Bare infinitival complements in Present-Day English[1]

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1. Introduction

Advances in corpus compilation, design and technology have made possible the description of several patterns of grammatical variation and change in Present-Day English (PDE), as well as the uncovering of several factors that underlie such patterns of variation and change (see e.g. the papers in Rohdenburg and Mondorf, 2003, and the monographs by Mair, 2006a and Leech et al., 2009). In particular, non-finite complementation has proved to be a rich and fascinating field of research in this respect. Egan (2008: 90) points out that "the English non-finite system of complementation is still evolving" and that "this evolution is reflected in synchronic variation". There are by now a number of detailed case studies of the patterns of complementation of individual verbs, e.g. *find* and *want (*Aarts and Aarts 1995), *begin* and *start* (Mair 2002, 2003), and *remember* (Mair 2006b), to name but a few. Still, Mair (2006a: 140) assumes that "in relation to their importance, changes in the function and use of the various types of nonfinite complement clauses remain an under-explored area of research".

The present contribution focuses on English verbs that exhibit variation between infinitival complements marked by *to*, and unmarked (or bare) infinitival complements (indicated by ∅) as shown in (1).

(1) a. This will *help them to make* better informed decisions on behalf of the company, its shareholders and employees worldwide. (BNC, GX6 69)[2]
b. Our aim is to *help them ∅ make* the right purchase by giving them all the information they need. (BNC, CBC 8409)

The verbs *help* and *try* in particular have been studied in some detail (Kjellmer 1985, 2000; Mair 1995, 2002; McEnery and Xiao 2005; Hommerberg and Tottie 2007; Wulff 2008; Lohmann 2011), and the alternation between a marked and a bare infinitive with *help* is also documented in the standard reference grammars (see e.g. Biber et al. 1999: 735-737). Kjellmer (2000) presents corpus evidence that *try* + bare infinitive is an incipient variant. Other verbs said to occur with the bare infinitive are mentioned only sporadically in the literature (e.g. Algeo 1988: 22f. and Algeo 2006: 227f. on *ask* and

[1] I wish to dedicate this paper to Rüdiger Zimmermann, professor emeritus of English Linguistics of the University of Marburg/Germany, on the occasion of his 70th birthday in September 2010. I would like to thank Christian Mair and the editors of the present volume for insightful comments on an earlier version. The usual disclaimers apply.
[2] Examples come from major electronic text corpora of English: the *British National Corpus* (BNC), and the *Corpus of Contemporary American English* (COCA). Both corpora can be accessed and searched online at http://corpus.byu.edu.

know). The bare infinitive is also often assumed to be more readily acceptable and more rapidly spreading in American rather than British English (Algeo 1988, 2006; Eastwood 1994: 147 vs. Wulff 2006 on *go*), but there is no large-scale study that has examined this variation (and possibly recent trend) across a larger group of verbs in the two main varieties of English.

This paper presents corpus evidence which suggests that the variation between marked and bare infinitival complements is also found with certain other verbs in both British and American English, a phenomenon that has to my knowledge not been well documented nor examined yet, see examples (2) – (4).

(2) a. Subsequently, in the Pacific region, New Zealand has joined with the United States and Australia to *assist Pacific island countries ∅ increase their counter-terrorism capabilities*. (COCA 2003, *Asian Affairs: An American Review*)
b. Since its inception, Council has operated a programme of capital grants designed to *assist governing bodies ∅ gain access to facilities suitable for international competition and national training purposes*. (BNC, HJ8 345)

(3) a. Since they came to Capitol Hill, Snowe, Chafee and DeWine have staked out middle ground that *allows them ∅ retain support from Clinton's backers and conservatives*. (COCA 1999, *USA Today*)
b. This helps them assess the effects of changing those structures by *allowing them ∅ make such changes directly through the virtual reality interface*. (BNC, HRD 2091)

(4) a. Such work has helped to cut costs and *enabled Clorox ∅ slash its average product-development time to six months, from two years*. (COCA 1999, *New York Times*)
b. Aimed at network operators and telecommunications providers, the resulting products are intended to *enable them ∅ introduce new value-added services and products*. (BNC, CNN 120)

Bare infinitives after *assist*, *allow*, and *enable* seem to have gone largely unnoticed or have been written off as mere exceptions, contaminations or errors in the research literature. For example, Egan's (2008) detailed study of non-finite verb complementation based on the *British National Corpus* (BNC) was restricted to a maximum of 1,000 instances per verb, hence overlooking many instances of bare infinitives. Egan writes off the very few instances that he actually found as "exceptions […] so rare as to render it unnecessary to revise the classification proposed" (2008: 196f.).

