[4] Haiman (1980: 515) admits that linguistic signs are arbitrary or symbolic when occurring in isolation, however.

ve=&start_from=&ucat=2&, 18 Feb 2012). Jakobson (1971 [1965]) was the first to carry the term over to linguistics, but it was not before Haiman's 1980 article that "iconicity found its way into mainstream linguistic terminology" (De Cuypere 2008: 2).

Following Peirce, Haiman (1980) distinguishes two types of iconicity, 'imagic' and 'diagrammatic' iconicity. The former type would be where the relationship between a single sign and its referent is direct and based on the resemblance of a certain characteristic. Typical examples for iconic images would be photographs, statues as well as onomatopoeic words in the realm of language. The latter type regards "a systematic arrangement of signs, none of which necessarily resembles its referent, but whose relationships to each other mirror the relationships of their referents" (Haiman 1980: 515; cf. also Fischer & Nänny 1999: xxii). In semiotic terms this would mean that there is no direct link between the signifier (i.e. the form of the sign) and the signified (i.e. the concept the sign represents).

For language study, especially grammar, the second type is of greater relevance. It is even "pervasively present in language" (Fischer & Nänny 1999: xxi), and can be further divided into two kinds of diagrammatic iconicity – isomorphism and motivation (Haiman 1980: 515).

3.1. Isomorphism

Isomorphism describes a one to one correspondence between a sign and its referent object. The sign itself can be either a single word or a grammatical construction. The notion of isomorphism also integrates the axiom, most popularly claimed by Bolinger (1968: 127) that there are no real synonyms, which means that different forms must have different meanings (Haiman 1980: 516). For Haiman, homonymy and synonymy are therefore pathological exceptions (1980: 516). Homonymy often is accidentally caused by sound change. For instance, the homonymous forms of *pair*, *pare*, *pear* indicate their "original distinctness of form" (Haiman 1980: 516). While Haiman admits accidental homonyms, synonymy is denied fully; no pair of expressions is identical in meaning, not even accidentally (1980: 516).

Similarly, Haiman argues against the Katz-Postal hypothesis (1964) which claims that there are cases of neutralization, where a sentence has only one surface structure but many deep structures, and of diversification, where a sentence can have many surface structures but only one deep structure. The first argument against this hypothesis is, again, Bolinger's point of

view that different surface structures "invariably DO correspond to different meanings" (Haiman 1980: 517). A second argument aims at showing that syntactic homonymy is not unmotivated but has semantic reasons. Thus, similar morphological realizations or similar syntactic behaviour might be an indication for semantic relatedness. As an example Haiman names the modal auxiliaries in English (1980: 517). They are

> both morphologically and syntactically similar: morphologically, all are defective in lacking an infinitival or participial form; syntactically, they are alike in occupying the same 'slot' in the auxiliary complex. They are also homogeneous semantically, since they all convey the idea of futurity or potentiality. (Haiman 1980: 517)

Other examples for the reflection of semantic similarity in lexical similarity would be the kinship terms *father, mother* and *brother*. Here, the formal similarity of the words are said to reflect their semantic proximity. The words *bash, mash, smash, crash, dash, lash, hash, rash, brash, clash, trash, plash, splash* and *flash* are all formally similar but are also semantically proximate as they all refer to a "lightningly fast event" somehow; the *–ash* is argued to be onomatopoeic, by iconically representing the sound of such an event (De Cuypere 2008: 87, following Jakobson 1971 [1965] and Bolinger 1949).

Haiman believes that isomorphism is linguistically universal. Structural syntactic homonymy must therefore be accounted for and justified somehow. This can be achieved either by showing that there is some semantic relation between the forms (as in the case of the modal auxiliaries) or there is some other independent motivation which is more important than isomorphic correspondence (Haiman 1980: 527-528; Kirsner 1985: 258; Fischer/Nänny 1999: xxiv).

3.2. Motivation

The diagrammatic iconicity described by motivation or "language external iconicity" (De Cuypere 2008: 94) follows the notion that "the structure of language directly reflects some aspect of the structure of reality" (Haiman 1980: 515). This direct reflection manifests itself, for example, in the iconicity of sequence. According to this principle, the sequential order of statements reflects the order of the corresponding events described. A popular and frequently quoted example is *Veni, vidi, vici*. Caesar's utterance thus reflects the order of events as they happened in the battle of Zela (Haiman 1980: 528; De Cuypere 2008: 94). Moreover, the SVO word order with the subject preceding the object is much more frequent than OSV, OVS

and VOS word orders (Haiman 1980: 528). Another example for iconic motivation would be the gradation of adjectives. Generally, the positive form of an adjective has a smaller number of phonemes, while the number of phonemes gradually increases with the comparative and the superlative. This increase of morphological complexity iconically reflects the increase of semantic complexity (Haiman 1980: 528). However, there are several other cases for which iconic motivation applies. Thus, grammatical reduplication, which often is a marker for intensity, plurality or repetition, is said to be iconically motivated, as is the distinction between familiar and polite pronouns of address in languages such as French, German, Russian and Turkish, where polite *V* pronouns express power relations or distance (Haiman 1980: 530).

While iconic isomorphism claims universality with only very little exceptions, motivation is by far rarer. The iconicity of sequence is the most frequent type of motivation; it is also pointed out, however, that even this type of motivation cannot be found in a number of languages, such as several South-East Asian languages (Haiman 1980: 533).

3.3. Exophoric vs. Endophoric iconicity

Nöth (2002) proposes the differentiation between exophoric and endophoric iconicity, a distinction which has proved useful for a number of researchers (cf. the contributors to Nänny & Fischer 2002). Exophoric iconicity means that a sign refers to or hints at something beyond language; it is understood as a relationship of form (the sign, e.g. a verb) miming meaning (the referent in the world). Endophoric iconicity, on the other hand, is form miming form and refers to an iconic relationship within language itself (Nöth 2002: 22). Exophoric iconicity is very similar to Haiman's concept of iconic motivation, which is why only endophoric iconicity will be introduced in more detail now.

When talking about endophoric iconicity one has to further distinguish between syntagmatic and paradigmatic iconicity. The former type is "iconicity within the linearity of text or discourse" (Nöth 2002: 23) and includes repetition, parallelism, alliteration, rhyme and meter. As a very simple example for iconicity on this level the words *mama* and *papa* are given. Both of them are reduplicative words in which the second syllable is a repetition, or an icon, of the first (Nöth 2002: 23). Nänny & Fischer (2002: 2) argue, however, that mere resemblance of signs is not enough to qualify for iconicity. Meaning is also involved, which is

why the repetition of the definite article in 'the king of the cats' is, because of the lack of meaning, not an example of endophoric iconicity. The latter type of endophoric iconicity is not iconicity within a text or discourse, but within the language system, including paradigms of grammar and word formation. According to Nöth (2002: 23), the singular/plural opposition in examples like *cat/cats, rat/rats, pet/pets* would be an example for paradigmatic iconicity because it is "the result of an iconic mapping of a form prescribed by a morphological rule to hundreds of nouns".

Fischer & Nänny (1999: xix) point out that it is very likely that the origins of many linguistic signs and structures may have been iconic, but that they have lost their iconic value and were "worn down to mere symbols" (Fischer & Nänny 1999: xix). This tendency towards iconicity can still be observed with children and their "natural language fantasy" (Fischer & Nänny 1999: xvii). This is, for instance, reflected by children's frequent use of onomatopoeic words and folk-etymologies. It was observed that Dutch children often tend to change the form of the word *rotonde* ('round-about') to *rontonde* because it seems natural for them to associate it with the word *ront*, Dutch for 'round'. At least in comparison to adults, children make much more use of such folk-etymologies – adults "have come to learn that most signs are 'symbols' (in the Peircean sense)" (Fischer & Nänny 1999: xvii-xviii). Above all, for children who have not learned to read and write yet, letters seem to be iconic images in the form of pictures. Thus, in the eye of an English child, the word *bed* depicts the perfect sign for the object 'bed':

> the upright strokes of the 'b' and 'd' functioning as the bedposts and the circular 'o' attached to the strokes of the b and d functioning as the pillow (or head) on one side, and the elevation of the feet on the other. (Fischer & Nänny 1999: xviii)

Thus, it seems safe to assume that there are aspects of language which are not arbitrary but which have to be interpreted considering the principle of iconicity. For Traugott (1985: 289-290), however, the questions of how pervasive iconicity is and how it is motivated (whether there are rules, non-linguistic factors, etc.) still have to be clarified. The questions of whether the perfect infinitive and the double perfect infinitive constructions are iconic in some way or whether they pose a challenge for this principle also still have not been answered so far and are therefore to be addressed in the ensuing analysis part below.

4. Construction Grammar

Construction Grammar (henceforth CxG) is a fairly young theoretical framework, but has already gained some popularity within linguistics, which is evident in the fact that it is applied to various grammatical structures in a variety of fields such as language acquisition, language change, grammaticalization, etc. (cf. for example Fried & Östman 2004; Fischer & Stefanowitsch 2006; Bergs & Diewald 2008; Trousdale & Gisborne 2008 for an overview of recent research within the framework). CxG developed out of Case Grammar (e.g. Fillmore 1968, 1977) and frame semantics (e.g. Fillmore 1982) and was initially thought of as a response to the model of componential analysis as promoted by transformational-generative grammars. The compositional model emanates from the assumption that the meaning of the whole is composed by the meaning of every single component and that grammatical structures can be explained by general rules for the combination of these grammatical components (Croft & Cruse 2004: 228). In opposition to this view, CxG argues that it is not single constituents, but rather constructions that are the basic units of language and also that speakers' grammatical knowledge is organized into such constructions (Goldberg 1995: 4-6).

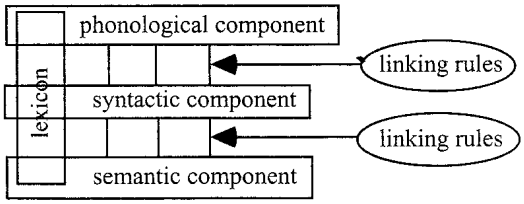
4.1. Constructions

In the sense of CxG, constructions (cxn) are form-meaning pairings. This means that form and meaning are not separated but integrated. In these pairings, the 'form' comprises syntactic, morphological and phonological properties, whereas 'meaning' includes semantic, pragmatic as well as discourse-functional properties.

> The primary motivation for Construction Grammar is the insight that the juxtaposition of two or more forms seldom results in a simple concatenation of the meanings those forms might have in isolation. Consequently, Construction Grammar sees linguistic units as particular associations between form and meaning that must be represented as such, rather than leaving such associations to the operation of a set of rules for how to combine individual forms. (Fried & Östman 2004: 12)

Thus, CxG started off with the description of idioms, following the realization that compositional analysis was not fit for this type of syntactic pattern because "at least some aspects of an idiom cannot be predicted by the general rules of the syntactic and semantic components and their linking rules" (Croft & Cruse 2004: 247). In the case of idioms like *kick the bucket* it is not possible to predict the meaning of the whole phrase from its components, which is a criterion for a 'proper' construction as demanded by the following definition:

C is a construction if $_{def}$C is a form-meaning pair <F_i, S_i> such that some aspect of F_i or some aspect of S_i is not strictly predictable from C's component parts or from other previously established constructions. (Goldberg 1995: 4)



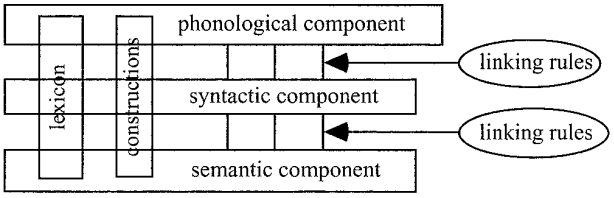


Figure 1. The componential model (Croft & Cruse 2004: 227) Figure 2. The constructional model (Croft & Cruse 2004: 247)

The comparison of Figures 1 and 2 shows representations of the componential and the constructional model of grammar. In the generative tradition, sentences are determined by the syntactic, phonological and semantic components and the linking rules which map these components onto each other. The only level where form-meaning pairings are found in generative grammar is the lexicon; single words are the only idiosyncratic and arbitrary structures in language, according to this theory (Croft & Cruse 2004: 227). In contrast, Fig. 2 shows that in construction grammar "a construction as a unit cuts across the componential model of grammatical knowledge" (Croft & Cruse 2004: 247) and that phonological, syntactic and semantic features are combined in a construction.

The thing is, however, that CxG is not a unified theory yet. Several strands have developed so far and the motto is now to wait and see what happens – whether they will converge or whether each of these branches will reach its own theoretical status (cf. Fischer & Stefanowitsch 2006: 3-4). The main representatives of CxG are the Berkeley School around Charles Fillmore and Paul Kay (e.g. Fillmore 1985, 1988; Fillmore, Kay & O'Connor 1988; Kay & Fillmore 1999), the more cognitive linguistic oriented movement of George Lakoff (1987) and Adele Goldberg (1995) as well as William Croft's (2001) Radical Construction Grammar which is similar to Cognitive Grammar.

Even though these schools might differ in certain aspects, there are some characteristic traits which all versions of CxG have in common and, more importantly perhaps, have agreed on: first, as already mentioned, they all see constructions, i.e. form-meaning pairs, as the basic units of analysis; second, CxG takes a non-modular (holistic, i.e. sound, syntactic form,

meaning and function are not represented in separate modules), non-derivational and non-compositional view on language patterns (Fried & Östman 2004: 23-24). Nevertheless, compositionality is not totally excluded from all of the theories, but is granted some space. Croft & Cruse (2004: 253) for instance note that

> [c]onstructions other than idiomatic phrases are compositional, that is, the meanings of the parts of the construction are combined to form the meaning of the whole construction. The reason that they must be represented as independent constructions is that semantic interpretation rules associated with the construction are unique to that construction, and not derived from another more general syntactic pattern, as construction grammarians carefully note. (Croft & Cruse 2004: 253)

Moreover, all versions of CxG agree that constructions can be combined and that as soon as there is a construct[5] which consists of more than just one word, it is made up of several constructions. For instance, in the sentence *She sent him a letter* the 'subject-predicate-construction', the 'ditransitive construction', 'noun phrase constructions' as well as several lexemes (or lexical constructions) become manifest (Fischer & Stefanowitsch 2006: 7). Regarding the nature of constructions, there do not seem to be any real restrictions, as they are found on all levels of linguistic description (derivational and inflectional morphology, lexical elements, conventionalised expressions such as proverbs, idioms, but also abstract schematic syntactic structures). Constructions can therefore be atomic or complex, they can have morphologically free or bound parts, they can consist of substantive parts (contain specific lexical items), but can be entirely schematic (or lexically open) as well (Croft & Cruse 2004: 255).

4.2. Organization of constructions

The terms schematic and substantive also play a role in describing the organization of a speaker's constructional knowledge. Constructions are not just "an unstructured list in construction grammar" (Croft & Cruse 2004: 262) but are structured in a certain way. This structure is usually represented in a taxonomic (or inheritance) network, which shows the hierarchical relationship between constructions. The hierarchic taxonomy is based on the different levels of schematicity of constructions through which individual constructions are related. More substantive constructions are usually related to more schematic constructions by some properties they have in common (Fried & Östman 2004: 12; Kaltenböck 2010: 29).

[5] a 'construction' is an abstract pattern of linguistic structure, while a 'construct' is the actually occurring utterance, e.g. in form of a sentence or a phrase (Fried & Östman 2004: 14)

Thus, the substantive idiom *The bigger they come, the harder they fall* would be an instance of the schematic idiom *The X-er, the Y-er* and can be represented in a taxonomic hierarchy:

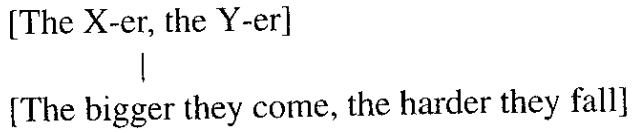


Figure 3. Taxonomic link of the schematic idiom *The X-er, the Y-er* (Croft & Cruse 2004: 263).

Similarly, the substantive idiom *kick the bucket* is related to or rather inherits other more schematic constructions in a taxonomic network:

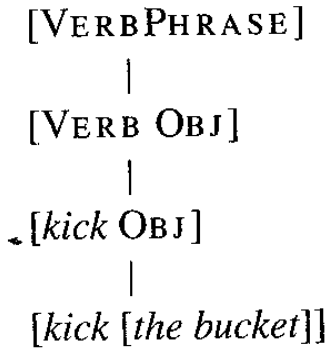


Figure 4. Different levels of schematicity of the idiomatic phrase *kick the bucket* (Croft & Cruse 2004: 263).

It should also be mentioned that CxG is a cognitive linguistic approach to grammar as

> constructions are said to reflect all the linguistic conventions that speakers of a given language know and make use of when they communicate in that language. Linguistic competence in this model of language constitutes speakers' knowledge of the full inventory of constructions (…). (Fried & Östman 2004: 23)

This is also why construction grammarians aim at describing the full inventory of constructions of language and do not content themselves with concentrating on the 'core' structures of grammar. It is a common assumption in CxG that especially non-core or 'peripheral' cases can provide for important insights into the entire structure of language because the majority of structures used in everyday language are such non-core cases (Goldberg 1995: 6; Fried & Östman 2004: 15). Fried & Östman (2004: 15-16) justify the call for an increased preoccupation with peripheral structures as follows:

> If speakers use grammatical patterns that a speech community (through its normative grammars) does not readily embrace, then the combined facts that such patterns (a) are used, and (b) have not been (explicitly) taught, guarantee the importance of such structures in language; it is not an indication of their triviality. When we encounter

> forms that we have not been explicitly taught – not to mention expressions that speakers are warned (by prescriptive grammars) against using – we know that we are touching on something very basic, something that must be rooted in our cognitive behavior independently of what others have attempted to impose on us.

This, in turn, concurs with CxG's affinity to usage-based approaches of language, which are especially suitable for the analysis of non-core cases since they are concerned with actual and authentic language data and the use of corpora as a source for supportive evidence (Fried & Östman 2004: 24; Stefanowitsch 2006).

4.3. Integrating Construction Grammar and Iconicity

Obviously, including iconicity as well as CxG in my analysis is not a contradiction, but they integrate and complement each other quite well. An analogy between these two concepts has already been detected and pointed out by Goldberg (1995: 67-68). She defines four psychological principles for the organization of constructions in a language and links them to Haiman's types of iconicity – isomorphism and motivation (cf. Section 3).

I. *The Principle of Maximized Motivation*: If construction A is related to construction B syntactically, then the system of construction A is motivated to the degree that it is related to construction B semantically. Such motivation is maximized.
II. *The Principle of No Synonymy*: If two constructions are syntactically distinct, they must be semantically or pragmatically distinct. Pragmatic aspects of constructions involve particulars of information structure, including topic and focus, and additionally stylistic aspects of the construction such as register.
    Corollary A: If two constructions are syntactically distinct and S(emantically)-synonymous, then they must not be P(ragmatically)-synonymous.
    Corollary B: If two constructions are syntactically distinct and P-synonymous, then they must not be S-synonymous.
III. *The Principle of Maximized Expressive Power*: The inventory of constructions is maximized for communicative purposes.
IV. *The Principle of Maximized Economy*: The number of distinct constructions is maximized as much as possible, given Principle III.

Thus, Haiman's aspect of isomorphism demanding that differences in form have to correspond to differences in meaning accords to the Principle of No Synonymy, while the reverse case of difference in meaning and corresponding difference in form concurs with the Principle of Maximized Expressive Power. The two possible exceptions to isomorphism – homonymy and synonymy – are covered by the Principle of Maximized Economy in so far as Principle IV tries to constrain the number of distinct constructions following a need for simplification in order to cope with the infinite number of distinctions in the world (Goldberg 1995: 68-69).

From this brief introduction to Construction Grammar, it might have become clear already why this framework seems especially suitable for an analysis of perfect infinitive constructions. First, perfect infinitive constructions as in (1) and (2) clearly represent form-meaning pairs in the sense that a componential analysis cannot be applied because the morphological form of the perfect infinitive does not correspond to the semantics of the constructions. Their meaning cannot be predicted from the various constituents. Second, they definitely belong to these 'non-core' cases of grammar which are often neglected in other grammatical frameworks. They are not taught and prescriptive grammars have strictly warned against their use (cf. Section 2.3 above and Section 6.4.8 below). Third, perfect infinitive constructions are ideal for the application of a usage-based approach since they are, for the reasons just mentioned, hardly ever mentioned in grammars or other descriptions of English but occur in everyday language use and are therefore to be found in corpora.

II. Analysis

5. Data

Visser (1984: 2452) might exaggerate a little by calling them one of the commonest features in English, but perfect as well as double perfect infinitive constructions definitely occur occasionally, as could be confirmed by a small scale corpus study. The results of this study will be presented in the following subsections.

5.1. Corpora

For the corpus research, three corpora were used: the British National Corpus (BNC), the Corpus of Contemporary American English (COCA) and the Corpus of Historical American English (COHA). BNC is a monolingual (British English), synchronic 100 million word corpus with language material collected from 1970 to 1993. It was originally compiled by Oxford University Press from 1991 to 1994 and revised later on in 2001 and 2007. It is also a general corpus, which means that it includes both spoken (10%) and written (90%) texts and it is not restricted to any specific text type, topic, field, variety, style or register, but includes language data from newspapers, magazines, academic and non-academic texts, letters, essays as well as conversations from formal and informal contexts (cf. http://www.natcorp.ox.ac.uk/corpus/index.xml; http://corpus.byu.edu/bnc/). COCA is a monolingual American English corpus, more than four times as big as BNC and contains about 425 million words. It was created by Mark Davies at Brigham Young University. While the BNC's focus is on written texts, the genres in the COCA are evenly divided into about 20% for each (spoken, fiction, newspapers, academic, popular magazines). This corpus comprises data from 1990 to 2011 – about 20 million words per year. It is updated once or twice annually; the most recent data was added in March 2011 (http://corpus.byu.edu/coca/).

COHA, the third corpus used for this study, is a 400 million word corpus of American English. It contains language data from 1810 to 2009 and is therefore often used for diachronic studies. The greatest part of words comes from fictional texts (about 200 million), followed by texts from popular magazines (97 million), non-fiction texts (61 million) and newspapers (40 million) (http://corpus.byu.edu/coha/). As an additional source for PDE data, Google search was used.

GENRE	COCA (millions of words)	BNC (millions of words)	COHA (millions of words)
Spoken	85	10	-
Fiction	81	17	207
Popular magazines	86	16	97
Newspaper	81	11	40
Academic	81	16	-
Other	-	30	61

Table 1. Genre distribution in BNC, COCA and COHA.

As can be seen in Table 2, the corpus is not balanced by number of words across decades. This would be quite difficult to achieve since textual documents from the early 19th century are much rarer than more recent documents. The corpus is balanced, however, by genres across decades. This means that the same percentage of fiction, non-fiction, etc is considered per decade.

DECADE	TOTAL (millions of words)	DECADE	TOTAL (millions of words)
1810s	1,181,022	1910s	22,655,252
1820s	6,927,005	1920s	25,632,411
1830s	13,773,987	1930s	24,413,247
1840s	16,046,854	1940s	24,144,478
1850s	16,493,826	1950s	24,398,180
1860s	17,125,102	1960s	23,927,982
1870s	18,610,160	1970s	23,769,305
1880s	20,872,855	1980s	25,178,952
1890s	21,183,385	1990s	27,877,340
1900s	22,541,232	2000s	29,479,451

Table 2. Distribution of words in COHA across decades.

5.2. Corpus search

The first step in the search process was to brainstorm for verbs that might occur in the (double) perfect infinitive construction. The most obvious starting point for this task was to brainstorm for verbs which take non-finite complements (e.g. *forget, remember, regret, admit, deny, believe, like, seem, intend, manage, want).* For the present study verbs of desire/liking, ability, retrospection expectation, necessity and intention were chosen and searched for in the corpora. All three corpora are annotated, a feature which greatly facilitated the search and allows to specifically search for the grammatical constructions in question. In this case, this was done by entering a whole sequence of commands: in most cases this would have been a verb with the wild card * + *to have* + the POS tag 'verb.EN' (for any past participle). Initially, this search was only aimed at double perfect infinitive construction and indeed produced relevant examples, but not only. It also showed many examples with only a single perfect infinitive. Consequently, these instances of constructions with single perfect infinitives were also included in the study because on the one hand they are very interesting constructions themselves and on the other hand as they are very similar to the constructions with two consecutive perfect infinitives they might provide some very important and interesting information for the analysis of both construction types. Moreover, it quickly became apparent that there is a significant difference in the historical distribution of the constructions, which was yet another motivation to consider these examples.

5.3. Results

Of the 14 verbs I searched for (*like*, *be able to, be unable to*, *intend*, *mean* (*to*), *manage*, *prefer*, *want*, *need*, *expect*, *be to*, *remember* and *regret*), 11 occur in the double perfect infinitive construction. The three only verbs which showed no occurrence in this construction are the verbs of retrospection *remember* and *regret* as well as *be to*. However, it is to mention that while some of the verbs seem to encourage the construction more frequently, for others only one instance of the double perfect construction was found. Furthermore, some of the instances do not have two perfect infinitives, but appear in a finite form (*I have managed to have…*) or even in the past perfect (*I had intended to have …*). These data will also be picked up later on in the analysis but will only play a very marginal role. However, they make it necessary to rethink the terminology. Since not all of the material actually provides instances of the double perfect infinitive construction it would be wrong to subsume it all under this term. Thus, the label 'double perfect infinitive construction' will still be used for actual

instances of this type, whereas the others will be referred to as 'double perfect constructions'. This seems an appropriate term because it does not further differentiate between present and past perfect and the perfect infinitive can also be included. Of course not all of the examples the corpus search provided were relevant to the present study. Therefore, the great wealth of language data was collected, examined and categorized right away. The outcome of this process still is a seemingly endless list of language data that proved relevant for the purpose of this thesis. In the following the results, i.e. only the selected and applicable examples, will be presented in more detail.

5.3.1. Perfect infinitive constructions

The search for constructions with only one perfect infinitive are very interesting in so far as they reflect its historical development within the past two centuries quite well and show that this construction type is no longer used very frequently in PDE.

Altogether 2941 examples of the construction with only one perfect infinitive were retrieved from the corpora, a number from which one could get the impression that this type of construction really is quite common. It is especially important, however, to look at this number more closely because it is a bit misleading. Alone 2074 of these 2941 examples were found in COHA. This smaller number is still misrepresentative as 1433 of these were examples with *be to* in its singular and plural past tense forms as the governing verb. The searches in BNC and COCA produced 551 and 316 hits, respectively. In the case of COCA, 458 examples had the governing verb be to and 222 in the results for BNC. There is another significant frequency to be observed for this construction type, namely the verb *be to* is most often complemented by the (active or passive) perfect infinitive of *be*, *have been* (+ V_{pp}) (805 instances in COHA, 268 in COCA and 110 in BNC).

From these numbers we can draw a few conclusions. First, the numbers from COHA (which actually add up to more than 2/3 of the overall number of examples) show that this construction type must have been much more common in earlier stages of Modern English, especially in the 19th and early 20th century. Second, there is one verb which was, and actually still is (at least in comparison to the other verbs), used significantly more frequent in the construction than any of the other verbs.

