Diachronic aspects of complementation

*Constructions, entrenchment, and the matching problem**

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1 Introduction: the matching problem

In his typologically oriented study of verbal complementation, Noonan describes complementation as “basically a matter of matching a particular complement type to a particular complement-taking predicate” (1985: 90).¹ The English system of verbal complementation forms no exception to this general statement. As is well known, English has a set of different complement types, such as the *that*-clause, the gerund clause or the infinitive clause, which are distributed over the inventory of complement-taking verbs in such a way that some verbs take only one complement type, while others allow two or even three, as the following set of examples illustrates.

(1) Mary enjoyed *listening* / **to listen* to her grandmother’s stories.

(2) Mary liked *listening* / *to listen* to her grandmother’s stories.

(3) Mary longed **listening* / *to listen* to her grandmother’s stories.

The question is, of course, what principles motivate the matching between a verb and a complement type, and thus give rise to the kind of distribution illustrated in (1)–(3). More specifically, why is a particular complement type obligatory with one verb but disallowed with another? And, if some verb allows more than one complement type, on what basis do speakers choose a particular complement type in one context but not in the other?

The matching of verb and complement has occupied the minds of a good number of linguists, and several factors and principles have been proposed to account for the distribution of different complement types. Most linguists have approached the issue from a synchronic perspective and have tried to provide semantically based explanations for the various facts encountered, typically focussing on the meanings of spe-

cific complement types and the notion of semantic compatibility between the meaning of a verb and its complement (Bolinger 1968, 1977; Givón 1980, 1990; Dixon 1984; Wierzbicka 1988; Langacker 1991; Duffley 2000; Smith and Escobedo 2002; Egan 2003). At the same time, it is clear by now that there are also non-semantic factors that influence the distribution of complement types, which obviously complicates the matching issue. Thus, there is good evidence for sociolinguistic variety (Mair 2002, 2003), certain discourse-pragmatic factors (Noël 2003), cognitive processing factors such as Rohdenburg's "complexity principle" (1995, 1996), and stylistic tendencies such as the phenomenon of *horror aequi* (Rudanko 1998; Vosberg 2003). In view of all this, the only possible conclusion appears to be that the distribution of complement types is the outcome of a subtle balance between several motivating factors.

To complicate matters even further, the distribution of complement types tends to be unstable through time. This is indeed confirmed by the history of English complement types (see e.g. Visser 1963-1973; Rohdenburg 1995; Rudanko 1998; Mair 2002). Telling examples are the diffusion of *to*-infinitives at the cost of subjunctive *that*-clauses in Old and Middle English (Fischer, Van Kemenade, and Koopman 2000: 212; Los 2005), the diffusion of gerund clauses (partly) at the cost of *to*-infinitives in Modern English (Fanego 1996a; 2004; Rudanko 1998), and the diffusion of *for...to*-infinitives in Late Modern English (De Smet forthc.). Naturally, the occurrence of historical change in the system of complementation opens up further areas of research, as the question arises how diachronic developments interact with the principles that motivate the distribution of complement types synchronically.

In this light, we wish to draw attention here to some factors in the distribution of complement types that bear both on diachronic developments in the system of complementation and on the resulting synchronic state of the system. In particular, the matching of a verb and its complement will be seen here as determined by constructions – a view inspired by recent ‘constructional’ approaches to language (Langacker 1987, 1991; Goldberg 1995; Croft 2001, 2003; Michaelis 2003; Taylor *forthc.*; Tuggy *forthc.*). The term *construction* or *complement construction* refers to any combination of a verb and a complement that is entrenched in the mind of the language user as a symbolic unit. That is, a construction represents an automated, routinised chunk of language that is stored and activated by the language user as a whole, rather than ‘creatively’ assembled on the spot. Importantly, notions such as entrenchment or automation are essentially gradual, and whether some combination of linguistic elements, say ‘*want + to-infinitive*’, constitutes a construction is a matter of degree (cf. Langacker 1987). Further, it must be pointed out that constructions vary in the degree of specificity at which they are represented. As a result, it is possible for an attested linguistic structure to simultaneously represent several constructions, which can then be ordered in a hierarchy of specificity. Consider, as an example, the combination of a verb and a complement in (4).²