The evidence presented in this paper challenges categorical approaches to syntax and non-finite complementation in particular, e.g. as regards Duffley's claim that "*allow* must be followed by *to*" (1992: 83). In the following section, I will summarize previous research and explanations on the alternation between marked and bare infinitival complements. Section 3 sketches the methodology and data of the present study, and section 4 presents the quantitative findings, also examining various structural and psycholinguistic factors that have been attested to influence the variation between a

marked and a bare infinitive. In the discussion in section 5, I will argue that the spread of the bare infinitive can be interpreted in line with similar 'erosion' processes, i.e. the tendency to omit semantically 'empty' function words, which have recently been documented in several other types of verbal and prepositional constructions. In the present context, the omission of infinitival *to* may cause an increase in syntactic ambiguity and may thus be analysed as a form of complexification of form-function-mappings in English that leads to a form of hidden syntactic complexity (Bisang 2009).

2. Previous research

According to Biber et al. (1999), the construction verb + bare infinitive clause is rare in all four of the registers conversation, fiction, news, and academic prose, while the pattern verb + noun phrase (NP) + bare infinitive is "rare in news and academic prose, but occurring with moderate frequencies (over 200 per million words) in conversation and fiction" (1999: 698). Verbs taking bare infinitive clauses come from only two of Biber et al.'s ten semantic classes: perception verbs (*feel*, *hear* (*tell*), *see*, *watch*) and verbs of modality or causation (*dare*, *have, help, let*, *make*). Similarly, Huddleston and Pullum *et al.* (2002: 1244) list sensory perception verbs (*feel, hear, notice, observe, overhear, see, watch*), *have*, *let* and *make* among the causatives, and a few verbs found either with or without *to*: *ought*, *dare*, *know* and *find* (both typical of British English, the latter in the sense of 'see, notice'), and *help.*

There is by now a rich literature that discusses various structural, semantic as well as discourse- and processing-related factors with regard to their influence on the synchronic variation between marked and bare infinitives. In this section, I will only very briefly sketch the main arguments and findings needed for some aspects of the analysis to follow in section 4.

Within functionally-oriented syntax, the variation between the two types of complements has predominantly been discussed in terms of the iconically motivated distance principle (Givón 1980, Haiman 1983) that takes up the concepts of binding and iconicity in syntactic coding: "the distance between linguistic expressions may be an iconically motivated index of the conceptual distance between the terms or events which they denote" (Haiman 1983: 781). In other words, direct causation or assistance will be expressed by more reduced complementation (e.g. a bare infinitival complement) than indirect causation or assistance (e.g. an infinitival complement marked by *to*). From a semantic point of view, it has often been claimed that the bare infinitive indicates a more direct relationship between what is expressed in the matrix verb and the complement, while the *to*-infinitive expresses a more indirect one with regard to parameters like [± involvement] and [± simultaneity of action or perception] (e.g. Mittwoch 1990; Duffley 1992; Fischer 1995; see also McEnery and Xiao 2005: 169-176 for discussion). One major problem of this analysis is that the claimed semantic distinctions – if they do exist – are very subtle indeed and are often not supported by corpus data (see e.g. Gries and Stefanowitsch 2004).

Several specific determinants of the synchronic variation between a marked and a bare infinitival complement have received attention in a number of studies of the verb *help* (e.g. Mair 1995, 2002; Rohdenburg 2000, 2006, 2009b; McEnery andXiao 2005; Berlage 2007; and most recently Lohmann 2011). These have identified several factors

that influence the choice of either variant, among them regional, structural and stylistic ones. In particular, Günter Rohdenburg has argued that whether or not the infinitive marker *to* is realised is determined by the overall structural complexity of the construction and the *horror aequi* principle. Rohdenburg's complexity principle (Rohdenburg 1996) assumes a correlation between two parameters, i.e. processing complexity and grammatical explicitness: in the case of more or less explicit constructional options, the more explicit one(s) – in the present context the infinitival complement marked by *to* – will tend to be preferred in cognitively more complex environments. The complexity principle takes into account several properties that determine the relative complexity of the construction, such as e.g.

(i) the form and syntactic environment of the matrix verb (indicative, present tense forms, as well as *to*-infinitival forms of the matrix verb, are more likely to trigger a bare infinitive),
(ii) intervening material between matrix and complement verb (the tendency that *to* is used increases with the length and complexity of the intervening material, e.g. complex objects or inserted adverbials), and
(iii) complement negation (the use of complement negation increases the rate of infinitive marking, Rohdenburg 2006: 61).

For instance, in terms of the complexity principle, the relative structural complexity of the construction in (5) would be expected to trigger a marked rather than a bare infinitive, and that is what we find in this example: there is the complex matrix predicate *would have allowed*, and the lengthy, co-ordinated intervening direct object NP *safety boards or state officials*:

(5) The rule abandons an earlier plan that *would have allowed safety boards or state officials to help researchers make such decisions on their own*. (BNC, EAK 118)

Horror aequi is understood as the tendency to avoid using formally (near-) identical and (near-)adjacent grammatical elements or structures, in this case the tendency to avoid the coincidence of two marked infinitives. Compare example (1b), repeated below, with (1c)

(1) b. Our aim is *to help them ∅ make the right purchase* by giving them all the information they need. (BNC, CBC 8409)
c. Our aim is *to help them to make the right purchase* (…).