(22) Yet Mr. Trotter never quite cracked the code of how to expand his brand. He **was to have been** one of the all-star chefs anchoring the Time Warner Center when it opened seven years ago, but he pulled out. (COCA)

When examining these results it was important not to confuse examples of the perfect infinitive construction with instances of the following kind where the past tense of the verb be is part of a copula construction:

(23) I thought she'd worked one of those bands free and was holding it up to show me how proud she **was to have broken** loose of what we referred to, in our charming teenage banter, as oral bondage. (COCA)

Other verbs which function as governing verbs in perfect infinitive constructions are *intend to, mean to, expect, remember, regret, be able to* and *manage to*.

Intend to + the perfect infinitive, for example, is found 5 times in BNC, 3 times in COCA and 61 times in COHA. The majority of the latter were examples from the 19th century, only a small number (about 10) are examples from after 1950. In all of these cases the governing main verb *intend to* is in the past tense (either active or passive).

(24) I originally **intended to have figured** all the Psittacidae – but I stopped in time (BNC)

Similarly, the corpus search for *mean to* plus perfect infinitive produced 4 examples in COCA, 21 examples in BNC and 104 in COHA.

(25) I **meant to have written** another 'Wonder Book' this summer, but another task has unexpectedly intervened. (COHA)

Only 5 of these 104 are taken from texts published after 1910. All the examples from COCA are past tense passive, 8 examples out of the 21 BNC results are also past tense passive, and one of them is past tense active. The remaining 12 instances are present tense passive. Interestingly, 98 of the instances found in COHA are past active and only 6 are past passive. Furthermore, the majority of the examples from COHA come from texts originally published between 1810 and 1910.

Two other very interesting constructions with a single perfect infinitive are found with the verbs *remember* and *regret*.

(26) It is a very respectable country, I do protest; and I scarcely **remember to have tasted** better gooseberries than they grow in that very island. (COHA 1835)

(27) "I **regret to have shocked** your ladyship," he murmured, satirically. (COHA 1902)

The construction with the verb *remember* + perfect infinitive occurred twice in the BNC, 4 times in COCA and 386 times in COHA. Out of these 386 times, there are 120 instances of *remember* in the present tense and 266 instances of *remember* in the past tense. 372 examples are from the years 1820-1910, 22 are from the years 1910-1920, 6 examples were published in the 1920s and only 14 examples are from texts which were published between 1930 and 2000. The impression that this construction is rather old-fashioned is supported by an additional search in Google, where only 5 instances of the construction were found on the first 22 pages of results.

There were no instances of the perfect infinitive construction with the governing verb *regret* in BNC and COHA. The construction must have been very rare, since there were no more than 16 examples found in COHA either. In contrast to the *remember*-construction, which was abundant in the 19th century, the examples of the regret-construction are equally distributed with one or two instances per decade from about 1830 to the 1990s. An additional Google search was used to double-check these results. The search produced 3 instances on the first 25 pages of results and seems to confirm the impression that this construction is only rarely used.

Another verb which occurs frequently with a single perfect infinitive is *expect*. In the BNC it was found 66 times in various environments (present active and passive, modal constructions, etc.), in the COHA 73 times and in COCA 82 times. All these different environments may change the meaning of the construction quite significantly. This is why not all of them are relevant to this study, but this problem will be discussed briefly in Section 6.4.3.

(28) I **expected to have been** here in time, but these trains are never to be depended on. (COHA 1871)

The results for the constructions with a single perfect infinitive are summarized in Table 3.

	BNC	COCA	COHA	Total
Intend	5	3	61	**69**
mean to	21	4	104	**129**
Remember	2	4	386	**392**
Regret	0	0	17	**17**
Expect	66	82	73	**221**
be to	222	458	1433	**2113**
Total	**316**	**551**	**2074**	**2941**

Table 3. Absolute numbers of perfect infinitive cxns found in BNC, COCA and COHA.

5.3.2. Double perfect constructions

The picture here is quite different to what was just described for the perfect infinitive constructions. It seems that the double perfect constructions are much more common in PDE than they were in earlier stages of Modern English. Altogether, the corpus search offered 775 examples of the double perfect constructions. 752 of these are double perfect infinitive constructions, 1 is a double perfect in a finite context and 22 are double perfect constructions with past perfect. Additional 94 examples of the constructions were found in Google. They will not, however, be included into the overall number of data because the Google search was mainly used as a reaffirmation and was not carried through for all of the verbs but only to get further PDE-examples for some of them.

	Number of overall examples
BNC	189
COCA	383
COHA	203
Total	775

Table 4. Overal number of double perfect cxns.

	Number of examples/double perfect infinitives
BNC	187
COCA	377
COHA	188
Total	752

Table 5. Overall results for double perfect infinitive cxns.

Table 4 also shows that the most examples were found in COCA. This is not surprising, however, because with 425 million words COCA is the largest of the three corpora. Considering that BNC is about four times smaller than COCA the number of examples from

the British English corpus is quite remarkable. With only 188 examples in about 400 million words from a time span of two centuries, the results from COHA seem to suggest that the double perfect infinitive construction was not so very frequent before the 20th century and became more abundant within the last decades of the 20th century, but up to this point this can only be speculation.

The double perfect infinitive construction has one feature that became especially apparent from the corpus search: in almost all cases (with the exception of only a few single cases) the double perfect infinitive construction is governed by a modal construction. In the majority of instances the modal verb *would* functions as the head, even though the other modals *should, might, could, may, will* and *must* appear occasionally. The verb with most occurrences as the complement of the modal verb in the double perfect infinitive construction is *like* with 486 hits, which is more than half of the total number of examples. Second comes the verb *have* with 130 examples and the third most occurrences of the double perfect infinitive construction were found with *prefer* (63). All the other verbs are only sporadically used in double perfect infinitive constructions, but the results for each of these verbs will now be presented in turn.

As already mentioned, the verb *like* appears most often in double perfect infinitive constructions of the following pattern:

(29) It was a house I **would have liked to have grown** up in.
(BNC)

The distribution of the findings follows the trend that was already suggested by the overall numbers of examples. Most instances (247) were provided by COCA; COHA and BNC showed almost the same numbers again, namely 122 and 117 respectively.

What is interesting here is that in COCA 117 examples – almost half of them – derive from the spoken part of the corpus. COHA does not have a spoken part but from BNC 17 out of 117 occurrences are from a spoken context. This latter number seems small at first glance but considering that spoken language data accounts for only 10% in the whole BNC it is not so very small. This already reveals, or at least suggests, that these double perfect infinitive constructions are a common attribute of spoken language, but also occur in written language. They are also quite common in fiction and newspapers. In these cases, the examples are often taken from direct speech or are, especially in newspapers, quotes from interviews.

A brief look at the results from COHA seems to support the hypothesis that double infinitive constructions were not as frequent in the 19th and in the first half of the 20th century. In the years from 1810 to the 1940s, the corpus found 54 examples. In the second half of the 20th century (from the 1950s up to the 2000s) 68 instances were generated.

The review of the instances that were provided for the verb *like* also shows that the most frequent verbs that form the second perfect infinitive complements are *have*, *see*, *be*, *do*, and *go*. These five verbs constitute the five most frequent verbs of the second perfect infinitive complements in all three corpora. This tendency corresponds to the overall frequencies of verbs in the BNC. Thus, in British English *be* is by far the most frequent verb (42277 hits per one million words); *have* comes second (13655 hits) and *do* is the third most frequent verb (5594 examples). The verb *go* can also be found within the top ten (2078); at the eleventh rank, with 1920, *see* also still belongs to the most frequent verbs in British English as represented in the BNC. Of course it is not possible to transfer this rank list of verb frequencies directly to American English but it is very likely that the situation is similar in this language variety.

The second most frequent verb which occurs in the governing modal construction of the double perfect infinitive construction is the semi-modal *have* (*to*) expressing necessity as in:

(30) And they **would have had to have broken** off what they were doing to bring the carrier here and decided that would have been overkill. (COCA_ SPOK)

Altogether, 130 examples of the construction of this kind were found. Of these, 83 instances were found in COCA, 34 in the BNC and 13 examples were found in COHA.

11 out of the 34 BNC examples and even 45 out of the 83 COCA examples, i.e. more than half, are from a spoken context. This further supports the suggestion that double perfect infinitive constructions are mainly a feature of spoken language. Since COHA contains only written language material, the low number of instances found in this corpus also seems to support this hypothesis. Furthermore, only two of the 13 instances found in COHA were produced in the 19th century, supporting the claim that this construction became more frequent in (the second half of) the 20th century.

As already mentioned above, the verb *prefer* also occurs quite frequently (at least in comparison to most of the other verbs) in the double perfect infinitive constructions. The corpus search produced 63 examples of the construction, as the one in (26):

(31) I **would have preferred to have stayed** right where I was. (COCA)

The search in the BNC resulted in 21 examples (4 of which are from the spoken part of the corpus), 23 examples (11 of which are from spoken language) were found in COCA and further 19 examples were found in COHA. While for the constructions with the verbs *like* and *have* the majority of the constructions found in COHA came from the later 20th century, this tendency is not as clear with the verb *prefer*. In this case, 8 out of the 19 instances were originally produced before 1920, 11 after that.

Table 6 summarizes the frequencies of the different types of perfect infinitive constructions.

	BNC	**COCA**	**COHA**	**Total**
would have liked	117	247	122	486
would have had to	34	83	13	130
would have preferred	21	23	19	63
Total	172	353	154	679

Table 6. Summary double perfect infinitive cxns.

The verbs listed in Table 7 were also found to occur in the double perfect infinitive constructions occasionally. Due to the small number of instances it is not possible, however, to comment on tendencies regarding their source in spoken language or the lower frequency of instances from the 19th and earlier 20th centuries, even though 33 of the 73 examples were found in COHA.

For the verbs *be able to* and *manage* an additional Google search was carried through and offered 67 and 10 examples of the double perfect infinitive construction respectively. These results also suggest that the perfect infinitive construction is a feature of informal speech, since they appear most often in forum entries, a text type that is also very close to spoken language. The online corpus service of Brigham Young University (corpus.byu.edu) also provides the function for using the Google Book Corpus of written American English. This corpus comprises 155 billion words from the years 1810-2009 and was used to find more

examples for the verb *be unable to* in the double perfect infinitive construction. This search produced 17 further examples, the majority of which are from the 19th and early 20th century. Since this special corpus was only used in this single case, the results are not included in any of the comparisons; the examples, however, will still be taken into consideration for the analysis of the data below.

	BNC	**COCA**	**COHA**	**Total**
able to	3	8	12	23
unable to	0	0	4	4
intend (to)	0	0	1	1
mean (to)	0	1	0	1
manage	0	0	1	1
want	1	7	4	12
need	3	1	1	5
expect	8	7	11	26
Total	**15**	**24**	**33**	**73**

Table 7. Results for further types of the double perfect infinitive cxn.

It should probably be noted that this thesis does not aim at providing an exhaustive list of verbs permitting the double perfect infinitive construction. Nevertheless, the purpose of this thesis still is to provide a good overview of possible environments for this construction. Thus, a very general search command for all verbs that can occur in the double perfect infinitive construction (have [v*] to have [v?n*]) in COCA showed that only few other verbs which were not included in the research for this thesis (for example *hope* and *love*) are occasionally used in the double perfect infinitive construction as well.

As already mentioned earlier, there are two further options for double perfect constructions. On the one hand there are double perfect constructions in a finite matrix context and double perfect constructions where the first part is constituted by a past perfect instead of a present perfect. The former type was only found once in the BNC with the verb *manage to* and six further examples of the same verb were found in the Google search.

(32) Well, we have a particularly clever syndicate, who**'ve managed to have** won five times so far this year (BNC)

The examples for the latter type, the double perfect construction with past perfect, occurred with the verbs *be able to* (7 hits), *intend* (8 hits), *mean to* (1 hit) and *expect* (6 hits) in at least one of the three corpora.

(33) **Had he been able to have cooperated** with Doyle in sufficient time, with their overwhelming force, assisted by Harrison and Ganey, with an equal, if not greater number of tories; (COHA 1821)

However, as was pointed out above, it is very likely that this latter type is much more frequent in language use and the low frequency of occurrences may be explained by the search commands which did not encourage or aim at more results of this type.

In his prescriptive grammar, Fowler (1965: 444) talks about the perfect infinitive as "forms that often push their way in where they are not wanted". However, as was just presented, the perfect infinitive was and still is used quite frequently in various constructions. Therefore, instead of saying that it is not *wanted* I would say – rephrasing Fowler – that perfect infinitives appear as forms that push their way in where they are not *expected* and thus are an interesting subject matter for linguists. James (1985: 76) summarizes the problem surrounding perfect infinitive constructions pointedly:

> The questions are why do prescriptive grammarians as keen as Fowler call this usage wrong, why do scrupulous and well-meaning commentators of Fowler, such as Thurber, advise so strongly against it, why do people persist in using it, and why are they and descriptive grammarians so perplexed by it.

The following sections are therefore meant to untangle the net of perplexities by looking at these various constructions more closely, based on a Construction Grammar approach and also taking the concept of iconicity into account.

6. Perfect Infinitive Constructions

The perfect infinitive construction has the abstract schema [[Subj] [V_{past}] [$V_{perf.inf.}$ object clause]]. This pattern is inherited by more specified, partly substantive constructions as illustrated in Figure 5.

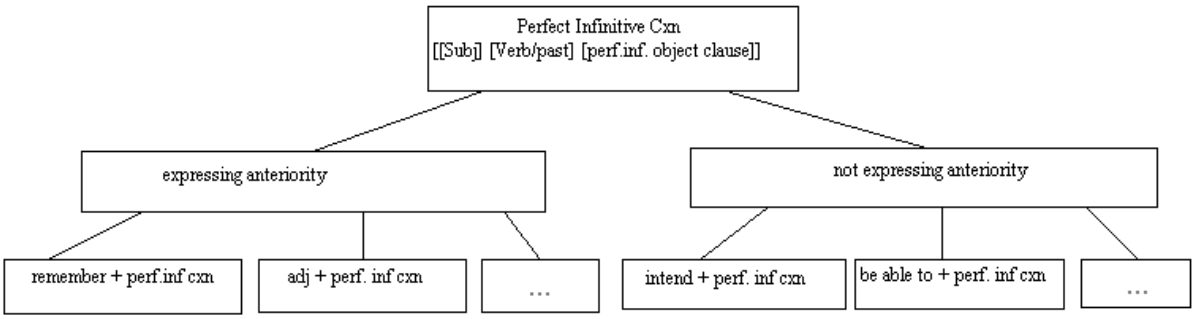


Figure 5. Taxonomic network of the perfect infinitive cxn.

Fig. 5 shows that this construction is inherited by two more specific constructions – one of which expressing an anteriority relation, the other not expressing anteriority. As has been stressed repeatedly, the main concern of this thesis is the latter type since it is more problematic than the former. In Fig. 5, the label 'perfect infinitive cxn' is used as an umbrella term for both types of the construction. If not stated otherwise, it will be used to refer to the sub-type in question alone in the following sections of this thesis, mainly to avoid a more bulky label. The three dots '…' in the representation imply that there are more subtypes of the construction; it should be noted, however, that it can only occur with a limited number and a restricted type of governing verbs (cf. apparent semantic restrictions pointed out in Section 6.2.1 below). Another aspect of the following analysis will therefore be the answering of the question of why this is the case. I will also try to find out what is so special about these verbs and why especially they encourage the unexpected use of the perfect infinitive as their complements, while other verbs such as *remember* also allow for a perfect infinitive complement, but with the usual anteriority relation and while there are many other verbs such as *demand, determine, refuse, strive, struggle,* etc., which also take *to*-infinitival complements, do not occur with perfect infinitive complements at all.

As was noted above, constructions are independent but not unrelated to other constructions. This applies to the perfect infinitive construction as well, of course. It is a construction consisting of more than one word, which is why it has to be combined of several different constructions, i.e. it has multiple parent constructions in a taxonomic network. First, the construction suggests itself to be an instance of the schematic pattern of the (past tense) Transitive Construction ([Subj] [TrV_{ed}] [Obj]) with the object being realised by an infinitival clause. A second related construction would therefore be the 'non-finite complement

construction', realised as a perfect infinitive. A diagram representation of these taxonomic or inheritance relations looks as demonstrated in Figure 6.

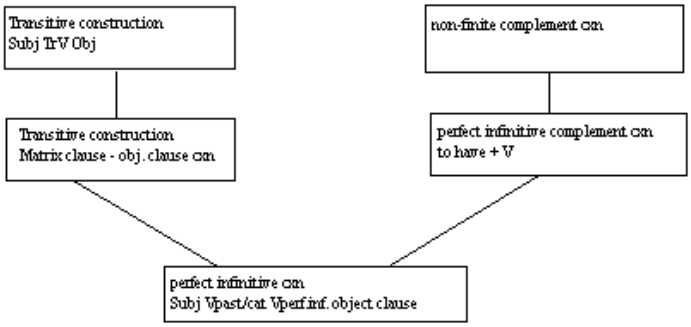


Figure 6. Inheritance relations of the perfect infinitive cxn.

On a very abstract level, the whole construction might also be considered an instance of the subject-predicate construction with the governing verb as its predicator. Perfect infinitive constructions are not prototypical transitive constructions such as *He broke the vase* where the actor volitionally acts upon and thereby causes a change of state in an undergoer (Tomasello 1998: xviii), however. While German has stayed rather closely to this prototypical transitive structure, the English transitive construction was extended to less prototypical situations and more metaphorical "force dynamics" (Tomasello 1998: xviii). Similarly, Trousdale (2008: 311) argues that the transitive construction has become more productive, more general and less compositional throughout the history of English and therefore allows at least some subtypes of the perfect infinitive construction to be considered instances of the transitive construction (for restrictions and exceptions to this cf. Section 6.4 below). This high productivity of the transitive construction is also illustrated by Figure 7, which shows that several different levels of schematicity and abstractness are involved here (cf. also Kaltenböck 2010: 35).

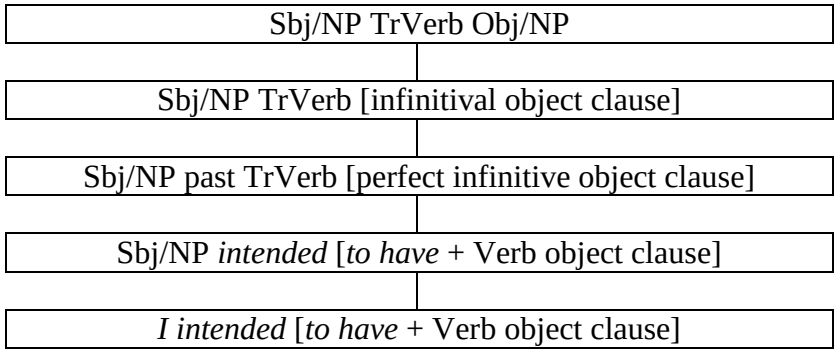


Figure 7. Levels of schematicity shown by the perfect infinitive cxn.

6.1. Arguments for “perfect infinitive constructions”

The question now is what makes the perfect infinitive construction a construction in the sense of CxG? I will argue that the constructions have certain semantic as well as morphosyntactic characteristics and properties which make them unique and which allow us to differentiate them from other constructions – especially those which express anteriority relations (e.g. with the verb *remember*).

6.1.1. Grammatical evidence for constructionality

Perfect infinitive constructions have some idiosyncratic grammatical properties.
First, the governing verb is always in the past tense; both active and passive are possible, however. Thus, examples (34a) and (35a) are instances of the perfect infinitive construction, while examples (34b) and (35b) would not be considered as such.

(34)

a. Is she gone? I **intended to have said** something else to her. (BNC)
b. *Is she gone? I **intend to have said** something else to her

(35)

a. I **was to have gone** to the Alliance to serve coffee to the soldiers, but too tired. (COCA)
b. *I **am to have gone** to the Alliance to serve coffee to the soldiers, but too tired.

Second, in the perfect infinitive construction, the governing verb can hardly ever be negated. Considering that perfect infinitive constructions are very often followed by an adversative subordinating clause, the negation of the matrix verb would not make any semantic sense. Thus, the negation of the governing verb in (36) is impossible because the dryness of the ground usually is not a reason to sow barley.

(36)

a. We **meant to have sown** a little barley to-day, but the ground is too dry. (COHA)
b. *We did not mean to have sown a little barley to-day, but the ground is too dry.

Third, in the perfect infinitive construction, the governing verb must be a verb which allows for non-finite verbal complements. The perfect infinitive always complements another verb. Moreover, the perfect infinitive in the construction is usually interchangeable with the present infinitive without entailing an (obvious) change of meaning. Hence, sentences (37a) and (37b)

semantically correspond to examples (37'a) and (37'b). However, there is no semantic concord between sentence (37c) and (37'c).

(37)'

a. A programme by which the US military **was to contribute** to environmental research has stalled in the face of congressional scepticism, but efforts are now under way to revive it.

b. I **expected to be** here in time, but these trains are never to be depended on.

c. We booked a room in what he **remembered to be** the grandest hotel there.

While (37c) clearly encodes an anteriority relation between the governing verb and the perfect infinitive complement expressing that the hotel was the grandest at some point in the past, example (37'c) means that it still is the grandest hotel there.

6.1.2. Interpretational features of the construction

The perfect infinitive construction is not to be interpreted literally. The literal, i.e. perfective, meaning would not make much sense semantically because it is illogical to assume that the intended, expected, planned etc. event would have taken place before the intention, expectation, plan, etc. was formed. Therefore, the meaning of the construction cannot be derived from compositional processes either. As the marker for the perfect aspect, *have* + past participle suggests anteriority; the actual semantic interpretation, however, is that of posteriority because the intended, expected, planned event does or does not take place after the intention, expectation, plan etc. has existed.

Furthermore, in the perfect infinitive construction, the governing verb seems to have some futurity-aspect. The verbs *intend, mean to, expect* and *be to* describe mental processes and clearly have the semantic aspect of futurity. The semi-auxiliary verb *be able to* has a more general meaning of ability but also includes the aspect of being able to do something in the future. The verb *remember* is a retrospective verb and even though it very often has the same syntactic pattern, the whole construction has an anteriority interpretation and should therefore be considered a different construction type (cf. Fig. 5).

(37)

a. A programme by which the US military **was to have contributed** to environmental research has stalled in the face of congressional scepticism, but efforts are now under way to revive it.

b. I **expected to have been** here in time, but these trains are never to be depended on. (COHA 1871)

c. We booked a room in what he **remembered to have been** the grandest hotel there. (COHA 1974)

6.2. Working in Construction Grammar

The present analysis is aligned with CxG as proposed for example by Fillmore (1988) and Kay & Fillmore (1999) and especially with the comprehensible presentation and summary in Fried & Östman (2004). When talking about syntax, it is especially important for this framework to distinguish between the external and the internal syntax of a construction. The external syntax comprises properties of the construction as a whole, while the internal syntax describes the properties of the construction's internal structure and of what the construction is made up (i.e. its constituents) (Fillmore 1988: 36; Fried & Östman 2004: 25-26). This distinction between the more general construction-level and the more specific constituent-level is usually represented by boxes-within-boxes diagram. In this type of notation, the outer boxes depict the external syntax, i.e. the whole construction; the smaller boxes within represent the internal syntax of the construction (Fillmore 1988: 37). Fillmore (1988: 37) as well as Fried & Östman (2004: 26) point towards the similarity of the box-notation system and constituent-structure diagrams or square-bracket notations of grammar. Thus, box-diagrams

> capture dominance relations and the linear order of constituents, but since a given construction may contain a relatively large amount of information, the boxes provide convenient containers for all the details that need to be specified in order to give an accurate account of a construct or a construction. (Fried & Östman 2004: 26)

6.2.1. Notational Conventions in CxG

Since CxG is about the integration and correspondence of form and meaning, it is not enough to just show a construction's dominance relations by boxes. These boxes have to provide space for all these other important details which are addressed in the quote and which go way beyond mere syntactic information; they should also comprise semantic, pragmatic as well as phonological information of the construction on the external and its constituents on the

internal level. In the representations of more substantive constructions or of special constructs another detail to be mentioned are specific lexemes.

A construction's grammatical information is usually provided by feature structures. These are realized by so-called 'attribute-value matrices' (AVMs) where attributes (i.e. a relevant property) and their values (i.e. specifications of the properties) are combined within square brackets (Fillmore 1988: 38; Fried & Östman 2004: 29). Similar to the nesting of the boxes, AVMs are nested as well. Thus, the value of an attribute may be another AVM. When specifying syntactic information, the abbreviation *syn* marks an attribute; typical values of this attribute are for example *cat* (for a lexical category) or *lex* for a lexical item or phrase. At the same time, *lex* is an attribute with the binary value + or - . The AVM [lex +] marks a lexical element, [lex -] marks its opposite, namely a phrasal element. A lexical item or phrase instantiates a *cat*, the value for which is not binary but has to be defined by a specific value instead, e.g. *v* for verb or *adj* for an adjective, and the maximality feature *max* +/- tells whether the element can be further expanded or not (Fried & Östman 2004: 31). Furthermore, constructions are constrained by either linking or by instantiation principles. From a box representation it has to be evident which type of construction is on hand. As regards linking constructions, the terms semantic frame and valence are important. The valence of a lexical element, e.g. a verb, specifies its requirements for complements; not only the number of complements but also specifies the "event participants that are minimally necessary in morphosyntax to express the meaning of a given predicate" (Fried & Östman 2004: 41). Possible event participants arise from or rather are determined by a word's semantic frame. For instance, both verbs *buy* and *sell* have the semantic frame of a commercial transaction and the frame elements or event participants (agent, patient, location, etc.) of buyer, seller, goods and money, even though they are mapped onto different syntactic arguments depending on the particular verb. Thus, linking constructions "express generalizations about matching a particular semantic (agent, patient, location, etc.) with its canonical expression in a specific grammatical pattern" (Fried & Östman 2004: 46). Linking constructions or valence requirements do not tell anything about syntactic dependencies or the order of elements in a construction. This aspect is catered for in phrasal constructions, where instantiation patterns or principles give information about such dependencies. "A phrasal construction represents a conventionalised structural configuration that necessarily consists of more than one constituent" (Fried & Östman 2004: 28); their structure and linear order are

also determined by conventional patterns and not by the constituents (Fried & Östman 2004: 57).

6.2.2. Notational conventions applied

The above is only a short overview of what a CxG diagram may and what it has to comprise. Actually, a full representation of a construction is much more elaborate and includes many more details which were not considered yet, but which would go beyond the scope of this thesis anyway. I am not concerned with an overarching representation and description of the perfect infinitive construction as it would in no way serve the answering of the research questions and will therefore only focus on what is relevant to the purpose of the study. This means that the main focus will be on the syntax-semantics correlation of the construction; phonological and pragmatic features will be left out completely because the perfect infinitive construction has neither special idiosyncrasies regarding the pronunciation nor fulfils it a special function in discourse (as far as I can tell at this point). This approach is not unusual because

> [b]y definition, every construction has to carry information about the conventional association between form on the one hand and its meaning or discourse function on the other, but the details and the amount of information in each dimension will differ depending on what is idiosyncratic to a given form-function pairing versus what can be 'figured out' from other parts of the grammar. (Fried & Östman 2004: 29)

On the level of syntax, AVMs for the category (cat), maximality (max) and lexical (lex)[6] features will be specified, while on the semantic level the semantic frame, tense, voice and overall meaning will be depicted. For the latter of the semantic features I will follow the convention of putting a line of prose in single quotation marks (['…']). According to Fried & Östman (2004: 30), this convention is very common in the semantic domain because this is an area in which the "details of the property in question have not yet been worked out systematically in terms of feature structures". I will, however, forbear from specifying semantic roles in order to avoid an overload of information in the box diagrams and to avoid the risk of causing unnecessary confusion by including irrelevant details in the representations. For the same reason, the internal syntax will only be given for the verbal elements on the constituent and on the phrasal level where verbs function as the heads; I argue that all other elements in the construction do not influence the mechanisms and interpretations

[6] According to Fried & Östman (2004: 30-31), the description of syntactic properties is commonly divided into *head* (e.g. *cat*) and *level* features (e.g. *max*, *lex*). For reasons of space I will refrain from doing so and will describe the syntactic features without the subdivision of the attribute.

of the construction significantly and will therefore be mostly neglected. The concentration on the verbal elements will suffice to show the discrepancies between the properties of the external and the internal syntax of the perfect infinitive construction, i.e. that the meaning of the whole construction is not merely a sum of its parts. To show that a certain feature would be specified in a full representation but is left out because of lack of space and relevance for the argument, the conventional notation for such purposes "[…]" is used (Fried & Östman 2004: 30). For the same reason, the valence requirements will not be amplified for every verbal element of the construction, but only for the matrix verb. The verbs' valence sets are usually noted within curly brackets and separated by a comma {…, …}.

What has not been mentioned yet, but is central to this version of CxG, is unification which "ensures that pieces of linguistic material that do not match ('unify') along any number and types of properties (syntactic, semantic, pragmatic) will not be licensed as possible constructs of a given language" (Fried & Östman 2004: 25). Moreover, "unification serves as a device for handling grammatical agreement between structural sisters, along shared semantic categories with non-conflicting values" (Fried & Östman 2004: 34). Thus, in a Determination construction, the words *much* and *snow* can combine because they agree on the semantic attributes of their configuration, their number and boundedness (Fried & Östman 2004: 34). There are cases, however, where words can combine even though they do not agree along one or more attributes, which would be the case for the perfect infinitive construction. It is very interesting here that the semantic specification of the governing verbs seems to be in conflict with the semantic specification of its infinitival complements. On the syntactic level they unify since the governing verbs allow for, some even require, non-finite complements, including the perfect infinitive. On the semantic level, however, these verbs which occur in the perfect infinitive construction are future-oriented. This semantic value therefore does not unify with the inherent anteriority semantics of the perfect infinitive.

There are different symbols used in CxG to show the unification phenomena at work in a construction. On the one hand, there is the #-sign which is used to mark agreement, government, and linking relationships; on the other hand, downwards and upwards looking arrows ↓↑ are used to mark semantic integration between structural mother and daughters (Fried & Östman 2004: 71). From my point of view, the use of # for three different relationships is confusing and will therefore not be applied. If agreement, government and/or semantic linking relationships are noted, an alternative representation will be found and

explained separately. As regards the arrows marking semantic integration, they will be used, but it should also be noted that semantic unification does not apply to all features. Thus, we will see that structural mothers and daughters unify along the lines of semantic frame, but not along temporal interpretation.

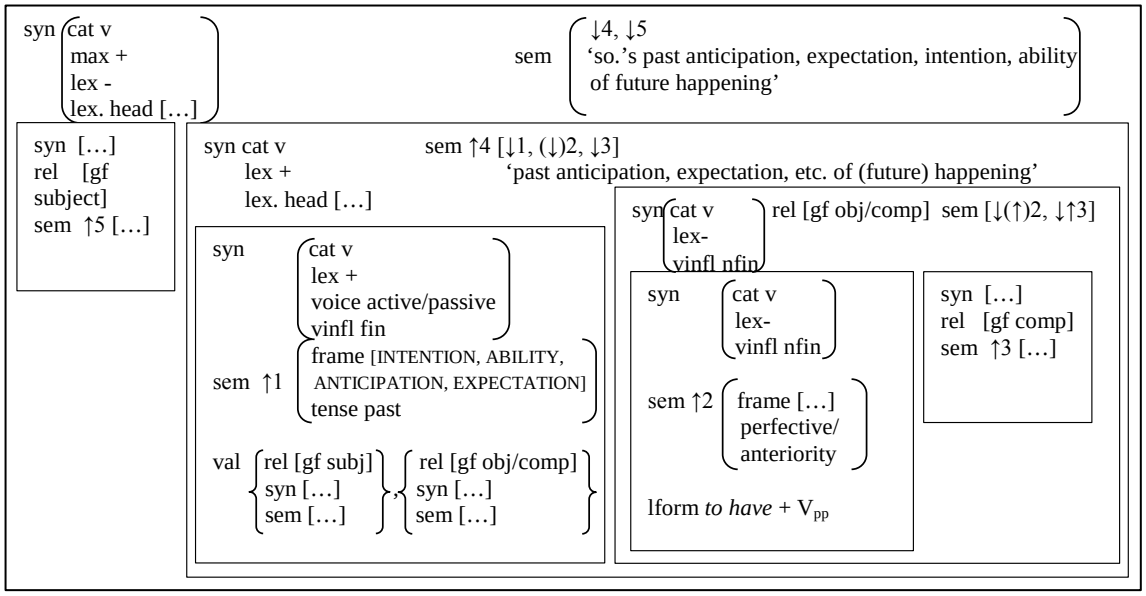


Figure 8. Box representation of the schematic perfect infinitive cxn.

Figure 8 is a box representation of the schematic perfect infinitive construction and will function as an example for the application of the notational conventions just discussed. The big outer box shows that, on the syntactic level the construction has a lexical head, which belongs to the category verb and which could be specified, but is not. Furthermore, the head of the construction has the maximality value 'max +' which indicates that the past tense head of the construction does not have to be expanded, i.e. it does not need a phrasal companion. The small box on the very left shows that the construction has an element which functions as the subject ('gf subj'). The object (or complement) is realized by the infinitival clause headed by the perfect infinitive on the right hand side of the diagram ('gf obj'). That the construction needs a subject as well as an object or another complement is indicated in the box representing the governing verb. Here, the verb's valence requirements are specified within the curly brackets; it shows that the verb requires a subject as well as an object. In this box we can also see that we are dealing with a finite lexical element ('lex +', 'fin') which can be either active or passive and which has the semantic values of being past tense and of belonging to one of the following semantic frames: anticipation, intention, expectation and ability (or related frames). As can be seen, the semantic feature of every constituent is provided with one or two arrows and a number. The numbers are more or less random and are

used as labels for the features, but the arrows indicate that the semantics of the constructional daughters unify with the mother's (↑) and the other way round (↓). Hence, the meaning of the matrix verb unifies with the semantics of its structural mother (↓↑1). The situation on the right hand side, with the non-finite clause, is a little more complicated. The meanings of the perfect infinitive and its complement unify with the meaning of the clause (↑2, ↑3). However, on the clause level, the upwards directed arrow is in brackets ([↑] 2). This notation was used to show that some aspects of the semantics of the perfect infinitive match with the meaning of the higher structure and some do not[7]. Thus, the semantic frame fits, while the perfective/anteriority meaning aspect does not quite unify with the semantics of the governing verb. The constellation of past verb + perfect infinitive entails a new meaning aspect (↑4) which comprises the relevant aspects of 1, 2 and 3. This is also why the semantics of the overall construction unifies with 4 and 5 expressing someone's past anticipation etc. of a future event and not with the semantics of 1, 2, 3 and 5 only. As this is the representation of a very schematic construction, lexical forms ('lform') are not to be found in the representation, except for the perfect infinitive, where the infinitive marker *to* and the non-finite auxiliary *have* are substantive.

Now that we have clarified these more general prerequisites regarding the perfect infinitive construction, we can go on to look at the construction in more detail and to discuss it with the help of corpus data, i.e. actual language material produced by speakers of English. This section is divided so that each sub-type of the perfect infinitive construction will be discussed separately as they all behave uniquely to some extent. Similarities and differences will be accentuated as well as reasons for why this type of construction is no longer very productive in PDE will be suggested. Before that I will, however, look at the more unproblematic constructions expressing anteriority relations. This approach might facilitate the analysis of the other type since it offers the opportunity for direct comparison between the two types.

[7] It is necessary to point out that this notation of a unification indicator in brackets has not been used anywhere else in CxG literature. However, it seems to be suitable in this case to show that there are meaning aspects of an element which do not match with the meaning of another element on the next higher level but also that there are other aspects which are taken over (e.g. the semantic frame).

6.3. Perfect infinitive constructions expressing an anteriority relation

6.3.1. The '*remember* + perfect infinitive' construction

As already indicated in Figure 5 above, the '*remember to have* + V_{pp}' construction behaves formally identically to the type of construction governed by verbs like *intend to* and *mean to*. On the semantic level, however, they behave differently; it is clear and out of question that in this case, the perfect infinitive marks anteriority.

(38) I **remembered to have read** that the victims of vampires generally became vampires themselves. (COHA 1888)

(39) I **remembered to have heard** some of my American acquaintances say that in their country it was not always qualifications that get a candidate into office. (COHA 1890)

(40) Friedrich tried to regain a path that **he remembered to have crossed** a few minutes before, but under the trees the gloom was too dense for profitable search. (COHA 1903)

(41) Elizabeth Scott Hardin **was remembered to have hidden** in a cave with her children (there were said to have been eleven, only eight of which got recorded) during Indian fighting, and to have been so strong a swimmer that she could ford a river in flood with an infant in her arms. (COHA 2003)

(42) Third, Jesus **was remembered to have remained** obedient toward his Father, despite trials and temptations. (COCA)

In these examples we can see that the governing verb *remember* is past tense (active or passive) and complemented by a perfect infinitive. The corpus search showed that the verb *remember* does not necessarily always have to be past tense but also occurs in the present tense with a following perfect infinitive complement.

(43) In the present instance however, I discern, I think, more marks of a true poetical talent than I **remember to have observed** in the verses of any, whether male or female, so disadvantageously circumstanced. (BNC)

(44) These are in the same condition as proper names. They are not indeed, like proper names, unmeaning; for the words sensation of white signify, that the sensation which I so denominate resembles other sensations which I **remember to have had** before, and to have called by that name. (BNC)

(45) I **remember to have felt** someone pull me by the hair, before I was utterly senseless. (COHA 1835)

(46) He **is remembered to have said** at that time "he cared very little for the

history of the world before the fourteenth century. (COHA 1873)

(47) This fixed it in my mind, and I **remember to have asked** my aunt why my uncle in Virginia did not free his slaves. (COHA 1897)

(48) The shithouse in question is a rest area with indoor plumbing – "Why spend so much money on a shithouse? Wouldn't an outhouse be just fine?" Barney **is remembered to have said**. (COCA)

Furthermore, the verb *remember* can be negated without causing any contradictions with the proposition or any other interpretational difficulties. The verb is either negated by the negation marker *not* or, as in (51), by the adverb *never*.

(49) I **can not remember to have owned** a bottle of medicine for my personal use in twenty-one years except quinine for influenza. (COHA 1928)

(50) I **do not remember to have read** of it in the books. (COHA 1875)

(51) I had ten dollars a year for clothes and charity, and **I never remember to have been needy**, though I never had but two or three aids in those six years of earning my home. (COHA 1883)

(52) But notwithstanding the privations they had endured, **I do not remember to have met** with a more happy family in my life. (COHA 1849)

In all of these examples, the verb *remember* is the lexical head of the clause, the non-finite subordinating clause functions as the direct object and the subject function is realized by a noun phrase, most commonly in the first or third person singular.

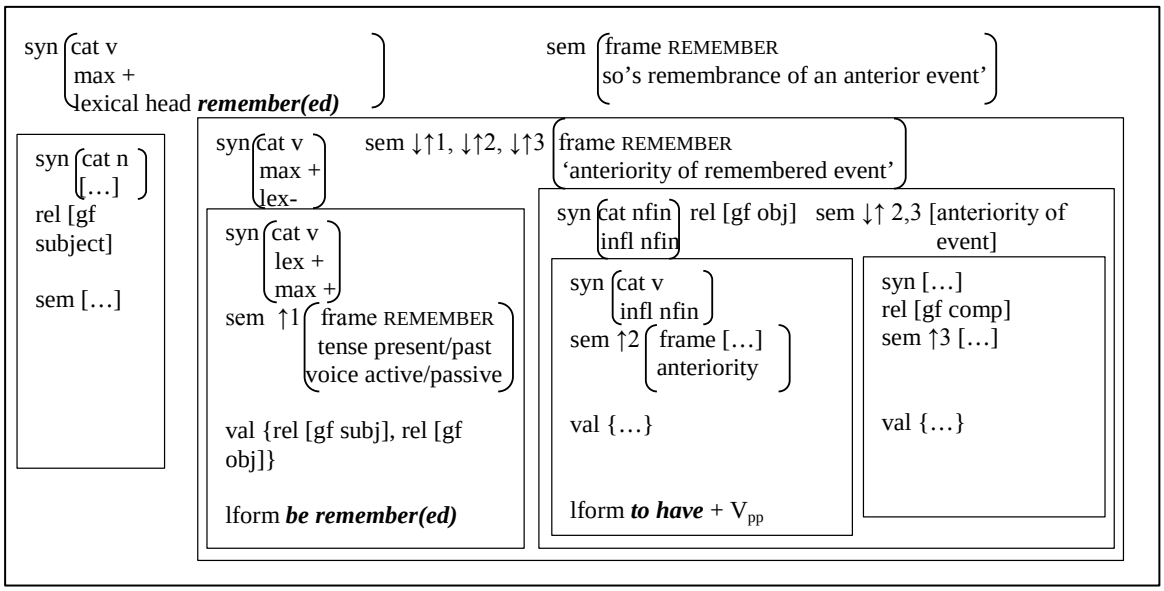


Figure 9. Box notation for the schematic *'remember* + perfect infinitive' cxn.

While the subject complement can be realised by any noun phrase encoding an entity capable of remembering, the object complement is realised by a non-finite subordinating clause, namely a perfect infinitive clause. The governing verb establishes the time frame, which is very important for the construction's interpretation. Thus, the REMEMBER-event is either in the present or in the past. Albeit these different temporal frames, the event expressed by the infinitival clause must have taken place before the REMEMBER-event.

The representation of the construction in Fig. 9 also supports that CxG cannot always reject the concept of compositionality, especially regarding constructions which are not idiomatic. The '*remember to have* + V_{pp}' construction clearly is not idiomatic and therefore the meanings of its constituents add up to the meaning of the whole construction and Fig. 9 therefore does not provide any unexpected idiosyncrasies of the construction, neither regarding its syntax nor its semantics. The upwards and downwards pointing arrows show that the meanings of the structural daughters unify with their structural mothers. Even though the governing verb defines the time frame of the overall construction, the perfect infinitive adds a central semantic, namely the temporal, aspect as it contributes the perfective, i.e. anteriority, meaning of the remembered event. This is especially important because it is impossible to remember an event which has not taken place yet.

For better illustration, let me exemplify this analysis by means of a concrete construct.

(53) I **remember to have read** it, and have known more or less of it ever since. (COHA 1997)

In this example, as in the more general representation above, *remember* is the lexical head of the construction; subject position is taken by the first person pronoun *I*. The object complement is realised by an infinitival clause. The temporal as well as the semantic frame are provided by the governing verb, i.e. the utterance is about a REMEMBER-event in the present tense – taking place at the moment of uttering. Since *I remember* is not a complete sentence (except maybe as an answer to a question) the verb requires an object, i.e. it is important to add what is remembered. The meaning of the construct in (53) is compositional. In the diagram this is shown by the list of numbers representing the semantics of each constituent in the AVM for the construct's overall meaning.

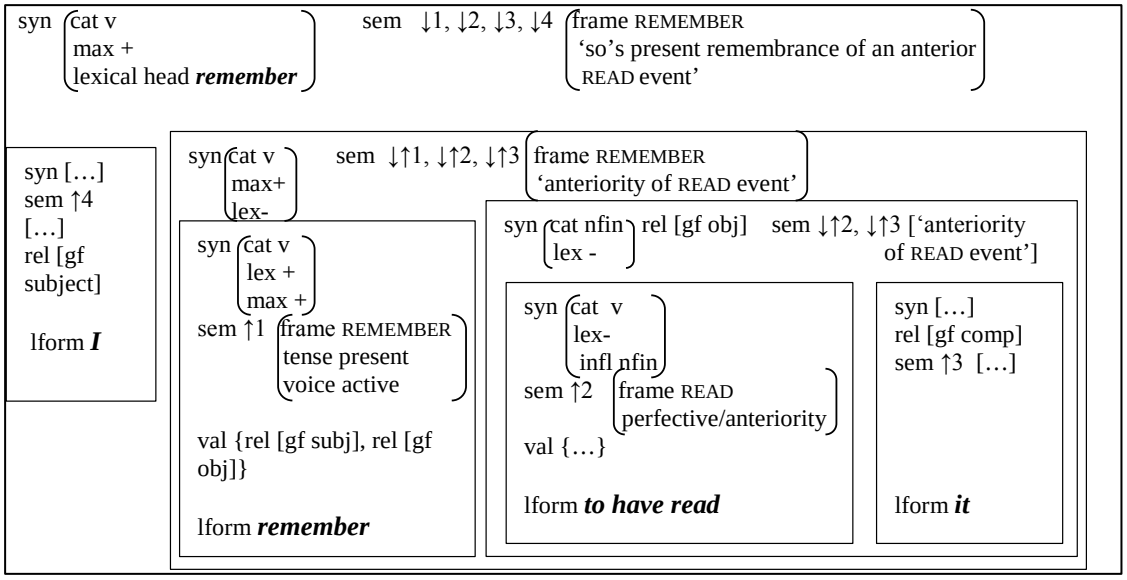


Figure 10. Box notation for the construct in (53).

Above we have clarified that the event denoted by the non-finite object clause has to have happened before the REMEMBER-event. This anteriority relation can only be indicated by the perfect infinitive, which is the case in example (53) and its representation in Fig. 10. The interpretation of the construct in (53) is that the reading event has taken place in the past of, i.e. before, the remembering event. On a timeline, these relations can be depicted as follows:

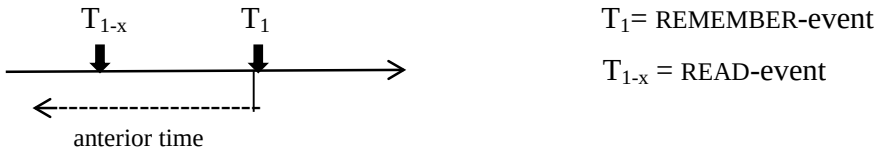


Figure 11. Temporal relations in (53).

In this diagram, T_1 represents the time of orientation, namely the utterance of a present REMEMBER-event. The remembered event, the READ-event, took place anterior to the REMEMBER-event, the exact moment remains unspecified, however, which is why it is labelled $T_{1\text{-}x}$ in the diagram.

As it was pointed out above, the matrix verb in the '*remember to have* + V_{pp}' construction can be either present or past tense. If the verb in example (53) was past tense (*remembered*), the temporal relations between the governing verb and the perfect infinitive complement would remain the same, their representation on a timeline would change slightly, however.

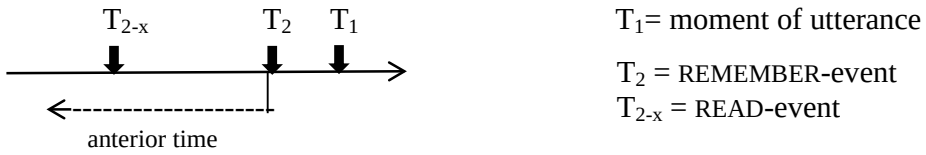


Figure 12. Temporal relations for (53) with a past tense verb.

While in Fig. 11 above, the moment of remembering and the moment of utterance are simultaneous, this is not the case in Fig. 12. The moment of speaking T_1 is still the time of orientation, but the REMEMBER-event T_2 has happened sometime before. Now we have yet another event which took place even further in the past ($T_{2\text{-}x}$). Since the speaker chose to complement the governing verb with an infinitival clause instead of, for example, with a *that*-clause[8], their only choice to express anteriority is the perfect infinitive; the present infinitive would not communicate the intended meaning.

As pointed out in Section 6.1.1 above, the problematic perfect infinitive constructions have corresponding constructions with a present infinitive. This is not the case with *remember* – it does not have such corresponding constructions, at least not without a complete change of meaning. While sentence (47) with the perfect infinitive marks anteriority, the present infinitive in the corresponding sentence (54) marks posteriority and the governing verb has the meaning of *do not forget* or *bear in mind* (cf. OED):

(54) I **remember to ask** my aunt why my uncle in Virginia did not free his slaves

Nevertheless, in Section 4.3.1 above it was shown that the construction '*remember* + perfect infinitive' occurs only very rarely in PDE. Vosberg (2003: 198) makes the same observation:

> The perfect infinitive, for instance, as a complement of the so-called retrospective verbs like *remember*, *recollect*, *recall*, *regret* or *forget*, has almost completely died out in Present-day English,

probably as an effect of solely linguistic processes. As a substitution for the recess of the perfect infinitive, the *–ing* form is now used in most contexts where the perfect infinitive was used before. This *–ing* form has been increasingly used since the late seventeenth century and

[8] In a *that*-clause, the 'normal' way to express anteriority would be the use of past perfect, following the usual sequence of tenses: *I remembered that I had read it*, even though it is not uncommon to use past tense in both clauses: *I remembered that I read it* (2 years ago).

has played its part in turning the system of verb complementation upside down (cf. Vosberg 2003: 200). The decrease in the use of the perfect infinitive would be an example for this, but also the resulting specialization of the retrospective verbs' temporal orientation, which entailed the PDE situation that a present infinitive complement tends to refer to the future and an *–ing* form refers to preceding events, i.e. to the past (cf. Vosberg 2003: 200; also Quirk et al. 1985: 1193). As an alternative to the simple *–ing* forms, the perfective *–ing* form is still used, even though it has also decreased in frequency. According to Vosberg (2003: 204),

> the earliest perfective *–ing* forms are found in the works of the authors born in the first half of the eighteenth century, when they were still slightly more common than the simple (non-periphrastic) *–ing* forms. The perfective *–ing* form then reaches its peak with the authors born between 1750 and 1780, even though at this time it had already been ousted by the simple *–ing* form.

Thus, the verb *remember* has two meanings – it expresses future and past orientation. Vosberg brings these two temporal orientations in connection with the terms 'positive' and 'negative volition'. He argues that

> future orientation can be associated with purpose, and purpose in turn with positive volition. Therefore, owing to the meaning of the preposition *to*, a complement expressing purpose and thus future orientation was and continues to be unambiguously bound to the infinitival construction. (Vosberg 2003: 200)

The *–ing* form was, however, apt to adopt retrospective meaning because it did not specify for either future or past orientation at first (cf. Vosberg 2003: 200-201). According to Jorgensen (1990: 147-148), the perfect infinitive and the gerund have the same retrospective function after some of the retrospective verbs. Thus, with the verb *remember* there are still three (synonymous) ways of expressing anteriority:

a. He remembered posting the letter.
b. He remembered having posted the letter.
c. He remembered to have posted the letter.

6.3.2. The '*regret* + perfect infinitive' construction

Another retrospective verb considered in the corpus search was *regret*. However, it appears far less frequent in the perfect infinitive construction than *remember* and in only two of the instances it is past tense, all the others are present tense.

(55) That must he knOwn, because if you have obtained your aim, if you have done what you wanted to do, then I have no reason to ask you to come back, in a diplomatic manner. But if you have not, then I say.' Take care,' because. I niii

toil you that will he interpreted in history,' America, **regretted to have gone** to wen' (1922)

(56) A friend of mine, a writer in northern Italy, who was in the anti-Fascist underground since 1931, wrote soon after the liberation, asking about my wartime broadcasts to Italy, which he **regretted to have missed**. (COHA 1946)

(57) "Mr. Secretary", he said, "I **regret to have been** the cause of putting you in this most trying position, and before I decide to accompany this officer or detective I must think, so with your permission I will light a cigar. (COHA 1915)

(58) We die ill, miserably What matter? There have been beautiful souls, glorious souls in this Italy, henceforth enslaved and prostrate. I **do not regret to have lived**… (COHA 1913)

(59) I **regret to have caused** you so much trouble; although I am grateful to you in the extreme, I would have preferred you to have given orders to some of your servants. (COHA1892)

(60) Everything is in order, "he reported, handing the passports back across the desk." We **regret to have delayed** you." (COHA 1971)

The '*regret* + perfect infinitive' construction behaves pretty much identical with the '*remember* + perfect infinitive' construction. On the morphosyntactic level, it requires an object complement which can be realized either as a direct object or a non-finite clause. On the semantic level, *regret* is also a retrospective verb, which means that the speaker 'looks back' at something that has happened earlier. This requirement of course has to be specified on the morphological level as well. As already mentioned, the governing verb can be either present or past tense, without changing the temporal relations expressed by the perfect infinitive – it expresses anteriority of the denoted event. Figures 13 and 14 show these relations for sentence (60) with the governing verb in present and past tense respectively:

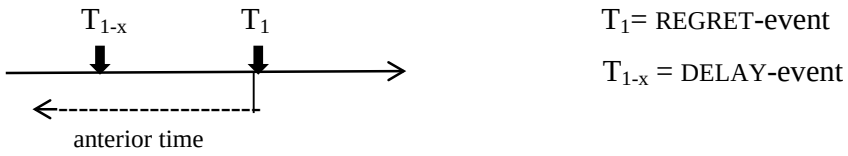


Figure 13. Temporal relations in (60).

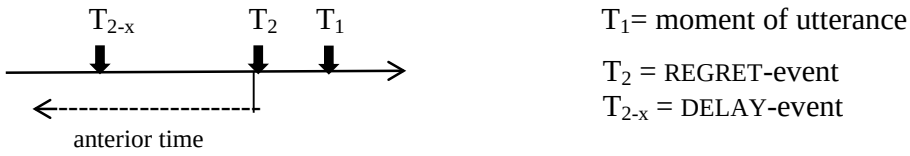


Figure 14. Temporal relations in (60) with past tense verb.

Similarly to *remember*, *regret* can also be used with the present infinitive in certain contexts. Thus, it is frequently used in phrases like *I regret to say…*, *I regret to see…*, *I regret to inform…* . However, if used in this way, the verb *regret* loses its retrospective function. For example, a pilot might say *I regret to inform you that our flight had to be cancelled*. In this case, the regret lies in the exact moment of the utterance or rather regards the utterance itself and expresses the feeling of sorrow. Otherwise, as already mentioned repeatedly, the meaning of the verb requires that the event of regret has to have happened before someone is able to regret it, which is also why the perfect infinitive is not interchangeable with the present infinitive when following this verb.