Horror aequi is assumed to operate below the threshold of consciousness, and can manifest itself in two forms, strong and weak. In its weak form, it may not be understood as a 'hard' grammatical constraint, but can be weakened by a number of other factors (e.g. through interaction with the complexity principle by insertion of intervening material or in contexts of negation). There is sufficient evidence that *horror aequi* is indeed a factor that strongly affects the choice of the bare infinitive (again, see

McEnery and Xiao 2005: 180; Berlage 2007: chapter 2; Rohdenburg 2009b and most recently, Lohmann 2011 for studies on *help*).

Finally, turning to the diachronic perspective on the variation between marked and bare infinitives, there are two major (and partially opposing) views that need to be summarised briefly. In the first view, Fischer (1995, 1997, 2000, 2007) and Los (1998, 2005) provide studies on the diachronic development of the *to*- and the bare infinitive in English. Fischer reports that in Old and Middle English, the choice between the two infinitival variants was not restricted to a small number of verbs as it is today, but it was usual for one and the same verb to select both. The determinant of this variation was basically semantic in nature: bare infinitives indicated a 'direct' relationship between what is expressed in the matrix verb and the infinitival complement, while *to*-infinitives expressed an 'indirect' one. The bare infinitive then decreased in the course of time, accompanied by an increase and grammaticalization of *to* at the expense of both bare infinitives and *that* (Los 1998, 2005). Fischer (1997: 131, fn. 22) hence argues that the variation between a marked and bare infinitive e.g. after *help* in PDE is a relic of earlier stages of the language, and thus explicitly rejects claims that the bare infinitive after *help* is a recent development under American influence by analogy with bare infinitives after perception verbs.

In the second view (Kjellmer 1985; Mair 1995, 2002, 2006a), the increasing use of *help* with a bare infinitive in 20th century English is seen as a recent trend, "an approximation of current British usage to US norms (…); in the long term, however, this Americanization is embedded in an overarching parallel diachronic development leading to an increase in frequency of bare infinitives in all varieties" (Mair 2002: 121). Mair considers this an early stage of grammaticalization in which an increase in frequency of use is paired with semantic broadening: "the meaning of *help* has broadened, from 'somebody lends support to somebody else in performing some task' to a more general notion of 'contribute to/provide a favourable environment for' " (Mair 2002: 123f.). Mair concludes that "[t]he verb *help* might thus be said to be in the process of taking over quasi-auxiliary function in complex verb phrases" (Mair 2002: 124). Kjellmer (2000: 120) provides a similar explanation for the occurrence of *try* with the bare infinitive.

3. Methodology and data

Starting out from personal anecdotal observation of several 'unusual' instances of the use of the bare infinitive, I carried out a corpus-driven analysis of two major electronic corpora of English, the *British National Corpus* (BNC), consisting of 100 million words of written (90%) and spoken (10%) British English between 1980-1993, and the *Corpus of Contemporary American English* (COCA), a monitor corpus covering American English since 1990, currently including more than 400 million words. These corpora were searched using the interface provided by Mark Davies at Brigham Young University. To some extent, this interface allows a search of the targeted complementation patterns without specifying a verbal trigger (i.e. a specific matrix verb). For example, a search for a form of any lexical verb followed by a pronoun, directly followed by a bare infinitive will retrieve instances like *assisting them publish*, and a search for a form of any lexical verb followed by a noun phrase within a span of 5

words, then followed by a bare infinitive produces instances like *aids athletes achieve* or *enable lower and moderate income families make*. The hits obtained that way were then carefully inspected and filtered manually. This first search was intended to examine what types of matrix verbs would take bare infinitival complements. Subsequently, more precise and varied searches were carried out on the individual verbs that were found to participate in the variation to ensure a higher recall rate. However, this procedure is still limited in that it does not allow the extraction of all instances of a verb that occur either with a marked or unmarked infinitive.