As was just shown, the '*remember* to have + V_{pp}' and the '*regret to have* + V_{pp}' constructions show the same formal and structural properties as the ones described characteristic to the 'perfect infinitive construction'. They are, however, not quite as restrictive, unpredictable and their semantic interpretation is not problematic at all. I will now turn to the analysis of the other, more problematic type of the perfect infinitive construction in order to find answers to the questions posed in the introduction. Thereby, the '*intend to have* + V_{pp}', the '*mean to have* + V_{pp}', the '*expect to have* + V_{pp}', the '*be to have* + V_{pp}', the '*be able to have* + V_{pp}' as well as the '*manage to have* + V_{pp}' constructions will be discussed in more detail.

6.4. Perfect infinitive constructions not expressing anteriority relations

6.4.1. The '*intend* + perfect infinitive' construction

In most cases when the main verb *intend (to)* occurs in combination with a perfect infinitive, it is indeed in the past tense (both active and passive).

(61) it was only during Samuel's judgeship that prophetic Yahwism finally reluctantly acceded to the people's request for a hereditary monarchy, the authority and legitimacy of which, however, **were still intended to have been** conditional upon observance of the covenantal principles. (COCA)

(62) One recited a speech which **was intended to have been spoken** by another, and he spouted one that should not have been spoken at all. (COHA 1834)

(63) I removed to New Milford, from whence I **intended to have set out** for Boston. (COHA 1859)

(64) "Yes", replied Haight, with his usual smile, "and I **intended to have spoken** to you about it this morning, but I forgot it." (COHA 1897)

The '*intend* to have + V_{pp}' construction is a schematic construction with only its head being substantive. The lexical item *intended* can change, however, depending on the person and number of the subject. The outer box in Fig. 15 shows that the construction is headed by the lexical item *intended*, but it also shows that the whole diagram does not represent a lexical construction, which is evident by the missing marking [lex +]. The same box also displays the semantic aspects of the construction, which will be discussed below. The second biggest box in the diagram shows that the verb *intended* governs a non-finite verb phrase. The governing verb itself is further specified as a lexical item [lex +]. Its most important semantic features are that it is past tense and that it can be either active or passive. Fig. 15 also shows the valence relations of *intended*. Thus, as it is used in its transitive form, the verb takes a subject and an object complement. The non-finite clause is headed by a perfect infinitive which is often, but not necessarily, followed by a complement [comp]. The other part of the valence set [gf subj] links the perfect infinitive to the subject of the governing verb. The head slot of the non-finite clause is not substantive; therefore, at least theoretically, the perfect infinitive of any verb can be inserted.

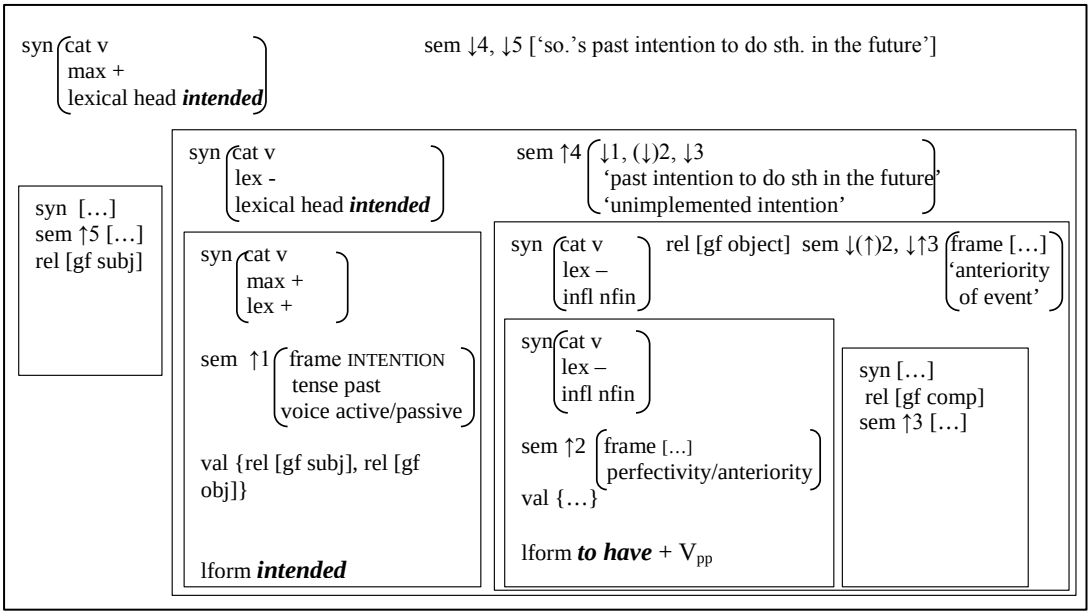


Figure 15. Box representation of the schematic *'intend* + perfect infinitive' cxn.

Turning now to the semantic aspects, the box diagram in Fig. 15 displays that the perfect infinitive element has anteriority meaning in isolation, but also in combination with its (optional) complement. On the next higher level, however, there seems to be a contradiction between the anteriority meaning of the isolated perfect infinitive and the overall meaning of the '*intended* + perfect infinitive' construction, which is that of the event denoted by the perfect infinitive being posterior to the intention. Even though this interpretation is logical, since it would be illogical if an event happens before it has been intended, the use of the perfect infinitive with its anteriority meaning in the construction seems inconsistent. I will try to exemplify this by a construct retrieved from BNC:

(65) Is she gone? I **intended to have said** something else to her. (BNC)

This construct inherits the '*intend to* + perfect infinitive' construction, including the lexical head and its valence sets. Since it is an actual language construct, it is fully specified. The subject requirement is realized by the first person singular pronoun *I*, the object is, just as in the representation above, realized by a non-finite clause headed by the perfect infinitive *to have said.* The perfect infinitive has a complement too, namely the pronoun *something else* and the prepositional phrase *to her*, which has the syntactic function of an adverbial. For reasons of clarity the subject and the complements of the perfect infinitive are not further described in Fig. 16.

In this construct, the perfect infinitive denotes a perfective SAY-event and bestows this meaning upon the whole non-finite clause because it is its head. On the next higher level, where the past governing verb *intended* meets its infinitival complement (↑4), the meaning of the perfect infinitive suddenly reverts to its opposite – now suggesting posteriority. This fact that the perfective meaning does not unify or match with the meaning of the higher structural level is indicated by the upwards and downwards arrows in brackets (↓↑2).

The semantic frame of the whole construct is given by the governing verb, including the temporal frame of past intention. According to the temporal relations established by a past verb and the perfect infinitive in the examples with *remember* and *regret, to have said* would have to express a saying event anterior to the intention of saying. While this structure works well on the formal level, it does not translate very well onto the semantic level in this case and would cause an illogical reading of the construct (cf. Fig. 17).

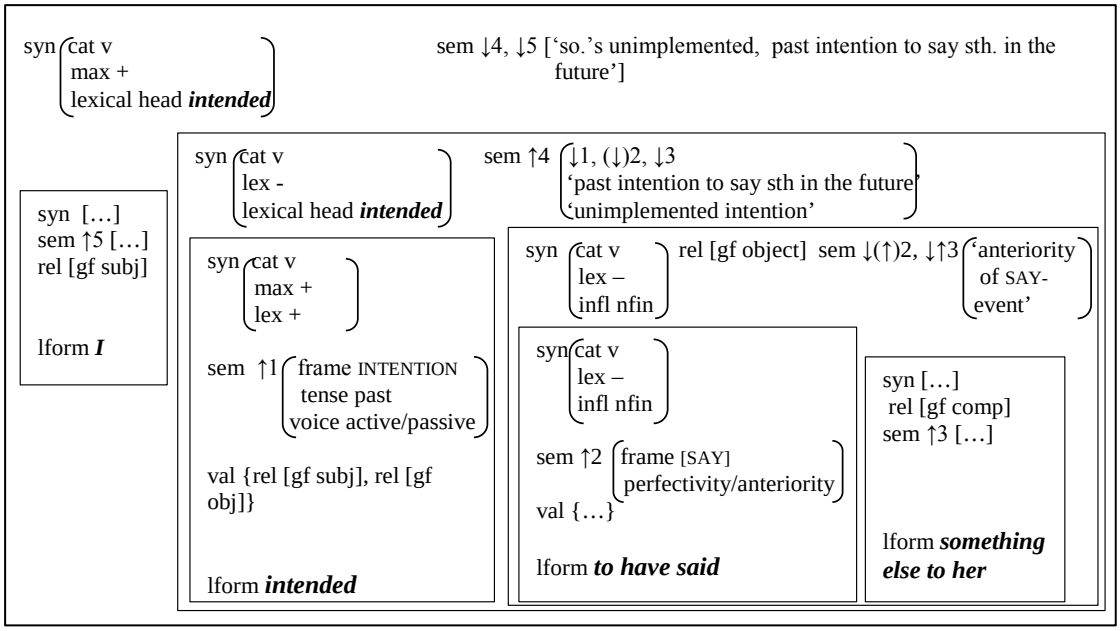


Figure 16. Box representation for the construct in (65).

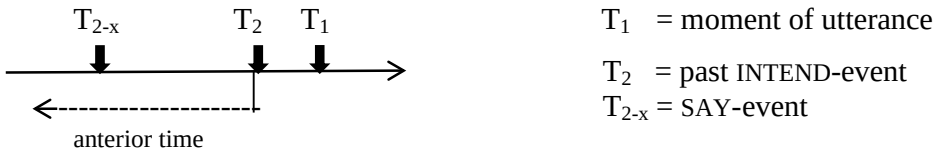


Figure 17. Illogical temporal relations in (65).

The semantics of the verb *intend* rather suggest that, even though it might be contradictory with its form, the perfect infinitive expresses posteriority, i.e. the SAY-event was intended to take place at some point in time after the intention was formed.

Figure 18. Actual temporal relations in (65).

It has to be kept in mind, however, that the intended event could not take place and probably will not. For the speaker it has become impossible to implement the intention, i.e. talking to the person they wanted to speak to, because she is gone. This impossibility of putting the intention into action is on the one hand suggested by the context, namely the question *Is she gone?*; on the other hand, in the past tense of the verb *intend* itself the non-actualisation of the intended event is already implied.

In some rare cases, the governing verb is negated. Of course, this negation also causes the meaning of the whole utterance to change. While in sentences which are not negated the past tense intended suggests the counterfactuality of the proposition express by the perfect infinitive, in negated sentences the negation marker *not* indicates that the intention was actually implemented. Thus, we could argue that there is a matter of double negation: the past tense of the verb *intend* has a negative implication and the negation marker *not* as well, but both together make the meaning of the sentence positive. Example (66) therefore means that peril was indeed brought to a house.

(66) We **did not**, however, **intend to have brought** peril to your house. (COHA 1839)

(67) One moment, Mrs. Martin! You said to me an hour ago that you **didn't intend to have asked** Mr. Barstow to send you an assistant! (COHA 1893)

(68) He got up, however, and went on till the explosion was to have taken place: then he waved his wand, with an air which **was not intended to have been resisted**. (COHA 1834)

Instances of the construction which have not been negated in the first place, especially those followed by an adversative subordinating clause, often cannot be negated afterwards because it would cause semantic confusion. For that reason, example (69b) does not work because the negation means that the speaker did deliver the letter themselves and clashes with the adversative meaning of *but* and the rest of the subordinating clause.

(69) a. I intended to have given you this letter myself, but my personal attendance might possibly be an intrusion. (COHA 1866)

b. *I did not intend to have given you this letter myself, but my personal attendance might possibly be an intrusion.

As already shown in the data section, the '*intend to* + perfect infinitive' construction was very frequent in the 19th century but hardly ever appears in PDE. The rare cases found in more recent texts do not differ in their use from the older ones, however. Moreover, the construction is not only used as in the sentences above but can also function as a pre- or post-modifying clause. In all of these cases, the governing verb *intended* is past passive and heading a reduced relative clause.

(70) Originally **intended to have taken** the form of a binding Convention, it was

watered down to a "Statement" as a result of concerted lobbying by a number of timer-exporting countries, led by Malaysia, which viewed it as an attack on sovereignty, and accused northern countries of hypocrisy, given the fact that they had already destroyed all but a tiny fraction of their own virgin forests. (BNC)

(71) Reform of the board, **intended to have taken** effect on April 1, has yet to be ratified by Brussels. (BNC)

(72) The public money and public liberty **intended to have been deposited** with three branches of magistracy, but found inadvertently to be in the hands of one only, will soon be discovered to be sources of wealth and dominion to those who hold them. (COHA 1826)

(73) By taking this clause in a literal sense, the English courts have gone far towards defeating and annulling the encouragement **intended to have been given** to inventors by that section (COHA 1837)

6.4.2. The '*mean to* + perfect infinitive' construction

The use of *mean to* in the 19th century as shown by the examples found in COHA was very similar to the use of *intend to*. In all but two instances the main verb is in the past tense.

(74) "**I meant to have told** you of that hole," said an Irishman, to a friend who had fallen into a pit in the Irishman's garden. "No matter," said his friend. "I've found it." (COHA)

(75) I suppose you are looking for a letter from me, and **I meant to have written** before this, but somehow I have neglected it. (COHA)

(76) I'll tell her the first thing after breakfast to-morrow. **I meant to have spoken** about it to-day, but when I got down-stairs she had gone out. (COHA)

(77) I knew you would be shocked, Asenath. **I meant to have kept** this to myself. (COHA)

(78) **We meant to have sown** a little barley to-day, but the ground is too dry. (COHA)

(79) "I quite forgot to buy any dinner," exclaimed Mrs. Fraser, starting up. "**I meant to have ordered** a leg of mutton as I went down, and now it is too late; and eggs for a pudding." (COHA)

In these examples *mean to* actually behaves just like *intend to* does in the examples discussed above, not least because it has intentional meaning here. Therefore, it should not be surprising that the box notation for the '*mean to* + perfect infinitive' construction in Fig. 19 shows almost the same properties as Fig. 15, which represents the '*intend to* + perfect infinitive' construction, except for the lexical specification of the governing verb and the grammatical function of the perfect infinitive clause. The finite verb is also the lexical head of the whole construction. It governs a non-finite clause which is headed by a perfect infinitive. The perfect infinitive complement, itself considered as one constituent of the construction, has perfective meaning but on the next higher levels of the construction (i.e. the second biggest box and the outer box) the event encoded by the perfect infinitive does not allow for the anteriority reading on grounds of logical interpretation and the temporal frame established by the governing verb. Unlike with the verb *intend*, the non-finite clause does not function as the object of *mean (to)* here but is considered a catenative complement.

Sometimes verbs like *manage to* or *mean to* which take non-finite complements (i.e. bare infinitives, *to*-infinitives or gerund participles) that do not function as direct objects are called 'catenative'. The name for this category comes from the characteristic that catenative constructions are repeatable and can build a long chain of verbs that are followed by a non-finite complement (Quirk et al. 1995: 147n; Huddleston & Pullum 2002: 65). The ability to build such chains is, however, not exclusive to the catenative verbs, but can be found with main verbs as well. This complicates the distinction between these two categories and also results in differing classifications. Quirk et al. (1995: 136-137) see catenative verbs as verbs with an intermediate status between auxiliaries and main verbs. In contrast, Huddleston & Pullum (2002: 1177) use the term in a much broader sense. From their perspective, auxiliaries (modals as well as others) are included within the category as well as verbs that would be considered main verbs elsewhere. As the grammatical function of the perfect infinitive clauses is not the main focus of this thesis, the distinction between catenative and non-catenative verbs is not very important in this paper either.

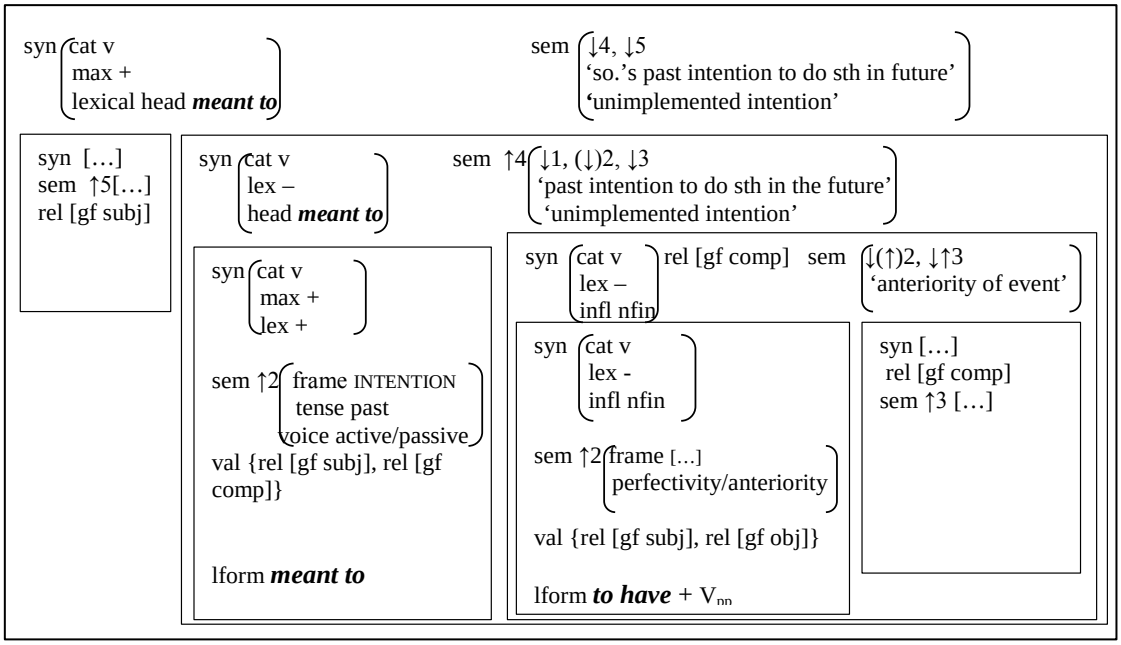


Figure 19. Box notation for the schematic '*mean to* + perfect infinitive' cxn.

The semantic aspect of an unimplemented intention applies here as well, maybe even a little more than with the construction headed by the verb *intend*. In the 'Longman Language Activator' (2006) it is not only suggested to use *mean to* especially in spoken language, but also in cases when one forgot or did not get the chance to do what one wanted to do. Hence, when *mean to* is marked for past tense, it carries the sense of counterfactuality. For example, for sentence (77) this means that the speaker did not actually keep the news or the information for themselves but gave it away. As was already elaborated on in section 2.2, the common assumption about the perfect infinitive in sentences like the ones discussed in this paper is that the perfect infinitive marks counterfactuality. This means that the perfect infinitive is believed to indicate that whatever was intended to happen did not happen eventually. However, all of the examples given and especially the box representations of some of them clearly refute this hypothesis since the perfect infinitive is not able to mark counterfactuality, neither on its own nor in combination with its past tense matrix verb. Especially, when considering that the past tense of the verbs *intend to* and *mean to* already implies that the intention was not acted out. Moreover, Molencki (1999: 97-98) points out that in the early instances the perfect infinitive as a marker of counterfactuality was often accompanied by an explicit clause, mostly introduced by the adversative conjunction *but*. This is still the case in Modern English as can be seen in most of the examples above and also in the following:

(80) I once intended to have insinuated that I wrote his letters too; **but** that was before I saw them; it won't do now; no honour there, positively. (COHA 1887)

(81) This raillery was intended to have been uttered with a pert archness; **but** the crimson cheek and tremulous lips entirely defeated the intention. (COHA 1852)

(82) Dorothea had replied. Or meant to have replied, **but** perhaps she had not, perhaps the knowledge of later years had imposed itself on that first memory. (BNC)

(83) I meant to have told you yesterday **but** I – I think I went fishing or something. (COHA)

(84) I meant to have seen where all these doors led, **but** was so busy dressing I had no time, so must leave it for my amusement to-morrow. (COHA)

In cases where there is no explicit *but*-clause, the context usually supports the implication of the finite verb that the event did not take place, as in the following examples:

(85) Vincent Skinner, the Writer of the Tallies, complained that "the distraction I have had about quarrels to my place have hindered me much and now so utterly discouraged me that the service I intended to have done **I could not**…" (BNC)

(86) … and was now informed that actually there had been an error, that he was not meant to have been at the tearoom at all, that he had been mistaken for someone more popular, someone better-looking. (COCA)

(87) There is one thing I meant to have asked you before. (COHA)

(88) One moment, Mrs. Martin! You said to me an hour ago that you didn't intend to have asked Mr. Barstow to send you an assistant. (COHA 1893)

Another interesting example would be (89). In this sentence, besides the finite verb phrase *was meant to,* a single adjective – *alleged* – contributes the counterfactuality interpretation.

(89) The **alleged** bomb plot was meant to have happened right here in Portlands Pioneer Square where thousands of people gather on Friday night for the Annual Christmas Tree lighting ceremony. (COCA)

Now that we have seen that the finite verbs of intention themselves, as well as the explicit adversative clauses clearly mark counterfactuality, the question is why it is still commonly believed that the perfect infinitive is the crucial element. This issue will be discussed in more detail below.

Let us turn back to the '*mean to* + perfect infinitive' construction. What is significant about the examples for this construction is that the majority has a first person singular pronoun subject. Third person pronoun subjects are rare and mostly appear in passive sentences. The same can be observed with the examples for the construction governed by *intend to*. Nevertheless, the parallels between the constructions governed by *intend to* and *mean to* disappear when it comes to more recent examples from BNC and COCA. Most of these examples are passive instead of active and many are present tense.

(90) The event **was meant to have been** a demonstration of the balloonist's art and the accident was dismissed by the organisers as the exception which proves the rule. (BNC)

(91) The party **was meant to have been** a thank-you to the casino staff from the management. (BNC)

(92) What was going on? Gene Bennett has not talked. Police can only speculate. Could it be, they wonder, that three bodies **were meant to have been** found, together? (COCA)

(93) He **is meant to have been** a brave warrior, but now looks very old and weak. (BNC)

(94) Right, Craig's just about to beat up Jane man, and he's hitting her because **she's meant to have taped over** something and I'm taping over even more of it now! (BNC)

(95) Napoleon **is meant to have said** that an army marches on its stomach. (BNC)

(96) Just for the record, a limited company **is meant to have filed** accounts with Company's House in London – or Edinburgh if it's registered in Scotland – within 10 months of its financial year end. (BNC)

(97) Since 1991 health authorities **are meant to have ensured** that mentally ill people who need continuing care are monitored on formal care programmes. (BNC)

From these diverse tense environments of the perfect infinitive, several different semantic interpretations of the verb *mean to* can be deduced. First, when *mean to* is in the past tense active, its semantics do not seem to be much different from *intend to*, whereas in the past tense passive two different meanings are possible. On the one hand, it might also have the meaning of intention; on the other hand, it might be paraphrased with *is believed* or *is thought* – i.e. *The party* was believed *to have been a thank-you*. Hence, examples (91) and (92) are ambiguous and allow for both interpretations. In the sentences with a present tense passive matrix, *mean to* can either mean *is believed/is thought* or *is supposed* (93)-(95). Sentence (96)

allows for two different interpretations as well. In one case *filed* would be analysed as a past participle with *have* being its perfect auxiliary, in the other case *filed* would be the past participle used as a pre-modifier of the noun *accounts* and *have* would not be an auxiliary verb but a main verb. In the latter interpretation, this sentence would not be relevant for this analysis, however.

All these comparisons as well as the analyses and diagrams strongly suggest that the function of the perfect infinitive is closely linked to the tense of the governing verb; its voice is a factor which should not be neglected either since, in the case of *mean to*, it can be deciding about the meaning of the verb. The verb *mean to* in governing position and its different meanings is also very interesting in so far as it supports the hypothesis that the occurrence of the perfect infinitive construction depends on the meaning of the governing verb, which was mentioned as one of the criteria for the construction above. Thus, in sentences (93) – (95), the present tense passive *is meant to* has the meaning of *is believed to*, which of course has a very broad semantic range, including some sort of retrospective meaning. This sense of the verb definitely applies in these examples, which is why the perfect infinitive marks anteriority of the event. The governing verb marks a present state of thought, belief, etc. about the past and the perfect infinitive ensures to transport the event of the proposition to an undefined point in the past. The representation of the temporal relations in sentence (94) therefore looks very similar to the representation of the temporal relations in the '*remember* + perfect infinitive construction'. Thus, these constructions are rather unproblematic, have been analysed in more detail already and do not need further elaboration here.

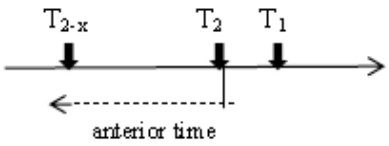
Figure 20. Temporal relations in construct (94).

The other type of construction with the governing verb in the past tense raises a few more questions, but the close connection between the meaning of the matrix verb and the meaning and function of the perfect infinitive gets even stronger support from the examples in (90) and (91), where the finite verb is past passive and where two different interpretations are possible. The following show the two options of how to substitute the finite verb in sentence (91).

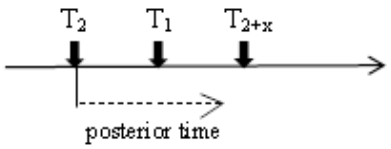
(98)

a. The party **was intended to have been** a thank-you to the casino staff from the management.
b. The party **was believed/thought to have been** a thank-you to the casino staff from the management.

In the sense of sentence (98a), sentence (91) has the usual interpretation of the '*intend to* + perfect infinitive' construction. In the sense of (98b), it carries the impression of a retrospective meaning of the verb *believe*, which was already mentioned above. An intention is always directed towards the future, whereas a belief has a much broader temporal scope. Therefore, the perfect infinitive takes the anteriority meaning in this case[9].



T_1 = moment of utterance
T_2 = past MEAN TO-event
T_{2-x} = BE-event



T_1 = moment of utterance
T_2 = past MEAN TO-event
T_{2+x} = BE-event

Figure 21 & 22. Temporal relations for (98b) and (98a).

The previous paragraphs do not only confirm the decline of the construction in PDE, but also show that there is a shift away from the past tense active governing verb to a past or present tense passive governing verb. In fact, as there is not a single example with a past tense active governing *meant to*, it seems reasonable to assume that this subtype of the perfect infinitive construction is extinct in PDE. A similar observation is to be made for the '*intend to* + perfect infinitive' construction, albeit the one or the other example with past tense active *intended* still occurs.

6.4.3. The '*expect* + perfect infinitive' construction

Another verb that appears frequently with a perfect infinitive is *expect*. With this verb, the perfect infinitive is used to complement a present tense (active or passive) or a past tense (active or passive). From the wealth of examples obtained, in only one of them the perfect infinitive does not mark an anteriority relation.

[9] Strictly speaking, one could, however, also argue that sentence 96b also allows for both possible readings.

(99) It was here that Mr. Brown **expected to have exerted** his talents for pictorial fancy; but a new feature presenting itself, his works rarely had this devotion paid to them. (COHA 1832)

In this example, the verb *expect* is past active and governs the perfect infinitive. The whole utterance is counterfactual and it is the past tense of *expect* itself which carries an implication of non-fulfilment. This is further supported by the following clause which is introduced by the adversative conjunction *but*; it is not the perfect infinitive which indicates that the event has apparently not happened. Similar to *intend (to)* and *mean (to)*, the verb *expect* is also oriented towards the future or future events.

Thus, at some point in the past, Mr. Brown expected something to happen at an undefined point in the future. Therefore, the use of the perfect infinitive, which is now mainly used to express anteriority, is contradictory, since in this case it marks posteriority. The label T_{2+x} indicates that the event was expected to take place at some point after T_2 – either before or after the time of speaking.