4. Results

4.1. Quantitative findings

Running the first search query, the following verbs were found to appear with a bare infinitival complement**:** *aid, assist allow, enable* and *force*, as well as *sense, spot*, *smell* and *witness*.[3] Interestingly, these verbs fall into the two semantic classes indentified by Biber et al. (1999) and Huddleston and Pullum *et al.* (2002): verbs of modality or causation, and perception verbs. In the remainder of this chapter, I will focus on the first group, i.e. verbs of modality or causation. Table 1 gives the raw frequency counts for bare infinitival complements found with these verbs.

verb	COCA	BNC
aid	6	0
assist	35	12
allow (intransitive uses)	9	6
allow (transitive uses)	42	9
enable	21	16
force	12	1

Table 1: Raw frequency counts of bare infinitival complements after selected verbs in two corpora

Given the size of the corpora, these frequency counts are fairly low, thus the variation is admittedly rare when compared to the verbs *try* and *help* in particular, for which the alternation has been more firmly established. However, for the three verbs *assist*, *allow* and *enable* in particular, there is evidence not to write these cases off as mere typos, speech errors or speaker idiosyncrasies.[4] Still, the question arises as to what is the

[3] The verbs *advise, ask, get, prompt* and *urge* also occasionally appear with a bare infinitive in the corpora, but when compared to the verbs listed in Table 1, these instances are either too few to be considered convincing evidence, or for reasons of syntactic ambiguity are not clear cases of infinitival complements in the first place. For example, searches for the verb *ask* produce numerous instances of seemingly bare infinitives. However, many of these occur in spoken language and may thus be considered cases of reported speech rather than bi-clausal constructions, as in the following example:

> And the bloke said well we can't charge you for that. So this is isn't what it's all about? Well, that's how it all come see he owes them a hundred and seven pound and er **when he asked them change the tyres over** they wouldn't do it. (BNC, KCT 13828)

[4] See also Manning (2003: 292ff.) who reports a similar case.

critical threshold for sufficient evidence. Sparsity of data has always been a challenge for linguists of whatever theoretical orientation (Manning 2003: 295). Obviously, when working with large corpora, which are necessary in order to examine rare syntactic patterns, the problem is that the larger the corpus, the more performance-related phenomena are bound to occur, e.g. clear errors, slips of the tongue, cases of intended ungrammaticality, foreigner talk, or errors caused by technical flaws in processing individual texts (scanning, transcription). While it is clear that not all such performance data should be included in a corpus-based account of language use, it should also be said that it is not through frequency information alone, but only through careful screening of individual instances (which in turn need to be considered in relation to their distribution across the corpus as a whole, see Tables 2 and 3 below) that it can be determined whether to write them off as mere exceptions, or whether they merit systematic attention.

The verb *allow* is of special interest here as it can take a bare infinitive with and without an intervening NP, the transitive use being more frequent. The data thus challenge the long-standing claim that *help* "is the only verb that can both control either a full infinitive or a bare infinitive and occur either with or without an intervening noun phrase (McEnery and Xiao 2005: 161), see examples (6) and (7).

(6) a. They were the only ones he would *allow ∅ administer his twice-daily intravenous medication*. (COCA 1990, *Associated Press*)
b. At worst, food will be *allowed ∅ develop only to the extent that it serves the needs of agriculture*. (BNC, HJ4 8403)

(7) a. Choose an exercise that fits your fitness level and incorporate it into your usual routine; this *allows the back ∅ remain* strong and fresh while performing your other exercises. (COCA 1998, *Saturday Evening Post*)
b. I can't see him *allowing me ∅ take* the children so far away from London. (BNC, JXX 2173)

That the data provide evidence for a grammatical phenomenon, not just an idiosyncratic property of a specific speaker/writer or genre becomes even clearer when considering the distribution of all observed cases in the corpora. Tables 2 and 3 list their distribution in different discourse domains / registers.

verb	spoken	fiction	magazine + newspaper	academic	total
assist	7 (20%)	2 (5.7%)	**7 (20%)**	**19 (54.3%)**	35 (100%)
allow (transitive uses)	11 (26.2%)	7 (16.7%)	**15 (35.7%)**	**9 (21.4%)**	42 (100%)
enable	1 (4.8%)	1 (4.8%)	**4 (19%)**	**15 (71.4%)**	21 (100%)

Table 2: Distribution of bare infinitival complements in discourse domains for the three most frequent verbs (COCA)[5]

[5] When the data were retrieved (June 2009), COCA consisted of approx. 412 milion words. The observed differences are statistically significant when comparing the distribution of all three verbs taken together in spoken + fiction (approx. 165 million words) vs. magazine + newspaper + academic (approx. 247,5 million words): Log-Likelihood (LL) = -4.57, $p<0.05$)

verb	spoken	fiction	news	academic	written misc.	total
assist	0	2 (16.7%)	**1 (8.3%)**	**2 (16.7%)**	**7 (58.3%)**	12 (100%)
allow (transitive uses)	0	1 (11.1%)	**2 (22.2%)**	**1 (11.1%)**	**5 (55.6%)**	9 (100%)
enable	2 (12.5%)	0	**1 (6.25)**	**0**	**13 (81.25%)**	16 (100%)

Table 3: Distribution of bare infinitival complements in discourse domains for the three most frequent verbs (BNC)[6]

Clearly, they do not predominantly occur in (informal) spoken language or fiction (that often includes substantial amounts of text modelling spoken language), where such variation would be expected to emerge first (see Kjellmer's 2000: 118 and McEnery and Xiao's 2005 findings for *try* and *help*), but in writing, especially in newspapers and academic texts. It is well-known that the discourse style of written informational registers is fundamentally different from spoken registers with respect to many linguistic features. Moreover, Biber and Gray (this volume) show that informational written registers participate in historical changes – such as an increase in nominal structures, but a decrease in verbal and clausal structures – to differing extents. By contrast, spoken registers and written registers that do not have a primary informational purpose (like fiction) have generally not participated in such changes. Thus, the observed register distribution of the bare infinitival complements poses the question whether the omission of *to* has to be interpreted as an effect of verbal economy, rather than informality.[7] This issue will be addressed further in section 5.