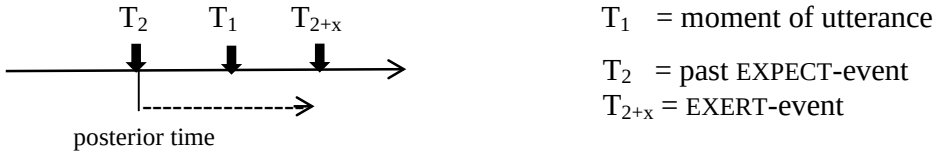


Figure 22. Temporal relations for construct (99).

Although (99) is the only actual instance of the construction, the other constructions using the verb *expect* + perfect infinitive show interesting temporal relations as well and are not totally irrelevant for this study. All the examples with a present tense governing verb, either active or passive, and a following perfect infinitive show anteriority relations. As was just shown, this combination is actually contradictory. This is why most of the examples have reference point in the future by which something is expected to have happened and which dissolves the contradiction caused by the verb *expect* and a perfect infinitive as its complement. Strictly speaking, this construction type could be seen as an instance of past in future. The future reference point is mostly marked by prepositional phrases headed either *by* the preposition by or the preposition *in*. Other temporal prepositions are also possible, though.

(100) IBM UK Ltd expects to have shed a further 2,000 jobs **by July** after accelerating its cost-cutting programme, the Daily Telegraph reports. (BNC)

(101) This is expected to have doubled **by the end of 1990**. (BNC)

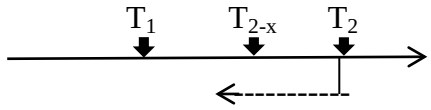
(102) These will not be made public **until tomorrow afternoon**, when the French Cabinet is expected to have recognized Generalissimo Francisco Franco's Burgos regime as the legal government of Spain. (COHA 1939)

(103) **By then** we expect to have pinned down your difficulty so that we can treat it directly. (COHA 1976)

(104) **By the year 2000**, an estimated 82,000 children nationwide are expected to have lost their mothers to the disease. (COCA)

(105) Though the search is far from over, the team expects to have surveyed enough of the sky **within the next two years** to test recent estimates of the Kuiper belt's comet population (COCA)

In these examples, an event is expected to happen in the future. The future is, however, not indefinite, but reduced to a certain time frame and restricted by a certain point before which the event is expected to take place.



T_1 = present moment of utterance/expectation
T_2 = point in future marking time frame
$T_{2\text{-}x}$ = event taking place at an indefinite point

Figure 23. Temporal relations for constructs (100) - (105).

Where the governing verb *expect* is past tense passive, temporal relations are similar, with the only difference that they are in the past. The time frames in these constructions are also usually explicitly marked by a prepositional phrase.

(106) By 1 April 1966 agencies **were expected to have** developed a comprehensive, multi-year programme and financial plan. (BNC)

(107) It was for this reason that the enemy's main effort originally **was expected to have been made** during the period of spring and early summer, when the rains would be at hand. (COHA 1951)

(108) He **expected to have returned** to the relative sanity of corporate life by then. (COHA 1976)

(109) In fiscal 2002, European sales were 10 percent of the company's business; in fiscal 2003, they **were expected to have grown** to 15 percent and in 2004, to 25 percent. (COCA)

(110) Finchem said the tour **expected to have resolved** all its contracts by the first week in December. (COCA)

Here, the time of expectation lies in the past, the time of the expected event happening lies somewhere between the past expectation and the present moment of the utterance, i.e. in the future of when the expectation was uttered. What is interesting here is that even though the function of the perfect infinitive is to mark anteriority, the examples seem to be counterfactual anyway. This impression is implied by the past tense of the verb *expect*, which suggests the non-fulfilment of the expectation. In some cases, this impression is confirmed by an adversative clause introduced by *but* (cf. example (99) above). With the only exception that they specify a temporal reference point, examples (106) – (110) are very close to example (99) and thus to the more prototypical examples of the perfect infinitive construction. Theoretically, in all of these examples one could exchange the perfect infinitive for the present infinitive. The perfect infinitive seems to be the semantically more accurate option because it indicates that the event should have been completed before that reference point, whereas the present infinitive implies that the action goes on to this point. Therefore, even though the perfect infinitive expresses anteriority relations, we are not dealing with the same construction type as the '*remember* + perfect infinitive' construction. While in the latter, the anteriority relation holds between the perfect infinitive and the governing verb, in the former, this relation holds between the event encoded by the perfect infinitive and a future reference point.

After discussing all these different instances of the perfect infinitive construction, it seems already pretty safe to confirm the hypothesis that the counterfactuality of many of these constructs is not marked by the perfect infinitive. Rather, counterfactuality is expressed by the past tense forms of the verbs and is confirmed by the subordinating clauses introduced by the conjunction *but*. Furthermore, there is another type of perfect infinitive construction which provides evidence against the counterfactuality argument, namely the '*be able to* + perfect infinitive' construction.

6.4.4. The '*be able to* + perfect infinitive' construction

This construction type behaves slightly different to the constructions just discussed. Two of the examples from the corpus search show a similar pattern to the constructions with the other verbs, namely with the governing verb in the simple past and a following perfect infinitive.

(111) I was bordering my death. My lungs were filled with seawater. I believe that if the waves had not calmed down before morning – a great spiritual gift, so Tony **was able to have increased** spiritual, physical and mental strength – we might not have made it. (COCA)

(112) But I liked serving and I liked to feel that **I was able to have sold** somebody something. (BNC)

Example (111) is ambiguous. It could either be interpreted with *to have increased* as the perfect infinitive complementing *was able to* or it could be interpreted with *have* as a main verb and *increased* as a pre-modifier of *spiritual, physical and mental strength*. Unlike the constructions discussed above, here the past tense governing verb does not imply non-actualisation of the proposition. Instead, the verb, and consequently the whole construction, express successful implementation of an action and thereby refute the counterfactuality argument without much effort. From this example it also becomes evident that it is not the 'verb$_{past}$ + perfect infinitive' construction per se which carries counterfactual meaning, but that it is contributed by some of the verbs which govern daughters of the construction. This is represented for example (112) in Fig. 25. The past tense of *be able to* is the decisive clue that the SELL-event took place and was successful, which is the meaning of the whole construct. The perfect infinitive element of the construct marks anteriority, but as the complement of past *be able to* it cannot keep this meaning. It was already argued above that *be able to* is directed towards the (immediate) future, or at least is simultaneous with its complement. Therefore, the ability to sell something always has to be there before something can be sold and it is impossible to predict the meaning of the construct from the meaning of the isolated elements it is constituted of.

Due to the fact that *be able to* is not a main verb but a semi-auxiliary, it does not take an object like main verbs do when they are used in transitive function. Instead, the non-finite clause functions as the complement. Above I have argued that the perfect infinitive construction inherits the pattern of the transitive construction or rather the sub-type thereof

where an infinitive clause functions as the direct object [[Subject] [TrV [infinitival object clause]]].

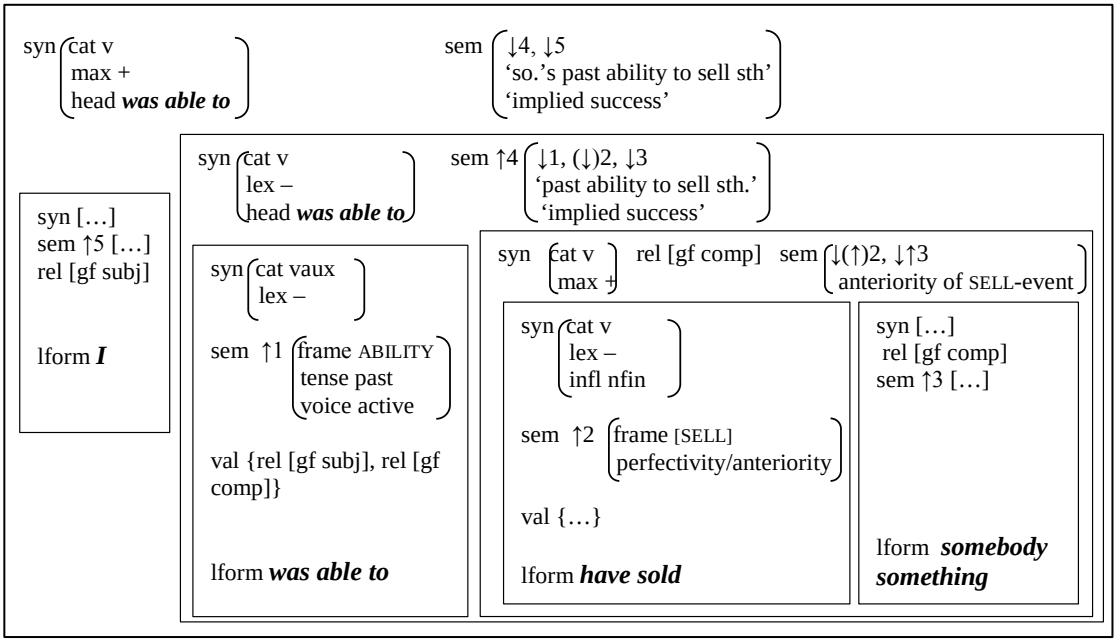


Figure 24. Box representation for construct (112).

Obviously, this does not apply to the '*be able to* + perfect infinitive' construction, neither does it for the '*mean to* + perfect infinitive' construction. A plausible way to bring them together would be to assume a prototype structure for the category of the perfect infinitive construction. Hence, the constructions with the past transitive verbs as the matrix are more prototypical and the ones where the perfect infinitive complement does not function as a direct object are less prototypical, even though they all show the same structural pattern.

6.4.5. The '*manage to* + perfect infinitive' construction

A similar observation can be made for the '*manage to* + perfect infinitive' construction. The past tense of the verb *manage to* definitely expresses success and is thereby quite similar in its meaning to the past tense of *be able to*. In the following constructs, the perfect infinitive neither implies anteriority nor counterfactuality.

(113) She put it in a letter which she **managed to have posted** in Baltimore, It was intercepted there. (COHA 1939)

(114) Mandy told Nigel about this when she went to work, and he did a piece about

the exploitation of raw emotion which he **managed to have syndicated** round a group of provincial papers and rewrote for one of his magazines. (COCA)

(115) The scullery was full of women, but Nana being small was able to slip out behind them, and as she closed the door she somehow **managed to have procured** a coat off one of the hooks on the back of it and wrapped it around Nora. (COCA)

(116) Also, I'm glad to find that some of you **managed to have gone** to the very last one, whom Jonathan was expecting to see (Google)[10]

(117) Best wishes to every single one of those of you who **managed to have gone** through all my text (Google)[11]

(118) Peter, Could you please explain to us how you **managed to have won** every contest you've entered in the last five years and why… (Google)[12]

The analyses of constructs that are instances of the '*manage to* + perfect infinitive' construction would look very similar to the one presented for the '*be able to* + perfect infinitive' construction in Fig. 25 as the perfect infinitive clause is usually not analysed as the direct object of the verb *manage to*. Sentence (115) is worth a closer look, however. What is interesting here is, that the verbs *was able to* and *managed to* are used consecutively within the same utterance, but with a present infinitive and a perfect infinitive complement respectively, even though there is no apparent difference which would encourage either the former or the latter usage. Both clauses express a successful undertaking and one gets the impression that the use of the perfect infinitive construction is nothing but random.

While past tense verbs like *intend to*, *mean to* or *expect to* suggest unreality of an event themselves, this meaning aspect is not inherent to the past tense of *be able* to or *manage to*. This does not mean that they cannot be used in a counterfactual utterance though. In such a case the governing verb has to be negated in one way or another. Then, obviously, it is again not the perfect infinitive that makes the utterance unreal or counterfactual.

(119) At the end of her life M'Clintock regretted that she **was unable to have done** more for the cause, but Stanton pointed out the importance of M'Clintock's influence within her own family (Google)[13]

[10] http://forum.jonathanansell.com/viewtopic.php?f=55&t=3221&start=45 (13 Apr. 2012)
[11] http://vulgariscience.wordpress.com/2011/08/06/the-language-of-dna/ (13 Apr. 2012)
[12] http://masteryofself.wordpress.com/2010/10/23/a-step-by-step-law-of-attraction-system-to-win-the-lottery-my-complete-secret-theta-method-revealed/ (13 Apr. 2012)
[13] http://books.google.at/books?id=-2iHAAAAMAAJ&q=At+the+end+of+her+life+M%E2%80%99Clintock+regretted+that+she+was+unable+to+h

(120) No, Yuvraj, Yet India **almost managed to have won** all 3 tests. (Google)[14]

Thus, in (119) the negative version of the verb *be able to – be unable to* – was used to make the sentence counterfactual, while in (120) the adverb *almost* indicates that India did not win all three tests.

6.4.6. The '*be to* + perfect infinitive' construction

The only construction type which has not been discussed yet is the one that occurs most often in older as well as more recent texts, namely the '*be to* + perfect infinitive' construction. The following are examples from COHA, COCA and BNC.

(121) Forty-seven canvases from the Contra Costa Road collection that **were to have toured** the country were destroyed in the fire. (COCA)

(122) Dennis Hastert The new House speaker **was to have participated** in a publicity stunt by standing next to a horse on the Capitol grounds -- demonstrating that Republicans were " workhorses, " not " show horses. " Hastert canceled, Hill rumor has it, because he's scared of horses. (COCA)

(123) The operation **was to have taken place** anyway in a few days, but her condition worsened on the flight from Zagreb. (BNC)

(124) THE third week in May was billed as the week in which Bill Clinton would join FDR as one of America's great social reformers. He **was to have unveiled** a health-care plan that managed, at a stroke, to introduce universal cover, control prices and, thus, tame the deficit. Instead, Mr Clinton spent the week drumming up popularity by giving speeches in Los Alamos and playing basketball (badly) in Los Angeles. (BNC)

(125) Father **was to have met** us at the Bend with relays of mules. We have waited forty eight hours and can wait no longer. (COHA 1892)

(126) We **were to have been married** in June, but the lady lost her fortune, and the marriage was deferred. (COHA 1860)

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ave+done+more+for+the+cause,+but+Stanton+pointed+out+the+importance&dq=At+the+end+of+her+life+M%E2%80%99Clintock+regretted+that+she+was+unable+to+have+done+more+for+the+cause,+but+Stanton+pointed+out+the+importance&hl=de&sa=X&ei=_SuZT4PlJcKeOrinwcgG&ved=0CDEQ6AEwAA (15 Apr 2012)

[14] http://armball.blogspot.com/2011/07/indias-first-test-woes.html (13 Apr. 2012)

In their accounts (cf. section 2.2) Larreya (2003) and Berezowski (2004) both use examples with *was to* for their analyses. Neither of the authors, however, specifies the form of the past form of *be + to* in such constructions any further. Berezowski simply counts it as an instance of the main verb *to be* and states that this is the only matrix verb after which instances of a counterfactual interpretation of the perfect infinitive can be found in PDE (2004: 90). This concurs with what can be found about it in a dictionary. According to the Oxford Advanced Learner's Dictionary (2005: 118) *be + to do sth.* has three different meanings. One is used to say what must or should be done: *I am to call them once I reach the airport*. A second meaning is used to say what is arranged to happen: *They are to be married in June* and a third is used to say what happened later: *He was to regret that decision for the rest of his life* (= he did regret it). Considering all three choices, only the second one seems to work for the examples above. There is, however, another option. Palmer (1990: 164-65) considers *is to* as a modal verb[15] – at least formally. Just like the core modal verbs, it does not have non-finite forms (this is why he uses the finite form *is to* instead of *be to*) and therefore cannot be preceded by any other verbs. While its present forms refer to planned or arranged events in the future, the past forms refer to planned events in the past which may or may not have taken place. The latter, however, strongly suggest that the planned event was not actually implemented, which is further supported by either explicit *but*-clauses or other clues in the context pointing towards the non-actualisation of the plan (cf. examples (121) – (126)).

Hence, the singular and plural past tense forms of *be to* do not only have a similar lexical form, but also have a similar status as the semi-auxiliary *be able to*. This is evident from the fact that the valence of this verb does not require an object, only an infinitival complement. Semantically, *be to* is very similar to *intend (to)* and *(mean)* to. While the latter two verbs denote an intention, the meaning of *be to* communicates an already fixed plan or arrangement, i.e. it is more certain than just an intention. The past forms encode futurity from a past reference point. In this use it is not considered a genuine case of future-in-the-past, however, as it is not guaranteed that the arrangement is sustained and fulfilled. Rather, its past tense forms imply that the plan was not implemented (Quirk et al. 1995: 218-219).

(127) She **was to have worn** a diamond tiara. (BNC)

[15] Quirk et al. (1995: 143) label it as a "modal idiom".

Fig. 26 illustrates the box notation of the construct. It follows the same pattern as the constructions discussed before. Therefore, I will refrain from describing this representation in more detail to avoid repetitiveness and to address issues that all of these constructions have in common.

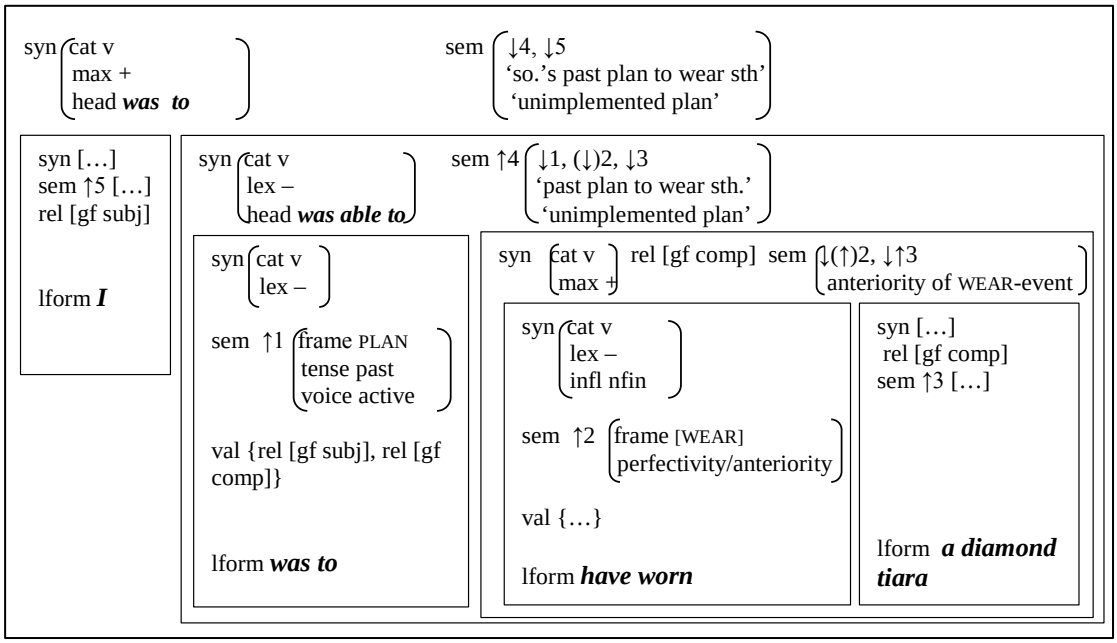


Figure 25. Box notation for construct (127).

6.4.7. Perfect vs. Present Infinitive

It was pointed out earlier that instances of the perfect infinitive constructions have corresponding constructions with a present infinitive and that these do not show an obvious difference in meaning. Hence, it is difficult to say whether there is a semantic change between the following sentence pairs.

(128)

a. "I **intended to have brought** them heaps of things", she said, "but we came home so suddenly I had no time". (COHA)

b. "I **(had) intended to bring** them heaps of things", she said, "but we came home so suddenly I had no time".

(129)

a. I **meant to have told** you yesterday but I – I think I went fishing or something? (COHA)
b. I **(had) meant to tell** you yesterday but I – I think I went fishing or something?

(130)

a. But I liked serving and I liked to feel that I **was able to have sold** somebody something. (BNC)
b. But I liked serving and I liked to feel that **I was able to sell** somebody something.

In a CxG box diagram, the notation for the form-meaning pairing of the construction with the present infinitive does not differ greatly from the already discussed representation of the perfect infinitive construction either. Representative for the number of other options, the diagram for (128b) (Fig. 27) will be discussed briefly.

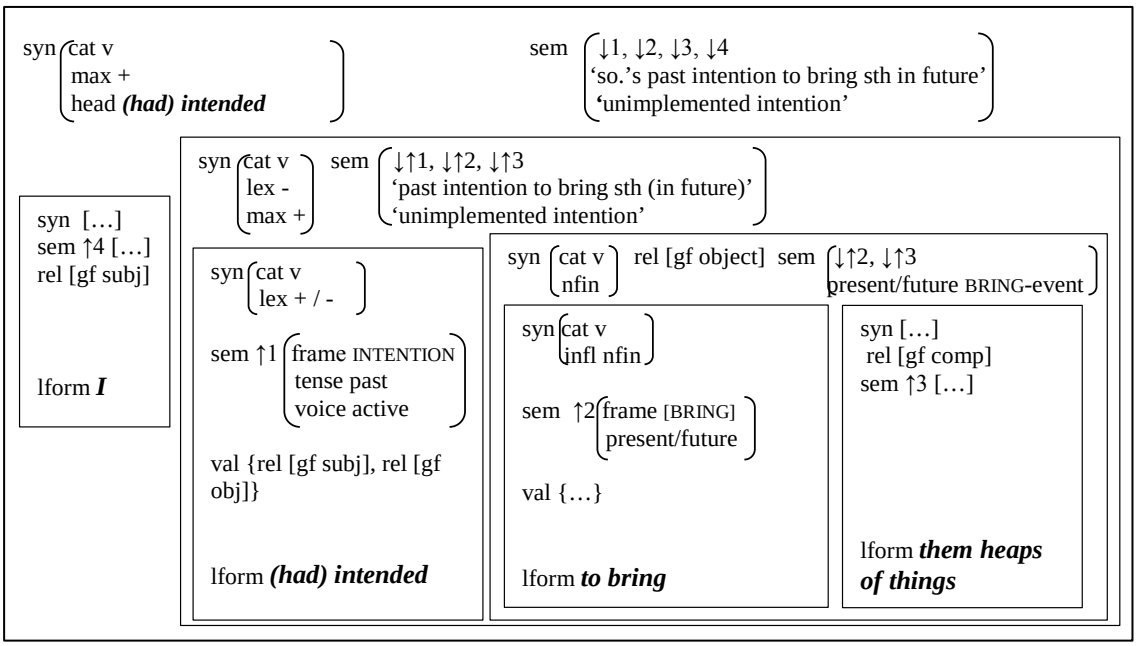


Figure 26. Box notation for the present infinitive cxn in (128b).

The two largest boxes in the diagram, representing the whole construct and the predicate, show that the complementation of past (perfect) *intend* with a present infinitive can be read in just the same way as the '*intended* + perfect infinitive' construction. The apparent difference to the analysis of sentence (128a) would be that here, in (128b), a componential analysis is possible because the meaning of every single element can be combined to produce the meaning of an intended, but not actualized, event of bringing heaps of things. This is also reflected by the arrows and numbers for the semantic attribute in the outer box (↓1, ↓2, ↓3, ↓4). They indicate that the meaning of the whole construct unifies with the meaning of the constituents. Hence, sentence (128b) also carries the meaning of an unimplemented intention, despite the use of the present infinitive which is believed to transport facts (cf. Molencki 1999: 100). Molencki (1999: 100) uses three examples to exemplify this claim about the

factuality of the present infinitive (cf. (11) – (13)). What the author does not consider, however, is that her only example using the present infinitive, (11) *Iudas Scarioth, oon of hise disciplis, that **was to bitraye** him,* makes use of another sense of the verb *be to* as the examples with the perfect infinitive in (12) and (13). While the latter two sentences use *be to* in its sense of a plan or an arrangement, in (11) it is used to communicate something that happened later (cf. Section 6.4.6). Hence, Molencki is right in saying that in this case the present infinitive refers to a fact, but is actually wrong in comparing it with another use of the verb *be to*.

Hence, this is yet another argument against the assumption of the perfect infinitive as a counterfactuality marker and the ensuing conclusion that the present infinitive implies success. Especially examples (130a) and (130b) illustrate very nicely that the interpretations of successful or non-successful implementation do not stem from the present or the perfect infinitive respectively, but rather from the semantics of the governing verb since both sentences, also the one using the perfect infinitive, refer to a factual event.

6.4.8. Discussion

The brief overview of the history of the perfect infinitive already showed that its development depended on the combination with modal verbs, which can be seen as a consequence to the loss of the primary function of the modals *wolde*, *mihte*, *sceolde* and *ahte* to mark past modality. To compensate for this development, the auxiliary *have* was added and should henceforth function as the past tense marker of modals in certain contexts. Now, Molencki (1999: 97) points out that not long after the development of the perfect infinitive in combination with a modal verb, but especially in the Late Middle English and Early Modern English period, other verbs also started to take a perfect infinitive as a complement. These verbs included verbs of intention, purpose, expectation or hope in their past tense forms. In this past tense environment, the perfect infinitive is said to function as an indicator of the non-fulfilment of the intention, purpose, etc. In the previous sections I have already tried to show that the assumption that the perfect infinitive has a counterfactual meaning is not supportable. Instead, I would like to claim that the perfect infinitive has never been a marker for counterfactuality but that the *have* + past participle forms in the constructions in question simply developed as an analogy to the earlier constructions of modal verb + *have* + past participle, which, as a matter of fact, often imply hypothetical or counterfactual meaning.

6.4.8.1. A matter of analogical extension?

Analogy is a central concept in language and linguistics, especially historical linguistics and language change. Analogy is at work in translations, in linguistic theory, but also within languages (Givón 1991: 258; Itkonen 2005: 6-11). Thus, the system of verb inflection in Latin (e.g. *am-o, ama-s, ama-t* 'I love, you love, he/she/it loves') is based on analogy and "shows that analogy pervades language to such an extent that it is difficult for us to imagine a language not governed by analogy" (Itkonen 2005: 8). Anderson, Dawson and Joseph (2010: 227) see speakers' tendency to prefer uniformity of language consisting of regular patterns and analogy is seen as a mechanism that can help to make a language more regular. A common definition of the concept therefore is to talk of it as "structural similarity" (Itkonen 2005: 1). Givón (1991: 258) argues that

> [a]lmost all creative-elaborative diachronic change in language, be it phonological, morpho-syntactic, semantic or discourse pragmatic, is in principle analogical. That is, it involves the language user's recognition – conscious or subliminal – of similarities between two structural or functional contexts.

Moreover, analogy is said to follow the principle of 'one-meaning-one-form' and that it is its task in language change to "arrange things in accordance with this principle" (Lass 1980: 71). This principle of 'one-meaning-one-form' is also central to the concept of iconicity, as already presented in Section 3. This is not the only parallel between these two concepts. As Itkonen (2005: 7) shows, iconicity of language and reality is also defined as a relationship of 'structural similarity'. Analogy is probably most often discussed in terms of its role in phonological and morphological change. However, analogy can also be found on the level of syntax and syntactic change. Thus, two sentences showing a similar pattern or construction, the SVO word order in English for example, are used in analogy to one another (Itkonen 2005: 4). Syntactic analogy works in such a way that the structure, or function for that matter, of an older construction is extended to a newer one: "Analogical creative change in morpho-syntax extends the applicability of a construction from its original (or 'older') functional context to a new context, one that is judged to be in some way similar" (Givón 1991: 258).