4.2. Some structural and psycholinguistic factors that influence variation

Given the low frequency counts of the bare infinitival variants compared to the large number of *to*-infinitives, at this stage it seems difficult to quantify the extent of this incipient variation.[8] What is certainly worthwhile and possibly more interesting, however, is to consider the possible factors that may give rise to this phenomenon. In this section, I examine various structural and psycholinguistic factors that have been found to influence the variation between marked and bare infinitives to see if and how they play out in the data.

To begin with, the complexity principle would predict that *to* is preserved in complex environments, e.g. as measured by the complexity of intervening material between matrix and complement verb (complex objects or inserted adverbials). We would expect an incipient variation of the kind investigated here to emerge in simple contexts where the infinitive marker can easily be omitted without causing additional

[6] The BNC consists of approx. 100 million words. The observed differences are statistically significant when comparing the distribution of all three verbs taken together in spoken + fiction (approx. 26.5 million words) vs. news + academic + written misc. (approx. 47 million words): LL = -9.50, $p<0.01$)

[7] In this context, it is interesting to mention that in a study of New Englishes based on several corpora of the *International Corpus of English* (ICE), Steger and Schneider (2009) also observe bare infinitival complementation especially with the verbs *allow* and *enable* (what they call "intermediate structures").

[8] Such a quantification may of course be possible, e.g. within the framework of probabilistic syntax. See Manning (2003: 297ff.) for a discussion of examples of verbal subcategorization.

processing effort for the recipient. Considering this, the corpus findings are surprising, because they show that bare infinitives are not restricted to (cognitively) simple environments. While Table 4 shows that the majority of NP-objects between matrix and complement verb are indeed short (pronouns or simple NPs), there are also quite a few cases of longer, post-modified NPs – some even including a relative clause – where the complexity principle would not predict the omission of *to*, see (8) – (10) for examples.

verb	COCA					BNC				
	1 wd.	2 wds.	3 wds.	4 wds.	5 +	1 wd.	2 wds.	3 wds.	4 wds.	5 +
aid	1	4	1							
assist	12	9	5	5	4	4	5	2	0	1
allow (transitive uses)	18	11	4	4	5	7	2			
enable	12	3	2	2	2	7	2	6	0	1
force[9]	7	1								

Table 4: Number of bare infinitival complements according to length of intervening material between matrix and complement verb (in number of words)

(8) But we should not *allow* <u>*the temptations of one woman*</u> ∅ *sway* us into thinking, even for a moment, that Kolk'r above would support such... such abominations." (COCA 2001, *Excalibur*)

(9) However, for the foreseeable future, higher education institutions in the United States will be faced with the formidable challenge of *assisting* <u>*large numbers of underprepared students*</u> ∅ *succeed* in postsecondary education. (COCA 2008, *Community College Review*)

(10) HUD's seller-assistance policy also *enabled* <u>*a woman who called herself Maria Guerra*</u> ∅ *become* a Colorado homeowner. (COCA 2006, *Denver Post*)

Thus, these findings rather confirm McEnery and Xiao's (2005) study on *help* showing that "the number of intervening words does not significantly influence the language user's choice of a full or bare infinitive. As such, while infinitives that are spaced more than five words apart from HELP are found to take *to* in our corpora, it is also not infrequent for them to omit *to*" (2005: 179).

Next, the *horror aequi* principle suggests that the choice of a bare infinitive is more likely if the matrix verb itself is preceded by *to*. Table 5 indicates that this factor can help explain a large number of cases. For example, in half of the instances of a bare infinitival complement counted for the verb *assist*, the matrix verb is already preceded by *to* as e.g. in (12).

[9] Of the 12 instances found in COCA, only the 8 transitives uses have been considered; no transitive use was found in the BNC.

(11) She was holding a tabloid newspaper and a packet of cigarettes and looked startled for a second until he stepped back <u>*to*</u> *allow her ∅ leave* the shop. (COCA 1998, *Triquarterly*)

(12) In a dream, which was not a dream, she was called away <u>*to*</u> *assist Dr McNab ∅ perform* an amputation on a Sikh whose arm had been shattered by shrapnel. (BNC, EFW 389)

verb	BNC	COCA
aid	0	3 (50%)
assist	7 (53.8%)	17 (48.6%)
allow (transitive uses)	2 (22.2%)	14 (33.3%)
enable	6 (37.5%)	8 (38.1%)
force	0	2 (25%)

Table 5: Number/percentage of tokens with *to* preceding matrix verb

Evidence that we are dealing with a grammatical phenomenon and not just with an idiosyncratic lexical property of a specific verb is also provided by two factors that in the present context appear to be intertwined and therefore difficult to tease apart: (semantic) analogy and persistence. Generally speaking, analogy may be considered "a general cognitive process that transfers specific information or knowledge from one instance or domain (the analogue, base, or source) to another (the target)" (Blevins and Blevins 2009: 2). In the domain of grammar, analogy is most strongly associated with language change (see e.g. Hock and Joseph 1996: Chapter 5), seen as a process "by which conceptually related linguistic units are made similar (or identical) in form (…), often regarded as the result of the move towards economy of form" (Bussmann 1996: 55). The analogical influence of auxiliary verbs taking a bare infinitive has been discussed as one possible factor for the rise of *help* and *try* with the bare infinitive (Kjellmer 2000: 120). Semantic analogy effects have been observed by Mair (2002: 112) who reports that *from*-less *prevent* also triggers the deletion of *from* in near-synonymous verbs like *stop* and *block*.

(13) and (14) are only two of numerous examples in the data in which a bare infinitival complement after *help* (the verb for which this variant is now the statistical norm in both British and American English) directly precedes a near-synonymous verb like *assist* and *aid*, which may thus be said to facilitate the omission of *to* with these matrix verbs (see also example (3b) presented earlier).

(13) a. Durlacher's consultants <u>*help*</u> *dot-coms ∅ develop* their strategy as well as <u>*assist*</u> *old-line firms ∅ get* online. (COCA 2000, *Fortune*)

b. *He helped ∅ lead* America in the difficult years following the end of the Vietnam war and President Nixon's resignation. *He helped ∅ end* the Cold War and <u>*assist*</u> *long-captive nations of the Soviet empire ∅ recover* their freedom and reap for themselves the blessings of democracy and free markets. (COCA 2005, *CNN Live*)

(14) The seminar *helps congregations ∅ develop* ministries to *aid elderly members ∅ plan* for death and funerals. (COCA 1998, *Houston Chronicle*)

Examples (15) and (16) present two of a number of instances in the data for which the immediate influence of a verb like *help* on the choice of complementation pattern with near-synonymous verbs is more difficult to motivate.

(15) This *helps them ∅ assess* the effects of changing those structures by *allowing them ∅ make* such changes directly through the virtual reality interface. (BNC, HRD)

(16) Another strategy that can also be effective in *assisting students ∅ manage* their time, is to *have students ∅ study* at their best time, whether that is in the morning, afternoon or early evening. This will *enable them ∅ complete* their assignments. (COCA 2006, *Journal of Instructional Psychology)*

In (15), *allow* is not usually considered a (near-)synonym of *help*, and similarly in (16), the semantic relation between *assist*, *have* (for which bare infinitival complements are well-documented in its causative meaning), and *enable* is not exactly one of (near-) synonymy, either. However, it may be argued that *allow* and *enable* are semantically close to causative *let*, for which the bare infinitive is established, see the discussion in section 2. Alternatively, it seems feasible at this point to consider the phenomenon of persistence in language use (Szmrecsanyi 2006) which is based on the assumption that speech production is inertial and that speakers are creatures of habit. Put simply, persistence is the tendency that if a speaker/writer faces a variable where he/she has the choice between two or more semantically equivalent variants, his/her choice will be affected by previous exposure to the variable. Persistence effects have been shown to influence users' choice of non-finite verbal constructions (*to*-infinitive vs. *-ing*-complement) in spoken language with a number of emotive and aspectual verbs like *begin, cease, continue, dread, hate, intend, like, loathe, love, prefer,* and *start* (Szmrecsanyi 2006: Chapter 8). Table 6 shows that for some verbs, semantic analogy and persistence effects are at play.

verb	BNC	COCA
aid	0	1 (16.7%)
assist	3 (25%)	7 (20%)
allow (transitive uses)	2 (22.2%)	0
enable	3 (18.8%)	2 (9.5%)
force	0	1 (12.5%)

Table 6: Number/percentage of tokens with neighbouring constructional trigger (i.e. another bare infinitive either immediately preceding or following the respective matrix verb)

That the phenomenon described here is only in its infancy and thus subject to instability and speaker/writer uncertainty can also be inferred from two examples found in the data. (17b) appears to be a (possibly edited) version of (17a) in a related publication in

which the bare infinitive has been corrected and replaced with *to*, whereas (18) could be either a slip of the tongue or an instance of self-correction.[10]