That the perfect infinitive itself has never been a marker for counterfactuality becomes evident from looking at modal constructions in more detail. In her classification of constructions in which the perfect infinitive can occur in PDE, Molencki (1999: 91) states that

it can be found “after modals expressing anteriority and/or counterfactuality”. The examples she gives are:

(131) She may have left.

(132) You should have told me.

In (131) the perfect infinitive *have left* clearly indicates anteriority of the leaving-event, since the example could be rephrased as *It is possible that she has already left the party and therefore we cannot find her now*. Palmer (1990: 10) interprets constructions as in (131) as a “present judgement about a past proposition” and therefore would formulate the corresponding construction slightly different – using past tense for the proposition: *I judge it possible that she left about 10 minutes ago.* In (132) things are somewhat different. Here, the whole sentence is indeed counterfactual. The ‘telling’-event did apparently not take place. Now, the traditional analysis would be that it is the perfect infinitive *have told* that indicates the counterfactuality of the sentence (cf. Brunner 1962: 348; Molencki 1999: 91). What function, then, is ascribed to *should* in this sentence? *Should* is, even though it is formally the past tense of *shall,* an independent modal verb which does not usually express facts, but often carries the implication that an event is not or was not actualized and does not refer to past time (Palmer 1990: 13; 123). It is more difficult, however, to find a counterfactual meaning in the perfect infinitive. The construction *have told,* quoted out of context, does not give any reason to assume that it marks counterfactuality. Rather the contrary seems to be the case. Another aspect is mentioned by Palmer (1990: 124), who argues that the form *should have* most often implies that an event did not take place. It is further claimed that this is used as the past tense form of *should* and not that *have* indicates the past of the proposition of the main verb (which might also be implied by thinking about similar constructions with epistemic modals such as in (131)). According to Palmer (1990: 124) a present obligation, duty or necessity in the present to perform acts in the past “would make little semantic sense”. This distinction between the different uses of the perfective in modal constructions, however, has something to do with the configuration of modal verbs and less so with the different meanings ascribed to the perfect infinitive by Molencki.

Excursus: Past Modality

> At its most general, *modality* may be defined as the manner in which the meaning of a clause is qualified so as to reflect the speaker’s judgement of the likelihood of the proposition it expresses being true. (Quirk et al. 1995: 219)

This definition of modality by Quirk et al. is a little overblown but basically says that modality means a speaker's judgement about whether or not an event is likely to happen. In English, one can differentiate between two main types of modality: epistemic and deontic (or root) modality. The former kind describes 'possibility', 'necessity' and 'prediction' and presents a person's judgement about the likelihood of truth or falsehood of a statement. The latter is about 'permission', 'obligation' and 'volition' and usually comprises human behaviour and how humans have control over events (Quirk et al. 1995: 219; Leech 2004: 84). Nevertheless, modal verbs do not belong to either one category or the other but they all occur in both uses. Now, in this chapter we are concerned with the question about whether the perfect infinitive marks the past of the modal or the proposition. This problem is closely tied to the type of modality used. Thus, an epistemic modal verb is always present because it is usually performative and therefore presents a judgement at the time of speaking (Palmer 1990: 44). In utterances with deontic modals, it is impossible to mark either the modality or the proposition for past: "Again, if deontic modals are performative, the modality cannot be past, and the proposition cannot be past because one cannot (in the present) permit or oblige someone to do something in the past" (Palmer 1990: 45). Let us consult examples (131) and (132) again. The use of *may* in (131) is clearly epistemic; therefore, it is the proposition that is marked for past by the perfect infinitive. What about (132), however? According to Palmer (1990: 59; 81-82), the modal *should* can be used epistemically as well as deontically. As we have just seen though, neither allows for the option to mark the modal for past, even though this is exactly what seems to be the case in (132). In his account, Palmer therefore recognizes a third type of modality, namely dynamic modality which is more objective than the other two types as it is about a subject's ability or volition (as expressed by *can* and *will*) (Palmer 1990: 36)[16]. This type allows the perfect infinitive in a modal construction to mark past modality, but not the past of the proposition. *Should* could be described as the mitigated version of the necessity modal *must* when used in the sense of '*It is necessary for…*' (Palmer 1990: 113; 122). Therefore in (132) the reading of past modality, past necessity in this case, is possible, not least because "there can be no obligation, duty, necessity in the present to perform acts in the past" (Palmer 1990: 124). Because *would, might, should* and *ought to* lost their ability to mark past tense and because there is no other way to tense modal verbs, *have* took over the role of past tense marker in this case. As Palmer points out, "non-finite *have* functions as if it were a marker of the past as well as the perfect" (1990: 45). Summing this up, it seems safe to

[16] This third category of dynamic modality is not without controversy, however. Palmer himself admits that strictly speaking, dynamic modality is not really modal because modality is substantially subjective and dynamic modality is not (1990: 36).

say that the main indicator for unreality in modal constructions is the modal verb itself and there is no reason to assume that this has ever been different. The perfect infinitive seems to contribute to this meaning solely by putting the modality into the realm of the past.

Following this pattern of modal constructions, the perfect infinitive construction must have developed a little later. It is very likely that speakers started to use the past tense of verbs like *intend to, mean to, be to* and *expect to,* which denote an unfulfilled plan, wish or arrangement, with a perfect infinitive complement along the line of the assumption that this is a very similar pattern to the 'modal + perfect infinitive' construction. Strictly speaking, one could also argue that a plan, an intention or expectation always has something 'hypothetical' in its meaning and would explain why this analogical extension of the modal construction came about. The question now is how the '*be able to* + perfect infinitive' construction and the '*manage to* + perfect infinitive' constructions fit in. It sounds like a reasonable explanation to say that this syntactic pattern was subject to further analogy and that its use was extended to even more structures. As was just mentioned, analogy follows the central principle of 'one-meaning-one-form'. The interesting thing here is, however, that analogy apparently did not quite meet up with this requirement in the case of the perfect infinitive construction since the perfect infinitive is interchangeable with the present infinitive without causing a change of meaning. For the sake of the fluency of the argument, the semantic aspects will not be elaborated further at this point but will be discussed in detail further below (cf. Section 7.4).

Even though it seems very clear now what the perfect infinitive is not – namely a counterfactuality marker – we still do not know why the perfect infinitive construction does occur. Especially when considering one's first impression of the oddness of the construction and one's immediate impulse to change the perfect infinitive for the present infinitive the problem does not become any easier to solve.

6.4.8.2. The decline of the perfect infinitive constructions

According to Brunner (1962: 348), perfect infinitive constructions are no longer productive "im guten literarischen Englisch"[17] except for cases where it is not possible to mark the governing verb for past tense, i.e. with modals (e.g. *he must have known it*) and semi-modals (e.g. *you ought to have done it*). In all the other cases PDE speakers prefer to mark past tense

[17] i.e. "in good literary English" (my translation)

at the governing verb (Brunner 1962: 348). Thus, *I should have been glad to go* is preferred to *I should be glad to have gone* and *I had meant to write you a letter* is preferred to *I meant to have written you a letter*.

That Brunner's observations are not entirely true here is suggested by some interesting instances of the '*be able to* + perfect infinitive' construction.

(133) The critical reader may perhaps question the propriety of Carlton's wounding Petro at all, inasmuch as he is represented **to be able to have defended** himself with comparative ease from the heated and headstrong Italian's sword. (COHA 1848)

(134) He seems **to be able to have satisfied** the Providence Journal, which is run by an Australian who has been running the spy system for the British Embassy, and has been printing a lot … about Germany and all the German press. (COHA 1922)

(135) She was relieved **to be able to have helped** him. (COHA)

(136) And it's so incredible **to be able to have had** that opportunity. (COCA)

(137) That'll make an elf feel pretty elfin old. "And lucky," Culig is quick to add, "**to be able to have done** this for so long." (COCA)

(138) **To be able to have studied** something that is making such a difference in the lives of so many people – a lot of people never – never can wake up to that kind of job. (COCA)

(139) The Plaza Hotel, it was a great sale at the time I did it and I was really lucky **to be able to have sold** it for the kind of money because these were the building blocks to coming back and to doing what I've done. (COCA)

In all these examples, the verb *be able to* occurs in present tense or as an infinitival complement and is itself complemented by a perfect infinitive. This distribution of morphology as illustrated in (133) to (139) actually makes little semantic sense upon closer examination. Unless someone is able to travel in time, it is impossible to have the present ability to have done something in the past. Therefore, these instances call the situation of modal constructions like *should have told* back to mind, where the *have* functions as an indicator for the past-ness of the modal verb. *Be able to* is a semi-modal, are there any parallels between these constructions then? Following Palmer (1990: 93), there seem to be obvious similarities. Thus, it is only possible to mark the verb *be able to* for past tense, but not the following proposition, which confirms my initial suggestion that

> it is impossible to refer either to present or to past possibility or ability, but not to the present possibility or ability to do something in the past or to past possibility or ability to do something in the present" (Palmer 1990: 93).

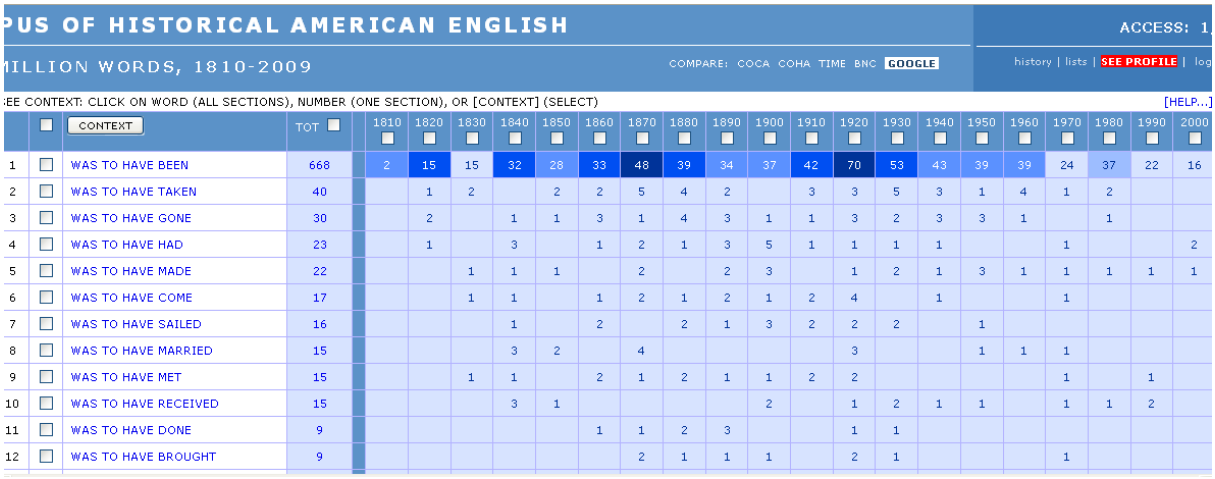
However, as is confirmed by the examples above, it still occurs in actual language use that the proposition consists of a perfect infinitive instead of a present infinitive. Brunner's argument that the perfect infinitive is only used after verbs which cannot be marked for past tense themselves therefore has to be challenged. Obviously, the verb *be able to* can be marked for past tense – *was able to* – but in all of the sentences above, many of which are utterances from PDE, it is not. It seems to be the case that the morphology is distributed 'wrongly', similar to the German Skandalkonstruktion. Thus, in sentences like (133) to (139), one would expect the governing semi-modal to be marked for past tense or past perfect and the verb complement to be a simple present infinitive, i.e. simply the other way round. In some of the examples above, *be able to* is used as a present infinitive verbal complement and is followed by its own verbal complement, namely a perfect infinitive. This morphological realization seems illogical, however, because the temporal relations thus expressed are that the perfect infinitive complement marks an event prior to the condition of being able.

Still, although the results from my corpus search suggest that this type of perfect infinitive construction still occurs occasionally, they also reflect its decrease in use. In their study based on the Diachronic Corpus of Present-Day Spoken English (DCPSE), Bowie & Aarts found that the use of the perfect infinitive (concurring with the downward trend of the perfect aspect in general) faces a considerable decline (2011: 5). Reasons for this decline are not quite clear; there are some hypotheses, however. A comparison between British and American English (BrE and AmE, respectively) shows that the perfect aspect is used much less frequently in AmE than in BrE. The decline of the perfect infinitive might therefore be due to the influence of AmE (Bowie & Aarts 2011: 5). Their search also showed that most perfect infinitives (88 % of all examples, to be specific) occur as the complements of modal auxiliaries. Apparently, the modal auxiliaries themselves are affected by a decline in frequency, which gives rise to the assumption that the decline of the perfect infinitive is a consequence to the decline of the most popular context they occur in (Bowie & Aarts 2011: 6). The decline of the perfect infinitives in contexts where a *to*-infinitive is required is much more significant, however. Therefore, the decreasing frequency of modal verbs cannot be the sole reason for the decreasing frequency of perfect infinitives (Bowie & Aarts 2011: 7). Regarding the present study, the majority of examples of the perfect infinitive construction was found in COHA and

came from texts that were originally published in the 19th or early 20th century. While the use of the perfect infinitive after verbs like *remember* and *regret* was superseded by the gerund, the perfect infinitive constructions met another fate. Not only double perfects were condemned, but also the decline of the perfect infinitive constructions can be, at least to some extent, attributed to the influence of language pre- and proscriptivists in the 18th and 19th century (Molencki 1999: 105). Visser (1984: 2421) presents a number of prescriptive grammarians' exclusively negative opinions on the use of the perfect infinitive. Murray (1805: 277) calls it "evidently wrong", Cobbett (1831: §259) identifies it as a "most common error"; others consider it "ungrammatical" (Abbott 1871: 259) or call it "faulty syntax" (Hall 1873: 200). The fact that the perfect infinitive is frequently interchangeable with non-perfect variants, mostly the present infinitive, suggests that its decrease could also be either a reflection or an indication of speakers' tendency to use simpler verb phrases in PDE (Bowie & Aarts 2011: 8).

From this perspective, Berezowski (2004: 90) seems to be right when he argues that the '*be to* + perfect infinitive' construction is the only subtype of the perfect infinitive construction in PDE. As far as one can tell from the results from COHA, this construction must have been the most frequent throughout the past two centuries. It seems to have developed in the early 19th century and hit a climax about a hundred years later, around 1920. The table in Fig. 28 also shows a continuous decline of the construction afterwards up to the present and thereby confirms Bowie & Aarts's (2011) more general observations. Thus, if there is a limitation to Berezowski's evaluation, it probably is that the '*be to* + perfect infinitive' is not the only option of the perfect infinitive construction in PDE, but probably the only one that is still fairly productive.

Language purists' attempts to ban certain language structures were not always as successful, however. Even though double perfect infinitive constructions were anathema to them, they did not manage to make speakers of English abandon this structure. Double perfect infinitive constructions are still used frequently in PDE, which was ascertained by the searches in BNC, COCA and COHA as well as in Google.



PUS OF HISTORICAL AMERICAN ENGLISH — ACCESS: 1

MILLION WORDS, 1810-2009 — COMPARE: COCA COHA TIME BNC GOOGLE — history | lists | SEE PROFILE | log

EE CONTEXT: CLICK ON WORD (ALL SECTIONS), NUMBER (ONE SECTION), OR [CONTEXT] (SELECT) [HELP...]

		CONTEXT	TOT	1810	1820	1830	1840	1850	1860	1870	1880	1890	1900	1910	1920	1930	1940	1950	1960	1970	1980	1990	2000
1		WAS TO HAVE BEEN	668	2	15	15	32	28	33	48	39	34	37	42	70	53	43	39	39	24	37	22	16
2		WAS TO HAVE TAKEN	40		1	2		2	2	5	4	2		3	3	5	3	1	4	1	2		
3		WAS TO HAVE GONE	30		2		1	1	3	1	4	3	1	1	3	2	3	3	1		1		
4		WAS TO HAVE HAD	23		1		3		1	2	1	3	5	1	1	1	1			1			2
5		WAS TO HAVE MADE	22			1	1	1		2		2	3		1	2	1	3	1	1	1	1	1
6		WAS TO HAVE COME	17			1	1		1	2	1	2	1	2	4		1			1			
7		WAS TO HAVE SAILED	16				1		2		2	1	3	2	2	2		1					
8		WAS TO HAVE MARRIED	15				3	2		4					3			1	1	1			
9		WAS TO HAVE MET	15			1	1		2	1	2	1	1	2	2					1		1	
10		WAS TO HAVE RECEIVED	15				3	1					2		1	2	1	1		1	1	2	
11		WAS TO HAVE DONE	9						1	1	2	3			1	1							
12		WAS TO HAVE BROUGHT	9							2	1	1	1		2	1				1			

Figure 27. Results for the distribution of the '*be to* + perfect infinitive' cxn in COHA, showing its decline. (www.corpus.byu.edu/coha)

6.5. Double Perfect Constructions

With the double perfect and the double perfect infinitive constructions the problem is similar to what is going on in the perfect infinitive constructions, but maybe a little more complex. Again, there is this perfect infinitive which shows up unexpectedly in a specific environment.

6.5.1. Double Perfect Infinitive Constructions

In the case of double perfect infinitive constructions, the governing element is a modal construction instead of a governing verb phrase with a simple main verb. The modal construction is then complemented by a perfect infinitive. We could therefore argue that the double perfect infinitive construction inherits the modal construction on the one hand and the perfect infinitive construction on the other hand. This means that it adopts the basic characteristics of both its parent constructions and combines and modifies them.

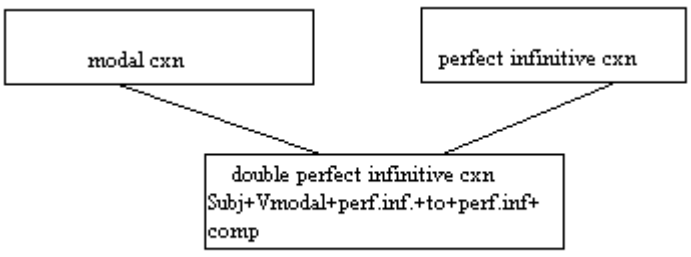


Figure 28. Inheritance relations of the double perfect infinitive cxn.

Fig. 29 shows the taxonomic relationship between these three constructions. Thus, the double perfect infinitive construction inherits the basic structure of a modal construction and modifies its complement elements with the perfect infinitive construction instead of a present infinitive construction. At the same time one could say that it inherits the basic structure of the perfect infinitive construction and modifies its past tense governing verb element with a modal construction. Similar to the perfect infinitive construction, double perfect infinitive constructions have their semantic and morphosyntactic idiosyncrasies and many of the grammatical and semantic characteristics that were identified for the perfect infinitive construction in Section 5.4 above can be applied to the double perfect infinitive constructions as well.

6.5.1.1. Grammatical idiosyncrasies

Double perfect infinitive constructions are, as already mentioned, not governed by a simple past tense main verb but by a modal construction. One could argue, however, that these modal constructions of 'V_{mod} + perfect infinitive' are past tense of some sort too. The past tense modals *could, would, might and should* have lost their primary function to mark past tense long time ago. There are still some cases where they can express past tense, though. Especially *could* and *would* mark past tense in sentences like *John could run 10 miles with ease, when he was younger* or sentences such as *He would always talk, he wouldn't stop talking – the thing was – he would concoct anecdotes and had to tell them to me over and over again* (Palmer 1990: 45; 155). The past tense meaning of could and would depends very much on the context and works only under certain conditions. For example, *could* is used to refer to past tense if there is no implication that the event was actualized or for habitual actions (Palmer 1990: 93-94)[18]; *would* is also used in contexts where an iterative action or a habit is expressed, but also in order to say something about what is typical for a certain subject (Palmer 1990: 155). According to Palmer (1990: 110), *might* can be used to refer to past tense, but only rarely and *should* does not mark past tense at all. When there is no other way to mark past modality, the perfect infinitive has to be added after the modal verb and thus makes it 'past'. With the double perfect infinitive construction, in the majority of cases the modal verb is *would*, but the others also occur in governing positions every now and then.

[18] There are several more conditions under which *could* can refer to past tense. For more details cf. Palmer (1990: 93-97).

(140) Because my bag was heavy, I **would have preferred to have been** picked up at home, but the voice at the other end didn't sound as if it would welcome special requests. (COCA)

(141) He **would have liked to have driven** his dagger straight into the interfering clerk's throat but knew this was not the time nor the occasion. (BNC)

(142) Marshall, it's true that we really didn't hear the fiery rhetoric or criticism that we **might have expected to have heard** from Mr. Khasbulatov. (COCA)

It is important for the construction that the modal is followed by a perfect infinitive. If the modal was complemented by a present infinitive, we would deal with a different construction.

(140) a. Because my bag was heavy, I **would prefer to have been** picked up at home (…).

(141) a. He **would like to have driven** his dagger straight into the interfering clerk's throat (…).

(142) a. Marshall, it's true that we really didn't hear the fiery rhetoric or criticise that we **might expect to have heard** from Mr. Khasbulatov.

Furthermore, in order to result in such a chain of verbs, the construction obviously has to include verbs that take non-finite complements. The modals belong to this class anyways since they always govern infinitives – be they present or perfect, active or passive. The verb complement of the modal verb also has to be such a verb, however, in order to allow for a following perfect infinitive complement. The complement of the modal verb usually denotes a mental process: *like*, *prefer*, *have to*, *be able to*, *need*, *expect*, *love* are the most common verbs which are found in the double perfect infinitive construction.

(143) I **would have liked to have got** to know her better but I drank too much. (BNC)

(144) Without the backing of my parents, I **wouldn't have been able to have done** any of the things I have mentioned above. (Google)[19]

(145) Brad must have found his balls in the jar Skankelina keeps them in. That's the only way he **could have managed to have gone** out without her. (Google)[20]

[19] http://www.tellingstories.nhs.uk/transcript.asp?id=22 (13 Apr. 2012)

(146) Stop feeling sorry for yourself, she chided. You speak of the old days? In the old days, you **would have been expected to have flung** yourself upon your husband's funeral pyre. At least you have a job. (COCA)

Moreover, similar to the perfect infinitive construction, the second perfect infinitive in the double construction is usually interchangeable with the present infinitive without a change of meaning. It is important to note, however, that it is only the second perfect infinitive that can be substituted; if the first perfect infinitive of the construction was substituted, the whole construction would change its meaning (cf. examples 143a-145a).

(143) a. I **would have liked to get** to know her better but I drank too much.

(144) a. Without the backing of my parents, I **wouldn't have been able to do** any of the things I have mentioned above.

(145) a. Brad must have found his balls in the jar Skankelina keeps them in. That's the only way he **could have managed to go** out without her.

6.5.1.2. Semantic idiosyncrasies

Regarding the construction's semantic characteristics, it usually denotes a hypothetically possible, but unreal past event. This is due to the use of the modal construction, which expresses that the event mentioned in the proposition did not actually take place. The perfect infinitive of the proposition also plays an important role for the semantic interpretation of the construction as it cannot be read literally, i.e. with its anteriority meaning. This is the reason why the double perfect infinitive construction is non-compositional. The typical futurity-orientation of the governing verb in the perfect infinitive construction is not necessarily inherited by the double perfect infinitive construction, however. Even though *expect* is oriented towards the future, the other verbs are more present-oriented. This is also why the second perfect infinitive in the construction can but does not have to mark posteriority. Whether this second verb phrase expresses anteriority, posteriority or simultaneity is determined by the semantics of the governing verb phrase. With the double perfect infinitive construction it is mostly the case that it either marks the simultaneity of the events encoded by

[20] http://www.dlisted.com/node/33175 (13 Apr. 2012)

the modal construction and by the perfect infinitive or a hypothetical event in the immediate future of the modal construction.

6.5.1.3. Analysis

When talking about the perfect infinitive construction it seemed necessary to look at some of the instantiations of the construction in more detail because of the distinct behaviour of some of the governing verbs and their importance to licensing the construction or not. Apparently, the perfect infinitive construction has certain requirements regarding the semantics of its governing verbs. This is a little different with the double perfect infinitive constructions. These constructions are more uniform because the governing element is the same in all of them, namely a modal verb. And in all but a few cases, the modal head is *would*. The modal verb functions as the head of the whole construction and therefore determines the semantics of the construction. The main verbs which function as the complements in the modal construction – even though there seems to be only a restricted number of verbs – do not determine the remaining make-up of the construction so much as the governing verbs do in the perfect infinitive constructions, which can also be deduced from Fig. 30.

The figure shows a representation of the schematic double perfect infinitive construction without any lexical specifications. The construction can be treated as consisting of two verb phrases where the governing modal verb phrase construction, headed by the modal verb (which at the same time functions as the head of the whole construction), determines the semantic, including the temporal, frame of the whole double perfect infinitive construction.

Thus, the double perfect infinitive construction usually has a past hypothetical meaning stemming from the modal verb and the following perfect infinitive complement, which together express past hypothetical ability, possibility, permission, prediction and volition of something. The head phrase of the construction is therefore described by *lex* -, which shows that it does not consist of one lexical item, but a phrase, and by *max* +, which means that it does not need another phrasal companion as the modal verb (*max* -) itself does. The meanings of the modal verb and the perfect infinitive constituent unify with their structural mother, as indicated by ↓↑1, and ↓↑2.

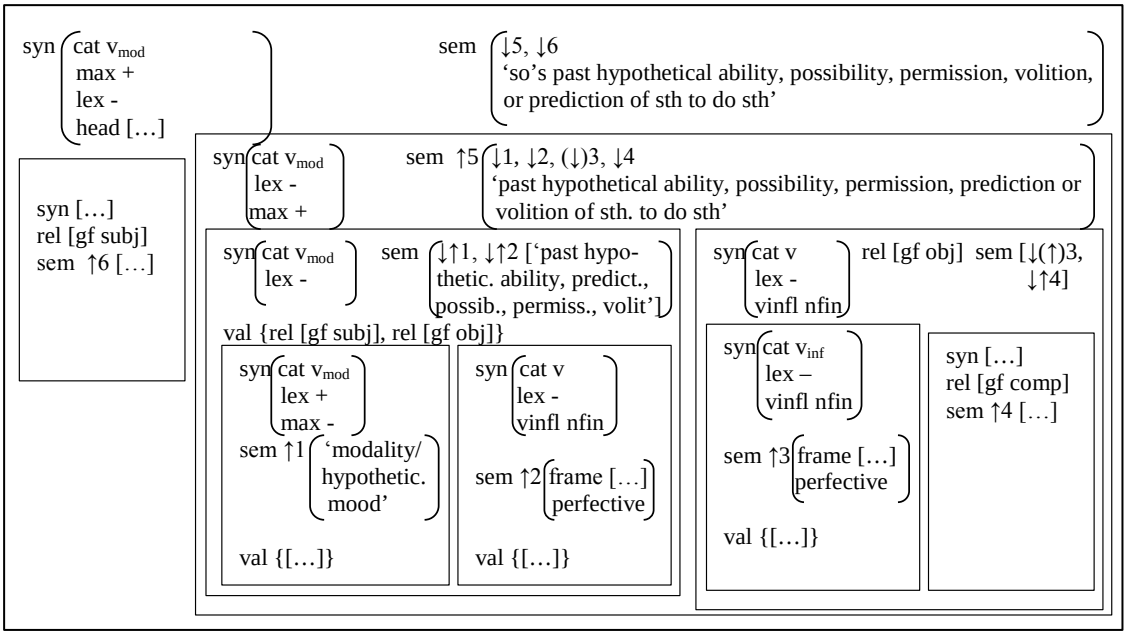


Figure 29. Box representation of the schematic double perfect infinitive cxn.