(17) a. The aim was to draw together good practice and make recommendations to *enable organisations ∅ manage secondment effectively* and provide [...] (BNC, HCE 556; *SCRE Newsletter*)
b. The aim was to draw together good practice and make recommendations to *enable organisations to manage secondments effectively* and provide […]. (BNC, HC9 5; *Spotlights*)

(18) Our sub-leasing of surplus retail area has continued in the period and combined with a small programme of retail park developments will *enable our retail area ∅ grow, sorry will enable our rental income to grow*. (BNC, J9N 13)

Finally, and in addition to the instances that document an incipient spread of the bare infinitive to other verbs, it appears that grammatical constraints on established patterns are increasingly being relaxed. In 1995, Mair pointed out that the impossibility of bare infinitives being negated was one of the few categorical constraints on the complementation of the verb *help*, and on bare infinitives in general (Mair 1995: 261). However, it appears that at least in American English, we do find negated bare infinitives, as examples (19) and (20) show.

(19) It is the kind of film that can *help you not ∅ give up* on the human race. (COCA 2006, *American Spectator*)

(20) Thank you for calling me every day. It *helped me not ∅ get* too depressed. (COCA 2005, *New Yorker*)

5. Discussion

Grammatical changes that involve the deletion of (optional) elements, like the infinitive marker *to* in the present context, are often explained in terms of grammaticalization. The erosion of *to* as an optional grammatical marker can be said to lead to a higher degree of syntactic integration of the bi-clausal construction. This development appears to be in line with a universal path of grammaticalization (see Haspelmath 1989) in which the preposition *to* lost its meaning (locative goal of motion, purpose) and became a purely grammatical marker. It can also interpreted in line with Hopper and Traugott's (2003: 179) cline of clause-combining and the grammaticalization of clause linkers that suggests a continuum of development from less to more unified clause combining, from less to more bonded: more overt and independent devices for signalling clause linkage (e.g. *that*, *to*) correlate with minimal-semantic-pragmatic integration, while the least overt (∅) correlate with maximal semantic-pragmatic integration. However, in the present context, we are faced with a problem that is pointed out by Fischer (2007):

[10] Unfortunately, neither the exact dates of publication of the two texts reported on in (17) nor a speech sample of (18) was available.

"clause reduction or clause fusion is not necessarily unidirectional" because "formally longer and more explicit constructions need not be historically earlier. Thus, after perception verbs, bare infinitives and 'that'-clauses existed from the beginning of the Old English period, while an extended infinitive with *to* only developed at a later period" (2007: 248). In sum, the problem remains how to reconcile the two opposing views on bare infinitival complements in PDE, i.e. Fischer's (1997) claim that the variation between a marked and bare infinitive after *help* is a relic of earlier stages of the language vs. Kjellmer's (1985) and Mair's (2002) analysis that considers the increasing use of *help* with a bare infinitive in 20th century English a recent trend, an approximation of current British usage to US norms, in terms of an early stage of grammaticalization in which an increase in frequency of use is paired with semantic broadening.

While at this point one can only speculate, it seems feasible that the incipient spread of bare infinitival complements that has been reported on above can be interpreted in line with a larger set of what may be described as erosion processes due to verbal economy in PDE. This erosion affects function words that are semantically redundant in that they do not add significantly to the meaning of the verb, and are at the same time grammatically omissible. American English has been claimed to be the more dynamic variety in leading the development in such erosion processes, favouring formally less explicit or simpler variants over more complex and explicit ones (e.g. Rohdenburg 2009a). For instance, the infinitive marker *to* is now also predominantly omitted in several types of cleft constructions which traditionally took a full infinitive clause (e.g. as in *What they do is* ∅ *destroy everything about climbing most of us hold dear*, see Callies 2012). Erosion processes similar to the loss of the infinitive marker have also been identified with regard to relative markers in relative clauses (Leech and Smith 2005). Moreover, the use of prepositions in various grammatical patterns has undergone significant changes in the (more recent) history of English: they are increasingly omitted from verb-argument constructions in favour of direct transitivization (e.g. with antagonistic verbs and verbs of leaving such as *fight/protest/appeal* ∅ *the decision* and *flee/depart/escape* ∅ *the country*, see Rohdenburg 2009a, but also with other verbs, see Callies 2011), and from temporal adverbials in American English (e.g. *the government announced* ∅ *Friday that…*; Algeo 1988, 2006).

Though in many of such structures, it is fairly straightforward to omit the respective infinitive marker or preposition without causing additional processing effort for the recipient, there are cases where this omissibility actually results in a more complex situation as exemplified in (21) below.

(21) a. The search tools *allow you get* very specific: You can search by type of metal, type of stone, or particular designer. (COCA 2000, *Redbook*)
b. The search tools allow *that* you get very specific.
c. The search tools allow you *to* get very specific.

Here, the omission of *to* or *that* in (21a) causes syntactic ambiguity (and possibly higher processing/cognitive complexity for the recipient), because the underlying structure may either be a *that*-clause as in (21b) or an infinitive clause as in (21c) with *you* being

either the subject of the subordinate clause, or the direct object of the matrix clause. This phenomenon may interpreted as a form of complexification of form-function-mappings in English in the sense of what Bisang (2009) calls "syntactic hidden complexity". Bisang distinguishes between two types of complexity: overt complexity, accessible through overt morphosyntactic patterns, and hidden complexity that must be inferred from context. He argues that these two types of complexity result from the competition between "expensive articulation or explicitness and cheap inference or economy" (Bisang 2009: 35). He claims that "overt complexity reflects explicitness: the structure of the language simply forces the speaker to explicitly encode certain grammatical categories even if they could easily be inferred from context. Hidden complexity reflects economy: the structure of the language does not force the speaker to use a certain grammatical category if it can be inferred from context" (*ibid.*).

Bisang further distinguishes between two types of hidden complexity:

(i) Functional hidden complexity: a difference in grammatical distinctions in a language is not reflected by the number of markers because individual markers themselves carry a number of different functions. The distinction relevant in a particular utterance has to be inferred from the linguistic and non-linguistic context.
(ii) Syntactic hidden complexity: given the lack of obligatoriness, a seemingly simple sequence of words may represent a considerable number of different constructions. The construction that is relevant in a concrete utterance has to be inferred again from linguistic and non-linguistic context.

Bisang concludes that in both cases, less is more: "As a consequence, what looks simple at the surface is based on a complex background of potential inferences which adds hidden complexity to seemingly simple structures" (2009: 38). In the present context of English grammar, it seems worthwhile at this point to consider Hawkins' (1986) comparative typology of English and German. Hawkins suggested that contrasts in several syntactic structures in the two languages can be explained by making reference to a typological continuum whereby languages vary according to the degree to which morphological and syntactic surface form (or grammatical function) and semantic meaning correspond. Based on an analysis of several clause-internal and clause-external syntactic operations which are either impossible or limited in other languages (e.g. oblique subject alternations (Levin 1993), and syntactic operations that move arguments across clause boundaries, viz. raising constructions and the mediopassive), Hawkins argued that "English regularly exhibits greater 'distance' between form and meaning in specifiable ways. I.e. English surface structures exhibit less correspondence with their semantic representations than do those of German" (1986:6). He concluded that English was characterized by ambiguity and/or vagueness of surface forms in terms of a loose-fit correspondence, manifest in syntactic structures that are functionally and semantically more complex, less transparent and less explicit, causing more cognitive cost and requiring more processing time for the recipient in terms of the analyzability and decoding of the form-function relation. In the present context, the omission of *to* or *that* in (21a) may be analysed to create such a loose-fit correspondence in that it causes syntactic ambiguity/vagueness, and thus, syntactic hidden complexity, by a blurring of

clause boundaries and a lower degree of explicitness of form-function mappings in syntactic (surface) structure.

6. Conclusion

This chapter has examined a phenomenon in contemporary English usage that can be interpreted with regard to the continuing evolution of the English system of non-finite verbal complementation: the (incipient) variation between marked and bare infinitival complements with several verbs that has not been well documented in the research literature yet, or examples of which have been written off as unusual exceptions, idiosyncrasies or errors. Conceding that the variation examined here has to be characterized as rare and difficult to quantify, the data provide evidence for a grammatical phenomenon, not just an idiosyncratic property of a specific speaker/writer, genre or of only one isolated lexical verb. This has also become clear from considering the distribution of the relevant instances in the corpora, and from the discussion of various structural and psycholinguistic factors that give rise to, or facilitate, this variation, most importantly analogical extension of patterns that are established with the near-synonymous verbs *help* and *let*.

I have argued that the spread of the bare infinitive may be seen as being in line with similar erosion processes documented in several other types of verbal and prepositional constructions, and that its occurrence in writing, especially in newspapers and academic texts, suggests that the omission of *to* is an effect of verbal economy rather than informality. This interpretation is in line with a recent study by Biber and Gray (2010) on academic writing. They argue that the compressed discourse style of academic writing is much less explicit in meaning than alternative styles employing elaborated structures. While academic styles are thus efficient for expert readers, who can quickly extract large amounts of information from condensed texts, they pose difficulties for novice readers, who must learn to infer unspecified meaning relations among grammatical constituents. In the present context, verbal economy can even create syntactic ambiguity, thereby adding to the complexification of form-function-mappings in English in the sense of a hidden syntactic complexity.

The present study has provided further empirical support for the recently advanced hypothesis that American English grammar "shows a more marked tendency to dispense with function words that are semantically redundant and grammatically omissible", and that this "trend towards grammatical economy ties together an array of otherwise unrelated phenomena in the complementation system and awaits further study" (Rohdenburg and Schlüter 2009: 6).

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