The repeatedly used sign '[…]' indicates that these features could be specified but are not in this representation. In the case of the semantic frames of the perfect infinitives, the sign can also be read in a way that shows that there are no real restrictions to their frame, even though, as will be argued, only a few verbs can complement the modal verb in this construction. The syntactic attributes and features seem relatively self-explanatory; the semantic specifications probably require further explanation. As was already pointed out and as can be seen in Fig. 30, the overall meaning of the construction describes someone's past hypothetical ability, permission, prediction, possibility or volition of something to do something.

It is a well-known fact that past tense does not always refer to past time. Sometimes it is used hypothetically and refers to events which are expected or anticipated to happen in the present or future but do not (Quirk et al. 1995: 188). Similarly, the past tense, or secondary, modals have a hypothetical use regarding a present or future event. They can, however, also have past hypothetical meaning of ability, possibility, permission, prediction and volition. This is achieved by adding the perfect infinitive which transports the modal verb to the past. All past modals work in this way, with the only exception of *might* (cf. Quirk et al. 1995: 188 and further below in this section). As already suggested briefly above, we might treat these constructions as past because sometimes there seems to be an overlap in the functions of past tense and present perfect. Thus, sentence (146) can be paraphrased in two ways (cf. Quirk et al. 1995: 190-191)

(146) I may have left the key at the office (last night).

a. It is possible that I left the key at the office (last night).

b. It is possible that I have left the keys at the office.

Furthermore, it was already argued that the non-finite auxiliary *have* is not only an indicator for perfect aspect but also for past tense (cf. Section 6.4.8.1).

The meaning of the modal verb phrase therefore unifies with the meaning of the construction (indicated by ↓↑1, 2). The larger inner box on the right also shows that on this level, the construction gets a 'new' meaning (↑5) because the semantics of the modal construction and its perfect infinitive complement do not unify, except for their matching semantic frames. The modal verb is usually complemented by the perfect infinitive of verbs like *like*, *prefer*, *need*, *expect*, *love*, etc. These verbs all have future or present orientation and their meanings do not match with the anteriority orientation of the perfect infinitive heading the non-finite complement. The perfective meaning of the perfect infinitive complement is therefore not included or rather is transformed to a non-perfective reading when it is directly dependent on the past hypothetical modal construction. In the smaller inner box representing the non-finite clausal complement, the upwards pointing arrow in brackets (↑)3 is used to indicate that the semantics of the structural mother and its daughter do unify, but only with the restrictions that were just mentioned. Since these elements do not fully match and the meaning undergoes a change, it gets its owns indicator (↑5) which then, together with the meaning of the element functioning as the subject (↑6), forms the basis for the meaning of the whole double perfect infinitive construction. As the verbs' valence requirements are not particularly important for the purpose of this study, they are only specified for the modal verb phrase, showing that it requires an element functioning as its subject and an element functioning as its object. The morpho-syntactic realization of these grammatical functions are not further described either, even though in the case of the double perfect infinitive construction, the object has the form of a non-finite clause headed by a perfect infinitive.

Some instances of the double perfect infinitive construction occur in the apodosis of conditional sentences. The following are some examples for the double perfect infinitive construction occurring in conditionals:

(147) "If I had not been what I am," he said "I think I **would have preferred to have been** a criminal lawyer. That would have been fascinating, finding out about criminals and their crimes, and being a ham actor in court! (COCA)

(148) You got the impression he **would have liked to have brought** all six volumes with him if he could. (BNC)

(149) At the end Eddie was asked (now) what team he'**d have liked to have played** for if not Leeds and he said he'd always followed Celtic's results. (BNC)

(150) "If you say you're mellow now, " Williams, 27, deadpanned to Brown, " I **wouldn't have wanted to have known** you before. " (COCA)

(151) I'm mighty glad the fog is shifting. **Wouldn't have needed to have started** so early if we had known. But that's the fun of the sea. You never know. (COHA 1921)

(152) Because, Nathan, I am none of them. If I were, I **would have had to have been** living two or three lives at once. And even I know a soul can occupy only one body at a given.... (COCA)

(153) The polling station was 400 yards down a forest track, about half a mile away from the nearest house. It was difficult to find, and if it had rained we **would all have had to have worn** our wellies. (BNC)

All examples (147) – (153) have a protasis. This *if*-clause explicitly presents the condition, whereas the double perfect infinitive construction in the apodosis describes the unreality of an event. As Palmer (1990: 172-173) points out, the condition is not always stated as clearly as in the sentences above. There are also plenty of cases where the condition is implicit and has to be deduced from the (linguistic) context, a pronoun or cases where the *I* implies the condition *If I were you, …*. From the large pool of data that was retrieved from the corpora, some instances in which the double perfect infinitive construction occurs are implicit conditionals:

(154) Andrewes **would** almost certainly **have preferred to have remained** at Cambridge as a don, a life for which he was superbly fitted. (BNC)

(155) I **would have preferred to have invited** you to a waitress service lunch over there of course. (BNC)

(156) The number of sorties which had been flown so far, one **would have expected to have lost** somewhere between 70 and 100 aircraft at a minimum. (COCA_SPOK)

(157) He'**d have had to have taken** it during the meal or shortly after. A curious time to choose with the Prince of Wales present, and a reading to give. (BNC)

(158) He **would have had to have been** very fast to get out to the car park in that time," he said. (BNC)

(159) He says he **would never have been able to have afforded** it himself, so it opened up another world. (BNC)

As other constructs with *would have preferred*, one could say that (154) and (155) imply the condition of *If he/I had had the chance/choice, he/I would have*…. In (156) the first part of the sentence clause could be amended by saying *If one considered [t]he number of sorties…* and for examples (157), (158) and (159) it is very likely that the linguistic context of the utterance, which was not retrieved from the corpus, provides either an explicit or an implicit condition.

When the double perfect infinitive construction is headed by a modal verb phrase, which is actually always the case, it marks a past hypothetical event. Similar to the perfect infinitive constructions, the unreality or counterfactuality of the event expressed by the double perfect infinitive construction is often supported and confirmed by an explicit statement in a subordinating clause which is introduced by the adversative conjunction *but*:

(160) On the one hand, there were those who gave up work reluctantly and **would have preferred to have kept on** working, but for reasons of health or lack of alternative employment chose early retirement. (BNC)

(161) Miller also **would have liked to have ordered** massive changes in mortgages like the Andronicas'. But that wasn't possible. (COCA)

(162) Ideally, we **would have liked to have tested** Guaymi living scattered throughout the jungle, but the logistical obstacles to such an effort were formidable. (COCA)

(163) Indeed, it **would have had to have begun** much earlier, her grandchildren's school being a good fifteen minutes' walk away, on the other side of West End Lane. But of this she said nothing, watched Tina putting her cake into the filthiest, blackest, greasiest oven she had ever seen, while waiting for an answer to one of her rare inquiries. (BNC)

(164) If it had ever been destined for him to have seen the refinements of the Parthenon before he died, he **would have had to have done** it 30 or 40 years earlier. Clearly now was too late and always would be. (COCA)

In sentence (164) there is no *but*-clause but the sentence following the conditional also supports the unreality expressed by the conditional and the double perfect infinitive construction. Furthermore, in this example the double perfect is not only found in the apodosis but in the protasis as well. Interestingly enough, this is not a typical environment for the perfect infinitive because neither one of the verbs that usually occur with a perfect

infinitive nor a modal construction are used. It is very likely, however, that the past perfect form of *be destined to* is the element which encourages the use of the perfect infinitive because it has a similar meaning to *intended* or *was to*.

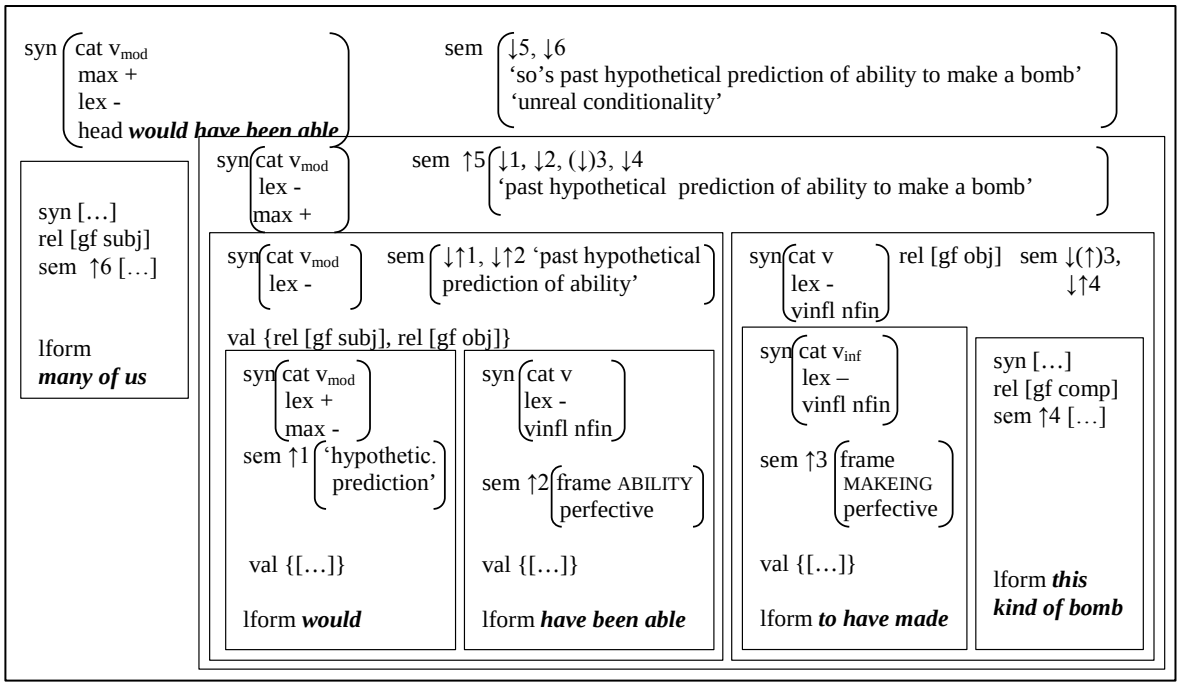


Figure 30. Box notation of construct (31).

Figure 31 is a box representation of the double perfect infinitive construction occurring in example (165).

(165) ZAHN: I'm wondering if you think we're being all too casual when we talk about how this was a low-tech bomb that was used in Oklahoma City and that, with some very simple instructions, many of us **would have been able to have made** this kind of bomb. (COCA)

The double infinitive construction in question clearly is a matter of unreal conditionality. It is part of a subordinating clause introduced by the conjunction *that*. The first part of this clause is the protasis, denoting the condition. Even though the condition is not introduced by *if*, it is not implicit either. Thus, the protasis could be easily paraphrased with an *if*-clause ('*If we had had some very simple instructions, …*'). The representation in Fig. 31 for the semantics of the overall construction depicts the fact that it is part of an unreal conditional. As it is the case with the perfect infinitive constructions and as has been shown in Fig. 30 already, the meaning of the whole construction cannot be predicted from the meanings of its constituents. While the meaning of the non-finite object clause still unifies with the meanings of the perfect infinitive and the complement phrase, on the next higher level, the modal verb phrase

construction *would have been able* does not match with the anteriority meaning of the perfect infinitive complement *to have made*, which is indicated by the bracketed arrow ([↓,↑]3). It is semantically illogical to have the present ability to have done something in the past; therefore, it is also illogical to have had past ability to have done something even earlier – no matter whether the situation is real or unreal. The perfect infinitive *to have made* therefore does not have the perfective reading but one of simultaneity of the ability and the bomb-making (↑5). The unification of the semantic frames is possible on this level, however.

Based on the modal verb *would* and its meaning, the construct in (165) has past hypothetical meaning. The representation of the construct in Fig. 31 would be pretty much the same for all instances of the double perfect infinitive construction, except for the lexical specifications and their semantics of course. This also holds for the different modal verbs which occur in the construction. Similarly to *would have*, *should have* also expresses past hypothetical modality. In contrast to *would*, *should* only rarely functions as the head of the double perfect infinitive construction:

(166) From the printed account of them, I **should have preferred to have been** the one who produced the six kinds named, as having been shown by the latter. (COHA 1848)

(167) I **should have liked to have said** come and be our guests, but, having been redundant since last October, Julia did indicate on the phone that you would be willing to pay the basic going rate. (BNC)

(168) I **should have liked to have made** of these peoples one single and uniform national body. (COHA 1961)

(169) And in any event he **should have been able to have kept** afloat for at least a few minutes. (COHA 1921)

(170) So are you saying that I **should never have been able to have posted** videos to clewis4343 at yahoo? What do I do now with the people that are subscribed to my clewis4343 I cant reply to them or nothing. (Google)[21]

(171) 1st, the mother did her daughter no favors by covering it. the girl should have covered it, but **should have been able to have taken** the items with her once she covered the costs. (Google)[22]

[21] http://www.google.com/support/forum/p/youtube/thread?tid=51a028311885ba43&hl=en (13 Apr. 2012)
[22] http://www.answerology.com/index.aspx/question/2999236_I-have-a-question-about-some-weird-shoplifting-policy.html (13 Apr. 2012)

In these examples, *should have* always implies that the event did not take place and expresses past hypothetical modality. Of course it is impossible to draw conclusions from such a small number of examples but the fact that the majority of examples with *should have* was found in COHA suggests that this construction might have been more common in the 19th and early 20th century. The examples found in BNC and the ones retrieved from the internet by means of a Google search, however, show that it still occurs sometimes.

It was already mentioned that all past modals can be used in a way to express hypothetical meaning, with some restrictions to the modal *might* in the sense of epistemic possibility. In this case, not the modal verb but the following proposition takes the hypothetical meaning (Quirk et al. 1995: 233) – also when it is used in the double perfect infinitive construction:

(172) Preston **might have preferred to have been** called Blackpool, all things considered. (BNC)

(173) Dan guessed that given half a chance -- he'd been given none at all -- his uncle **might have liked to have been** an actor. (BNC)

(174) I **might have liked to have seen** her get a little more time because it might have been like other manslaughter cases. (COCA_SPOK)

(175) So, I pose the question of whether or not we **might have been able to have seen** his untimely death coming? (Google)[23]

(176) Lucius D. Clay, the former military governor of the U.S. Zone, Germany (1947-49) and the "father" of the Berlin Airlift (1948-1949) felt that "we **might have been able to have stopped** the Wall form being built that night," if the American Commandant of Berlin had taken action, "even if he had been in violation of his instructions, he would have succeeded and he would have been forgiven and he would have become a very great man." (Google)[24]

Paraphrases of examples (172) – (176) would all start with *It is possible that…*, indicating that it is not the modal that has the meaning of hypothetical possibility (even though possibility seems to have a hypothetical notion about it anyway) but the following complement.

[23] http://www.drdahlman.com/tim-russert-could-we-have-seen-this-coming.shtml (13 Apr. 2012)
[24] http://www.voicesunderberlin.com/DayBefore/legend.html (13 Apr. 2012)

There are only very few examples with the modal *could* as the head verb. These examples also fit very well into the pattern shown in Fig. 30 and Fig. 31 because *could have* indicates past hypothetical possibility.

(177) Thus, it is likewise, that the Earth moving, the motion of the stone in descending downwards was really a long tract of many hundreds and thousands of yards, and if it **could have been able to have delineated** in a calm air or other superficies, the track of its course, it would have left behind a huge long transverse line. (COHA 1949)

(178) Reply #2: If it is not addictive, then he **could have managed to have gone** without since going there. (Google)[25]

The situation is a little different with the modals *may* and *must*. They are no past tense modals and therefore do not have hypothetical meaning. In sentences (179) – (181) these modal verbs are epistemic and therefore cannot be past (cf. Section 6.4.8.1). They present a present judgement about an event in the past. Epistemic *may* is very similar to epistemic *might*, with *might* being a mitigated version of *may* and communicating less certainty about the possibility addressed. The modal verb *must* always denotes necessity, even though *It is necessary that…* is not the appropriate paraphrase. For sentences (179) and (180) the most appropriate paraphrase would be to say *The only possible conclusion is that …* (Palmer 1990: 50).

(179) For any action, if that action was performed freely, then the person who performed it **must**, at the moment of acting, **have been able to have acted** otherwise than he did in fact act. (Google)[26]

(180) The defendant **must have been able to have discovered** the peril through appropriate vigilance so as to avoid its harmful consequences to the plaintiff. (Google)[27]

(181) "It's a bit optimistic. If the Higgs had been in an easy to find area then yes, we **may have been able to have discovered** it by Christmas," Richard Hawkings told BBC. (Google)[28]

The modal verb *will* also has an epistemic use, where it means something like *It is reasonable to conclude that…* . This interpretation would apply to example (182). In example (183) *will* refers to the future and reads as a prediction.

[25] http://www.democraticunderground.com/discuss/duboard.php?az=show_mesg&forum=105&topic_id=8351788&mesg_id=8351798 (13 Apr. 2012)
[26] www.smu.ca/faculty/.../Free_Will_in_a_World_of_Cause_and_Effect.doc (13 Apr. 2012)
[27] http://legal-dictionary.thefreedictionary.com/Last+Clear+Chance (13 Apr. 2012)
[28] http://www.christianpost.com/news/god-particle-could-be-found-in-time-for-christma-54976/ (13 Apr. 2012)

(182) But to have done the scans secretly – surely that was a mistake. Think of all the people who **will have wanted to have been** present! Scans aren't chap, are they. (COHA 1995)

(183) At a time, when our world will have had faced deadly doom … There will only be one, who **will have been able to have saved** the world …! (Google)[29]

Even though the large majority of examples uses past tense modals, there are some instances of *may*, *must* and *will*. This also shows that the representation of the double perfect infinitive construction in Fig. 26 does not apply to all occurrences of the construction and that it has to be adapted for these verbs because they do not have and do not communicate past hypothetical meaning. In this regard it seems reasonable to argue that the double perfect infinitive construction headed by a past tense modal is the prototypical structure of the construction, whereas the ones with other head modals are 'poorer' examples of the category.

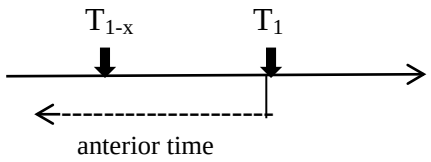
Fig. 31 as well as Fig. 30 show that the problem of the double perfect infinitive arises from the co-occurrence of the past modal verb phrase and the perfect infinitive, where the perfect infinitive is not to be interpreted in its anteriority function but rather as posterior or, as it is the case in (184), simultaneous to the modal verb phrase. It is also obvious that this must have something to do with the pastness of the modal verb phrase, especially considering constructions with a present tense modal construction.

(184) a. She **would have liked to have wed** a Jewish boy, primarily for mother's sake, but fate had decreed otherwise.

b. She **would like to have wed** a Jewish boy, primarily for mother's sake, but fate had decreed otherwise.

As in the examples shown and discussed above, in (184a) *would have liked* expresses past hypothetical meaning, but the perfect infinitive complement does not place the WED-event anterior to the past hypothetical LIKE-event. In contrast, in (184b) the modal verb phrase denotes a present hypothetical preference or wish. The perfect infinitive complement clearly marks a past event.

[29] http://www.rokatoonz.com/ (12 Apr. 2012)



T_1= present utterance of wish

T_{1-x} = anterior/past WED-event

Figure 31. Temporal relations for construct (184b).

Thus one could say that at the point of uttering this sentence in (184a) the female in question might be perfectly content with her situation, even though she was not quite happy in the past, whereas in (184b) she seems to presently question her past decision about not marrying a Jewish boy. The same temporal distribution goes for the following sentence pairs, even though it should be noted that all of these words like *like*, *prefer*, *need*, etc. usually take a complement which marks a posterior or simultaneous event.

(185) a. Size undoubtedly told against Dennis McBride while Terry Kingston **would have needed to have played** in all four Internationals. (BNC)

b. Size undoubtedly told against Dennis McBride while Terry Kingston would need to have played in all four Internationals.

(186) a. And you'll talk to others who say, well, if I had my choice, I **think I would have preferred to have been raised** by a black family. (COCA_SPOK)

b. (…) I think I would prefer to have been raised by a black family.

6.5.1.4. Lexical requirements

Above I have argued that, since all instances of the double perfect infinitive construction are governed by a modal, verbs that complement the modal are not so important because they do not have a great impact on the constitution of the construction. This argument basically holds true for most cases, but it is still remarkable that only a limited number of verbs can complement the modal in their perfect infinitive form and then take another perfect infinitive as their own complement. Swan (2005: 264) claims that with "*would like, would prefer* and one or two other verbs", a double perfect infinitive can occur. These two as well as *need*, *want*, *have to*, *be able to* and *expect* were included in this study. Furthermore, a quick corpus browse has shown that *love* and *hope* can also occur in this construction. It is possible that there are a few more words, but the number will probably not get much higher. The question now is what is so special about these few verbs that they can occur in and permit such

complex constructions? In Section 2 Quirk et al.'s (1995: 155) position, which emanates from the assumption that it is the special status of semi-auxiliaries like *have to* in *We would have had to have arrested you* that allows for syntactic doubling and therefore for the repetition of the perfect infinitive, was introduced. This could be a factor, but as was already pointed out in Section 2.3.2, the authors seem to be aware of the limitations of their own approach. Moreover, it is rather unlikely that the problem arises from the semi-auxiliary, since *have to* and *be able to* are the only semi-auxiliaries amongst the verbs occurring in the construction. Sometimes *need* is classified as a marginal modal because it resembles the central modals in many criteria (e.g. Quirk et al. 1995: 138-139; Palmer 1990: 127). Within the double perfect infinitive constructions, however, it is always used as a main verb that takes a *to*-infinitival complement. All the other verbs are main verbs. The most important factor here seems to be that the verb, no matter whether it is a main verb, an auxiliary or a semi-auxiliary, can take a non-finite complement. As we have just seen, verbs across different categories have this ability and therefore it is probably not the verb status/category which determines the possibility of the double perfect infinitive construction.

Rather, it is the verbs' meaning that is the decisive factor whether the (double) perfect infinitive construction is possible or not. The number of verbs which allow for the (double) perfect infinitive construction are limited and among this limited group of verbs, some have related semantics and can be assigned to certain semantic categories. Based on a classification in Quirk et al. (1995: 1187), the following verbs can be grouped together[30]:

expect	like	manage
hope	love	be able to
intend	prefer	
mean (to)		
be to		
need		
want		
have to		

Table 8. Verbs grouped according to their semantic similarities.

[30] This classification is about semantics only and does not take different verb classes into account. Therefore, semi-auxiliaries like *be to*, *have to* and *be able to* are to be found amongst main verbs.

The verbs in the column on the left-hand side have in common that they all express futurity, at least to some extent. While the first five verbs have this meaning aspect definitely, the other three verbs have this meaning aspect less distinct but it is still there. The semantic similarities of the verbs in the middle column are those that they all encode the mental process of liking on different levels of intensity, whereas the two verbs in the very right column express ability and achievement respectively. One could argue that these two meanings are not so very similar in the present tense, but in the past tense they are very similar in that they both convey the successful implementation of an event.

Another deciding semantic feature of some of these verbs, especially these in the left column, is that they communicate a certain degree of uncertainty, hypothetical or counterfactual meaning; this is especially true for their past tense forms. As Molencki (1999: 97) pointed out, verbs of will, intention, purpose, expectation or hope in their past tense forms, which all suggest counterfactuality or unreality, were the first ones to be used in the perfect infinitive construction after it was no longer restricted to modal constructions. The verbs *manage (to)* and *be able to* are exceptions then. In their past tense forms they both mark the successful realization of an event. However, the examples for these instantiations are very rare and verbs of achievement and ability are not mentioned in Molencki's list anyways, which allows for the assumption that their use in the perfect infinitive construction is the result of a second step of the analogical extension of this specific syntactic pattern. The other verbs in Table 8 do not have this uncertainty/counterfactuality aspect inherent in their past tense meanings. This is probably why they are used following the (past) modal verbs. Thus, they get this hypothetical and unreal notion and consequently permit the perfect infinitive too. This counterfactual environment that seems to encourage the (double) perfect infinitive constructions is probably also the source for other researchers' assumption that the perfect infinitive is the element that contributes the counterfactuality meaning. But as should have become evident from the analysis, this was probably the easiest way for them to avoid further engagement with these puzzling and problematic, but still very interesting, structures and is simply not supportable because as a subtype of the perfect the perfect infinitive is used to mark anteriority and nothing else.

6.5.1.5. The double perfect infinitive construction – a feature of spoken language?

It was already observed in Section 5 that double perfect (infinitive) constructions seem to be a common feature of spoken, informal language. Denison (1998: 140) confirms this impression by saying that double perfects are "very frequent in colloquial PDE". It is very likely that they were also used in a spoken context in earlier stages in the history of English. In older literary sources they were repeatedly employed in representations of non-standard, lower-class or dialectal speech (Denison 1998: 140). The sections of spoken (as well as written) English in BNC and COCA provide plenty of PDE examples of the double perfect infinitive construction which allow for such attestations:

(187) LANCE ARMSTRONG: Well, in fact, I actually caught it very late, and fortunately I did catch it at that time and was able to get on top of it. But I would – I **would have preferred to have caught** it much earlier and not gone through all that. (COCA_SPOK)

(188) Yes I did I **would have liked to have gone** much farther but I couldn't. (BNC_SPOK)

(189) It may be one of those things we'll never really know the real answer for. However, I **wouldn't have wanted to have been** the guy that said, Oh, it probably isn't a real problem. This money is way too much money to spend. Let's cross our fingers and hope we make it through. (COCA_SPOK)

(190) oh right Conversely had we had the profits last year which would have generated taxable profits then we **wouldn't have needed to have done** that, so that's one reason why it was not disclosed on floatations at the time and floatation was not regarded as an asset. (BNC_SPOK)

It is more difficult to make such a statement about whether the perfect infinitive construction occurred more frequently in the spoken or written genre. This problem arises from the fact that, as we have already seen, perfect infinitive constructions were most frequent in the 19th century (and probably earlier) and have decreased in popularity and use for several reasons ever since; obviously, we only have written evidence from these time periods. This evidence, however, suggests that the perfect infinitive construction was a feature of spoken English too because many of the examples are quotes from direct speech, i.e. dialogues in fictional texts as well as first person singular or plural utterances. Nevertheless, due to the lack of spoken records this has to remain mere speculation.

6.5.2. Double Perfects

At this point be reminded that I have already made the distinction between double perfect infinitive and double perfect constructions earlier. The difference between these two is that the latter consists of a finite present or past perfect form of the governing verb and its perfect infinitive complement. Double perfects are very similar to the main objects of this study; even more similar to the perfect infinitive constructions than to the double perfect infinitive constructions, in that the governing element occurs in a finite form. They behave similarly to the previously discussed constructions also in so far as the perfect infinitive can be exchanged for a present infinitive without an obvious change of meaning. However, as the examples for this construction type were not actually searched for and came up in the corpus search only by chance, a few instances will be given for the purpose of illustration, but will not be discussed any further.

(191) We are still in awe that **we have been able to have completed** as much of this project as we have in a 3 year period of time. (Google)[31]

(192) Now, I haven't worked in some time now, but **we've managed to have gone** thru puberty and teen years with 2 kids and not gone broke – often – on my love's pay… so it's not all that bad really. (Google)[32]

(193) I therefore took him by the Elbows & pushed him before me until I had got him out; there **I had intended to have left** him, but he, turning about put himself into a Posture of Defiance, threatening & swearing at me. (COCA)

(194) There was no way now that the sergeant could leave the house and pass the stolen ring to his confederates. **He had expected to have had** several hours while you were out of the house to do the deed, you see. (COHA 1999)

7. Discussion

So far we have mainly looked at the formal, structural aspects of the constructions in question. This means, we now know how these constructions come about and work. We have also considered opinions about the function of the perfect infinitive in the construction and have found out what it does not function as – namely a counterfactuality marker. What we still do not know, however, is *why* the perfect infinitive is actually used the way it is. The purpose of this section will be to pursue and discuss this question further.

[31] http://www.pancakeday.net/hall.htm (20 Apr 2012)
[32] http://forums.military.com/eve/forums/a/tpc/f/90600431813/m/4660078252001 (20 Apr 2012)

7.1. A Case of Redundancy?

Repeatedly, the perfect infinitive in the constructions discussed in this thesis has been considered ‘superfluous’, ‘pleonastic’ or ‘redundant’. Amman (2007) has shown interesting ‘redundancy’ phenomena in German, namely double perfects and double pluperfects where a second perfect form is used in an already perfect construction.

(195) Ich habe/hatte gesungen gehabt.

In this example, *Ich habe gesungen* or *Ich hatte gesungen* would already be well formed perfect and pluperfect sentences respectively. For some reason, however, another perfect form, namely the past participle of the auxiliary *haben* (‘have’), *gehabt*, is added. Amman then poses the question whether this is really redundant or whether it actually is a morphological feature. The same can be asked about the English (double) perfect infinitive constructions I am concerned with. Is the perfect infinitive in these constructions really redundant? If not, what is its real function, if not counterfactuality? For the German double perfects and double pluperfects Amman (2007) suggests different possible approaches to answering the question.

First, sentences in which these double constructions occur usually have complex temporal relations. Hence, especially in written, literary German it is possible that the writer feels that a simple (plu-)perfect is not specific enough to communicate them appropriately and uses the double perfect stylistically in order to add an additional temporal marker (Amman 2007: 191). In colloquial spoken language, it is less likely that speakers care much about semantic precision regarding temporal and aspectual relations, which leaves some ground for the claim that double perfects are redundant in informal speech. Amman (2007: 202) objects, however, that “at the same time, it is conspicuous that the uses of DPCs in colloquial language resemble each other or at least they are not completely random”. Moreover, Amman (2007: 194) argues that it might have something to do with the “[t]endency in colloquial German to use bulkier verb forms where simpler one would suffice”, even though the simpler forms would be shorter and therefore more economical. Another possible explanation would be that redundant verb forms are simply used because they are available (Amman 1997: 194). In the end it seems very difficult to decide whether double (plu-)perfects are morphological and therefore belong to the German verbal paradigm or whether these forms are to be seen as redundant because the boundary is very fuzzy (Amman 1997: 202).

Even though English does not have DPCs where the past participle of the auxiliary *have* is added (Amman 2007: 195), the case of the German double (plu-)perfect constructions seems to be very similar to what I am concerned with in this study about the English (double) perfect infinitive constructions. They are frequently labelled as redundant, but are they really? At the first glance, the *to*-perfect infinitive in both construction types seems to be unnecessary. The comparison of perfect infinitive constructions with corresponding constructions where a present infinitive is used alternatively also suggests that there is no obvious semantic motivation for the use of the perfect infinitive, since there is no clear difference in meaning and that "there is some leeway" (Bowie & Aarts 2011: 8) left open for speakers to decide which of the two constructions they choose. Moreover, at least the English double perfect infinitive constructions are frequently employed in spoken language and more informal written language. It is very likely that people pay less attention to what they are saying in these registers, which is why it can be possible that the constructions are redundant. However, the pattern of a past tense matrix with a following perfect infinitive does not leave the impression that it is a random phenomenon, especially because the structure is not a new phenomenon, but has developed as an analogical extension of modal constructions. Despite the fact that the use of the perfect infinitive is in decline, it is still used too frequent for being the result of carelessness in colloquial language. The point that verb forms are used because they are available seems plausible, but availability can hardly be the only reason, given the possibility that there are other structures which are not used even though they are available.

For the German DPCs Amman (2007: 202) argues that if they communicate a difference in meaning, it is most likely to be of temporal or aspectual nature. I think these are, especially the temporal features, exactly the points which need to be considered in order to prevent the (double) perfect infinitive constructions from being treated as a case of mere redundancy.
It seems about time to pick up James's (1985) thoughts about the function of the constructions, which were already presented in Section 2.3.2 above. By means of the sentence in (18) taken from James Thurber's comment on the perfect infinitive, which is repeated below for easier reference, the author argues that the *to*-perfect infinitive is not intended to place the event of the proposition prior to the past hypothetical desire (which is not only illogical but also impossible), but to locate both events as simultaneous.

(21) We would have liked to have found you in.

A speaker's train of thought is easy enough to comprehend. If the governing verb phrase is past, its complement, which is to be interpreted as being simultaneous to the past hypothetical

desire expressed by *would have liked*, has to be marked for past tense as well in order to mark them as contemporaneous and in order to place it prior to the time of speaking.

Of course, this one example is not enough to draw any conclusions, but the examples from my corpus search which have been introduced in the previous chapters seem to confirm this notion. This is also why the importance of the temporal past tense frame has been stressed repeatedly throughout the past sections. Only a past oriented matrix enables the perfect infinitive and the double perfect infinitive construction because with a present matrix there is no need for the use of a perfect infinitive in order to establish a simultaneity interpretation between the governing verb and its complement.

7.2. Anteriority Agreement

Thus, it seems that the (double) perfect infinitive constructions constitute instances of what Görlach (1991: 111) refers to as "hypercorrect marking of past". Hypercorrect they are because the additional perfect marker as indication of the anteriority of the proposition is not utterly essential, a present infinitive would be just as appropriate to mark simultaneity of the events. Nevertheless, the term 'hypercorrect' also transports the fairly negative sense of redundancy. A maybe more neutral way to describe this phenomenon would be to refer to it as a type of anteriority agreement. This would be based on the speakers' assumption, which they deduce from their language knowledge as well as their intuition, that a governing verb and its verbal complement have to agree along formal as well as semantic, including temporal, lines and that therefore the complement has to be marked too in order to make both elements congruent. For verbs which take infinitival complements, the perfect infinitive is the only option to mark these relations if one wants to do so.

The following examples show that this agreement does not only work across two verb phrases but can include several:

(196) We ourselves could not decide initially before moving to New Zealand whether to make our life here in New Zealand or in Australia and **would have loved to have been able to have seen** a DVD such as the one we have produced. (Google)[33]

[33] http://www.newzealanddvd.co.nz/New_Zealand_Australia_Comparison.htm (19 Apr 2012)

(197) What **he'd have liked to have done would have been to have given** every boy and girl in English the same instruction this selected group was getting, but that would have been out of the question. (COHA 1953)

What is also important to note is that the temporal relations posed by verbs are not always those of simultaneity. Verbs like *prefer, like, want, be able to, manage, need, have to,* etc. can be interpreted according to simultaneity relations. Other verbs like *intend, mean (to), be to,* and *expect,* where the intended, planned or expected event is never simultaneous with the intention or expectation, but usually subsequent to it. James (1985: 78) also adverts to "the tendency in English to interpret temporal forms in relation to the time of speaking". Thus, if not otherwise specified, the time of speaking is always the point of reference. This point is very interesting. I have argued that the perfect infinitive is primarily a marker for anteriority in relation to any given reference point. Following a past tense verb in the perfect infinitive construction, it is no longer interpreted this way, but often indicates posteriority or is to be read as simultaneous with the event denoted by the governing verb. Hence, the reference point that I have assumed for the perfect infinitive is the time of the governing verb, whereas the governing verb was interpreted in relation to the time of speaking. As a complement, the perfect infinitive is dependent on its governing verb and interpreted in relation to its time. As "there is a potential for interpreting the perfect infinitive in two separate ways, either in relation to the time established by the governing verb or in relation to the time of speaking" (James 1985: 79) there is a second option too, which is very likely to be applied from a speaker's perspective. This does not mean that in this latter type of interpretation, the dependency relations are not considered – quite the contrary. Speakers must be aware of the dependency between governing verb and its complement, only that they orientate their interpretation according to the time of speaking. Thereby, agreement is created by not only positing the governing verb prior to the time of speaking by marking it for past tense but also by marking the dependent complement. While the iconic form-meaning correspondence diverges if the time of the governing verb is the time of orientation, this correspondence is preserved if the reference point is the time of speaking. Moreover, this way of interpretation offers the possibility to see

> the perfect infinitive as a deictic form, similar to a tense. Given the strong tendency in English to locate the times of events and states in relation to the time of speaking, it is perhaps inevitable that a deictic use of the perfect infinitive has developed. (James 1985: 79)

From this perspective it also seems legitimate to grant the (double) perfect infinitive constructions a space within the constructional inventory of the English language, even though they are rare in comparison to other structures and features within the language. Frequency is often made an important factor in such cases. I agree with Amman (2007: 202), however, when he argues that the low frequency of a structure is not necessarily a valid reason to exclude it from a paradigm of a language:

> a verbal category that can be replaced with another one, but does add an overlay of meaning at least in some contexts, should be considered part of the paradigm, and therefore of the verbal morphology of a language.

Frequency is a very fuzzy concept. It is difficult to say when a certain feature is frequent – just as difficult it is to say how frequent it has to be to be included in a paradigm. And who would be in the place to determine such limits? Apparently, 19th century language prescriptivists only saw the redundancy in the perfect infinitive construction and overlooked that it might actually fulfil certain functions for the people who use it.

So, it seems we have clarified the function of the perfect infinitive, namely to locate an event or a hypothetical event prior to the time of speaking and on one level with the time of the governing verb. This still does not really answer the question about the idiosyncratic contribution the perfect infinitive makes to the meaning of the whole construction, especially in comparison to corresponding constructions with a present infinitive, which also places the event it encodes as simultaneous to the time of the event encoded by its governing verb.

7.3. Syntactic Doubling

Perfect infinitive as well as double perfect infinitive constructions could be seen as an instance of syntactic doubling, for in syntactic doubling, a constituent (i.e., a morphosyntactic feature, morpheme, word, or phrase) is expressed two or more times" (Barbiers 2008: 2). For the latter type of construction it is clear that the doubling phenomenon comprises the repetition of perfective infinitival morphology. For the former type it is less obvious, but I argue that there is syntactic doubling at work too. Barbiers (2008: 2) claims that agreement is a subcase of syntactic doubling. Hence, if perfect infinitive constructions are seen as instances of anteriority agreement, we have some ground to assume that they are instances of syntactic doubling as well. Even though no morpheme or word is expressed twice or more often, the morphosyntactic feature of marking pastness is expressed twice – once in the past tense of the

governing verb and once through the perfect infinitive which can be ascribed, as we have seen, a deictic function.

Syntactic doubling is “a core property of natural language” (Barbiers, Koeneman & Lokakou: 1), but even as such it marks a challenge for several theories central to linguistics. First, it violates the Principle of Economy in that there is at least one superfluous element in syntactic doubling constructions. Second, it poses a problem for the Principle of Compositionality which says that every single constituent contributes to the meaning of the whole structure and finally, syntactic doubling might violate the conversational maxim of quantity in pragmatics, which requires an utterance to be no more or no less informative than necessary (Barbiers, Koeneman & Lokakou: 1-2). In the case of (double) perfect infinitive constructions, we have already found a way to bypass or even solve the problem for the Principle of Compositionality by considering them from the perspective of Construction Grammar, which does not depend on the compositional model and assigns a meaning to the (idiomatic) construction. Whether the pragmatic maxim of quantity is violated is difficult to say at this point, since we have not fully established the possible meaning differences of the constructions yet, but this will be addressed again below. The same goes for the Economy Principle. As long as we do not know whether perfect infinitive constructions actually really mean the same as their corresponding constructions with the present infinitive it is impossible to say whether the Economy Principle is violated or not.

7.4. Synonymy or no synonymy – that is the question

All these principles and maxims tie in quite well with and play a role in the concept of iconicity which was introduced earlier. On the one hand, (double) perfect infinitive constructions are a challenge for iconic motivation. According to this, word order, for instance, reflects the sequence of events as they take place in reality. There is no problem with this as the word order in the (double) perfect infinitive constructions reflects that for example an intention has to be there before the intended event, an expectation before the expected event, a plan before it can be put into practice or an ability before something can be done (and so on). If we acted on the assumption of a compositional model, the morphological form of the perfect infinitive would challenge this sequence, however, by illogically locating an event prior to another event, where this is not possible. By taking a Construction Grammar position, this problem has already been dissolved in so far as we assumed a non-componential form-

meaning pairing with the idiosyncratic, non-predictable posteriority reading of the perfect infinitive construction. Unfortunately, this results in yet another problem, where there does not seem to be an iconic relationship between the form of the perfect infinitive (which suggests anteriority) and its meaning (posteriority or contemporaneity). This in turn violates the other subtype of iconicity, namely isomorphism, which is based on the paradigm of 'one form one meaning'. As we have seen, this is the same paradigm which analogy is based on. Given the fact, that on the first glance sentences in (198) and (199) have exactly the same meaning, one gets the impression that analogy failed at reaching its goal and instead created the situation that we now have two forms which are associated with only one meaning, i.e. a case of syntactic synonymy.

(198) a. I wanted to create a place that **I would have liked to have gone** for treatment. (COCA_SPOK)

b. I wanted to create a place that I would have liked to go for treatment.

(199) a. In a case study by Turner (1987) an account is given of an inspection which **was to have built** upon a self-evaluation, with the latter acting as an initial ground clearing and the provision of information. However, the inspectors ignored and even scorned the self-evaluation, seeing only their inspection as important. (BNC)

b. In a case study by Turner (1987) an account is given of an inspection which was to build upon a self evaluation, …

Synonymy presents an exception to iconic isomorphism but should not exist. This is picked up by Goldberg (1995: 67) in her Principle of No Synonymy, which would be violated by sentences (198) and (199), as well as the Principle of Maximized Expressive Power. The Principle of No Synonymy has two corollaries. The first claims that "[i]f two constructions are syntactically distinct and S(emantically)-synonymous, then they must not be P(ragmatically)-synonymous" (Goldberg 1995: 67). According to this principle, there has to be a pragmatic difference between (198a) and (198b) as well as between (199a) and (199b). This would be the position Berezowski (2004) takes. His hypothesis that the constructions using the present infinitive violate the maxim of quantity and that the perfect infinitive is used to compensate for the lack of information would be a way out – if it only was supportable. Pragmatic differences also include stylistic aspects such as register. The results from the corpus search suggest that these constructions are a feature of colloquial spoken and informal written language and are used less in more formal written (e.g. academic) language. This thesis was, however, not devised and does not have the scope to answer this aspect

appropriately. Therefore it is not safe to say whether these constructions have distinct pragmatic functions or not.

The second corollary presents the reverse option to corollary A by saying that "if two constructions are syntactically distinct and P-synonymous then they must not be S-synonymous" (Goldberg 1995: 67). Thus, if we assume that there is no real difference in register, there has to be a semantic difference. What is this difference then? Well, the claim that the present infinitive implies success whereas the perfect infinitive does not has already been refuted by the fact that there are other elements in a counterfactual utterance which cause this interpretation. James (1985) also thinks that the semantic difference is based on the different infinitive forms, but has an alternative suggestion. I will present this idea by means of the sentences in (198) and (199). According to James (1985: 78), the difference between (198a) and (198b) lies within the interpretation that in (198a) the going event is unambiguously contemporaneous with the past hypothetical wish in the matrix phrase, whereas the use of the present infinitive in (198b) might communicate the possibility that the wish of going to such a place for treatment extends to the present. Thus, it is possible to read (198a) in the sense that the person speaking needed some sort of treatment in the past, but does no longer and therefore the wish of going to a special place for treatment does not extend to the time of speaking. Similarly, (199b) might imply the possibility that the plan of building the inspection upon a self-evaluation is still held, whereas the perfect infinitive in (199a) excludes this option. Nevertheless, it is to say that while for the examples in (198) this distinction works quite well, it does not really apply to the sentences in (198) because the following sentence, which is introduced by *however*, shows that the plan already failed and that there is no way left to build the inspection on a self-evaluation. Another objection to James's approach would be examples like the one in (200) where it is difficult to detect a motivation for why the double perfect infinitive construction is used in the second conditional whereas in the first it is not:

(200) And if it was Fluttershy… I probably wouldn't have been able to get past the first page. My soft little heart **would not have been able to have taken** that… (Google)[34]

[34] http://www.escapistmagazine.com/forums/read/18.277382-MLP-Cupcakes?page=2

Thus, even though James's hypothesis seems quite promising and definitely works for some instances of the (double) perfect infinitive constructions, it is very unlikely that it can be applied to all of the examples cited in the above sections. This means that at this point, and as unsatisfying as it might be, it is impossible to give a definite answer to the question about the difference in meaning between the (double) perfect infinitive constructions and their corresponding constructions with a present infinitive. It has been shown that it is possible that there are pragmatic differences regarding the register or (very subtle) semantic differences regarding actuality and/or extension to the time of speaking. This definitely deserves further investigation, but unfortunately lies beyond the scope of this thesis.

8. Conclusion

In the introduction I have signalled that this study was aimed at moving a non-core phenomenon of the English language into the spotlight. In the preceding chapters I have therefore argued for the existence of the 'perfective infinitive construction' on the one hand and the 'double perfect infinitive construction' on the other hand. Both constructions, which are actually closely related through inheritance relationships, comply with the basic requirements for a construction in the sense of Construction Grammar: as form-meaning pairings they mostly do not allow for a componential analysis because part of their overall meaning is not predictable from their components. As the names of the constructions already suggest, the perfect infinitive is the central element. It makes these constructions so very interesting and intriguing because it appears as a complement in places where it would not be expected and because it is still used even though it has been subject of condemnation by prescriptive grammarians throughout its history. As the non-finite form of the perfect, it is usually used to express anteriority, but in the constructions in questions this anteriority meaning is cancelled out and turned into expressing posteriority or simultaneity with the governing verbs because the other interpretation would be illogical. However, at the same time they violate the iconic paradigm of 'one-meaning-one-form'.

Informally put, the main purpose of this thesis was to find what was going on in these constructions and to investigate into the special function the perfect infinitive seems to fulfil when it complements a past tense matrix verb or a modal construction with past hypothetical meaning. In the course of the analysis of several subtypes of the (double) perfect infinitive

construction within the Construction Grammar framework, it became evident that the use of the perfect infinitive must be a form of hypercorrect marking of the past, or rather a form of anteriority agreement where the event encoded by the perfect infinitive is apparently located either as simultaneous to the event encoded by the past tense matrix or at least where the speaker simply wants to locate it as prior to the time of speaking.

As form and meaning are always interrelated, I also had to ask about the semantics of the perfect infinitive in the two constructions. Especially, because it is interchangeable with the present infinitive without changing meaning in all cases and thereby apparently violating iconic isomorphism and the Principle of No Synonymy. Previous opinions have tried to solve this dilemma by claiming that there is a difference in meaning which stems from the perfect infinitive's ability to mark counterfactuality in these environments. I have tried to refute this position by arguing that, even though utterances using the (double) perfect infinitive construction often (but by no means always) are counterfactual indeed, this is not due to the perfect infinitive but to other elements in its environment.

The former, long maintained assumption is still comprehensible to some part, though. It has turned out that the perfect infinitive construction must have developed in analogy to modal constructions (modal + perfect infinitive), which also frequently communicate unreal and/or hypothetical events. This is most likely also the reason for why the constructions mainly occur as the complement of past hypothetical modal constructions, or, even though very rarely, as the complement of verbs of intention, planning, expectation, etc. which, in their past tense forms, also have the connotation of unreality or counterfactuality.

This still does not mean that the existence of (double) perfect infinitive constructions violates the – actually thought to be universal – concept of iconic isomorphism and the Principle of No Synonymy. There are two possible arguments against the synonymy of the (double) perfect infinitive constructions and their counterparts using a present infinitive. One of them sees a pragmatic difference in register, according to which the perfect infinitive is used in more informal, colloquial, spoken language, whereas the present infinitive is used in more neutral and/or higher and written register. The other argument stresses a semantic difference where the present infinitive extends the encoded event to the present while the perfect infinitive locates it unambiguously in the past. Unfortunately, this paper does not offer the space for an exhaustive discussion of the phenomena and has to leave many answers unanswered. This

thesis faces its limits when it comes to finding an answer to the question about the semantic difference because going into more detail here would go beyond the scope of this thesis. However, it leaves us with the potential and incentive for further research into the phenomena and suggests the necessity for a larger-scale corpus study including the perfect as well as present infinitive constructions. And even though James Thurber (*Perfect Infinitive* 144-145) advises people against the use of the perfect infinitive, he is right when saying "[t]hat's what it is – a fascination" and therefore it is well worth the "dull pain" it might cause when thinking about it too much.

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Appendices

Appendix A: English abstract

Constructions like those in (1) and (2) have been subject to criticism by language prescriptivists for centuries. In these sentences, a perfect infinitive occurs where it would not be expected. As so-called “non-core” elements of the English grammar, they are puzzling, but at the same time present an intriguing research topic. The question about the nature and the function of these constructions is therefore made the centre of attention of this thesis.

(1) The fire happened two doors down from where Luz Maria Aguilar-Bucio, 32, was shot and killed the night before Valentine's Day, when she **was to have been** married. (COHA)

(2) She **would have liked to have kissed** him then, but couldn't because they were in the street. (BNC)

So far, a number of linguists have argued that the perfect infinitive in such constructions marks counterfactuality. This thesis challenges this traditional view by arguing for a perfect infinitive construction and a double perfect infinitive construction ((1) and (2) respectively) in the sense of Construction Grammar instead – assuming that they are form-meaning pairs with an idiosyncratic meaning which does not compose from the constituents of the construction. Based on a syntactic analysis of language data retrieved from online corpora I try to show that the use of the perfect infinitive can be explained as being an instance of anteriority agreement, whereby the speaker feels the need to place the governing verb and its complement on the same temporal level. As the perfect infinitive in these constructions usually is interchangeable with a present infinitive, the question of meaning differences and syntactic synonymy are raised. The apparent lack of semantic difference thereby addresses and even challenges the issue of linguistic iconicity. It is very likely that there is either very subtle pragmatic or semantic difference which prevents syntactic synonymy, but within the limited scope of this thesis it is impossible to present a definite answer to this subject.

The thesis is divided into two main parts. The first part is concerned with theoretical preliminaries. Thus, the historical development of the perfect infinitive is outlined and discussed briefly as well as previous attempts to explain the phenomenon are presented and evaluated. Moreover, the theoretical framework of Construction Grammar and the concept of iconicity are introduced. In the second part, the actual analysis is carried through, based on the theoretical preliminaries, certain criterions and by means of language data found in an initial corpus search.

Appendix B: German summary/ Deutsche Zusammenfassung

Titel: „*I meant to have written another 'Wonder Book'* – Eine Untersuchung verschiedener Verwendungsmöglichkeiten der (Doppel-)Perfekt Infinitiv Konstruktion."

Syntaktische Konstruktionen wie die Beispiele in (1) und (2) waren über Jahrhunderte hinweg von Angriffen aus den Reihen der präskriptiven Grammatiktradition betroffen. In solchen Sätzen wird der Infinitiv Perfekt verwendet, obwohl man eigentlich einen Infinitiv Präsens erwarten würde. Aus diesem Grund werden solche Konstruktionen wohl auch nicht zum ‚Basisinventar' der englischen Grammatik gezählt, sondern stellen Sonderformen (‚non-core elements') dar. Ebendeshalb sind sie aber ein verblüffendes und faszinierendes Forschungsthema, indem sie das Hauptaugenmerk dieser Arbeit auf die Frage nach der Natur und Funktion solcher Strukturen werfen.

(1) The fire happened two doors down from where Luz Maria Aguilar-Bucio, 32, was shot and killed the night before Valentine's Day, when she **was to have been** married. (COHA)

(2) She **would have liked to have kissed** him then, but couldn't because they were in the street. (BNC)

Der Forschungsstand zeigt, dass der Infinitiv Perfekt in solchen Konstruktionen bisher meist als ein Marker für Kontrafaktizität der Aussagen abgetan wurde. Mit dieser Arbeit präsentiere ich eine Alternative dazu, da ich für die Existenz einer Perfekt Infinitiv Konstruktion und einer Doppel-Perfekt Infinitiv Konstruktion (vgl. (1) bzw. (2)) im Sinne der Konstruktionsgrammatik argumentiere. Dabei vertrete ich die Position, dass diese Konstruktionen Form-Bedeutungspaare sind, deren Semantik sich nicht aus den einzelnen Konstituenten erschließen lässt.

Anhand einer syntaktischen Analyse von Beispielen, die in Online Korpora gefunden wurden, versuche ich zu zeigen, dass es sich bei den Perfekt Infinitiven in diesen Konstruktionen um Fälle von ‚Vorzeitigkeitskongruenz' (anteriority agreement) handelt. Dabei verspüren Sprecher offensichtlich das Bedürfnis, das regierende Verb und sein Komplement auf die gleiche zeitliche Ebene zu stellen und verwenden deshalb den Infinitiv Perfekt. Da der Infinitiv Perfekt meist auch mit einem Infinitiv Präsens ausgetauscht werden könnte, stellt sich die Frage, ob die Verwendung des Infinitiv Perfekts auch eine Bedeutungsänderung mit sich zieht, oder ob wir es mit einem Fall von syntaktischer Synonymie zu tun haben. Letzteres würde ein ernsthaftes Problem für das Konzept der linguistischen Ikonizität darstellen. Es scheint sehr wahrscheinlich, dass dieses Problem der Synonymie durch die Identifizierung

eines sehr feinen pragmatischen oder semantischen Unterschieds gelöst werden kann. Ein eindeutiges Ergebnis konnte im Rahmen dieser Arbeit jedoch nicht gefunden werden.

Die Diplomarbeit ist in zwei Teile geteilt. Der erste Teil beschäftigt sich mit theoretischen Vorbemerkungen zum Thema. Zum einen wird kurz die geschichtliche Entwicklung des Infinitiv Perfekts im Englischen abgehandelt; zum anderen werden der bisherige Forschungsstand zum hier behandelten Phänomen und die wichtigsten theoretischen Gerüste (Konstruktionsgrammatik und Ikonizität) präsentiert. Im zweiten, analytischen Teil der Arbeit werden die Ergebnisse der Korpus-Suche dargestellt und in Bezug auf die theoretischen Erläuterungen und bestimmte Merkmale ausführlich analysiert.

Appendix C: Curriculum Vitae

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