- (4) Previously studios, for good commercial reasons had wished to downplay the importance of individual actors. (CCB)

If only on the basis of frequency in usage, it is plausible that example (4) simultaneously illustrates the two constructions ‘volitional verb + *to-infinitive*’ and ‘*wish + to-infinitive*’. There is no need, however, to posit any more specific construction, such as ‘*wish + to downplay*’, as it is unlikely that the latter combination is stored by any language user as a single unit.

In what follows, we will explore the impact of constructions and entrenchment on the system of complementation. The role of entrenchment in language change has already received some attention, though mainly in the domains of phonology and morphosyntax (Bybee 1985; Krug 2003; Croft and Cruse 2004: chap. 11), much less so in the domain of syntax. On the other hand, the notion of construction has already been applied to the English system of complementation from a synchronic and wholly semantic point of view (Smith and Escobedo 2000; Egan 2003). In fact, the practice of dividing the inventory of complement-taking verbs into groups of semantically related verbs displaying similar syntactic behaviour (as in Visser 1963-1973; Bolinger 1968; Wierzbicka 1988; Rudanko 1989; 1998; Fanego 1996a) accords well with the constructional view adopted here, since the groups of related verbs could be seen as the instantiations of schematic constructions. The ‘extra’ a constructional approach can offer may therefore lie mainly in its recognition of all manner of idiosyncrasies and partial regularities in grammatical systems. Consequently, our main concern here is to show that relatively specific constructions also play a role in the overall system of complementation and the way in which it develops over time.

The structure of this paper is as follows. In Section 2 we briefly address matters of methodology, more specifically, the corpus material used in our research. Section 3 is devoted to an example of limited productivity, showing that the system of complementation may consist of constructions that are more specific than is generally assumed. In Section 4 entrenchment of constructions is demonstrated through the diachronic phenomenon of constructional split. Section 5 examines local conservative reflexes in the system of complementation that may again be due to entrenchment at

the level of fairly specific constructions. In Section 6, finally, we return to the matching problem and reconsider it in the light of the findings of the previous sections.

2 *Corpus material*

The data used for this paper cover about three hundred years of the history of English and can be divided into two main parts. The first part represents Present-Day English and is made up of the material in the *Collins Cobuild Corpus* (CCB), a 57 million word corpus of American, Australian, and British English, containing both spoken and written data. In addition, some examples have been drawn from the *British National Corpus* (BNC). The second part roughly covers the Late Modern English period and is made up of the material in (a slightly extended version of) the *Corpus of Late Modern English Texts* (CLMET). This corpus is a compilation of texts that are publicly available through electronic archiving projects such as the *Project Gutenberg* and the *Oxford Text Archive*. Its make-up is described and discussed in detail in De Smet (2005), but a brief summary of its contents is given here in Table 1.

Sub-period	Number of authors	Corpus size
1710-1780	15	3.39 million words
1780-1850	29	3.73 million words
1850-1920	28	3.98 million words

Table 1. Contents of the CLMET

3 *Limited productivity*

An important indication of the role of constructions in complementation comes from the phenomenon of limited productivity. This phenomenon is remarked on by Pawley and Syder, who note that “native speakers do not exercise the creative potential of syntactic rules to anything like their full extent” (1983: 193). Alternatively, we can conceive of the phenomenon in terms of productive but relatively specific constructions (rather than schematic but unproductive constructions), which captures the finding that the ‘limitations’ involved are, in fact, fairly regular. The important insight that derives from the phenomenon of limited productivity is that the system of complementation includes constructions that are more specific than is typically recognised.

A fine illustration in the area of complementation is provided by retrospective verbs such as *remember*, *forget*, or *recollect*. In Present-Day English, retrospective verbs display a very neat distribution of gerund and *to*-infinitive complements, the gerund being used to express anteriority and the *to*-infinitive being used to express posteriority and intention on the part of the subject (see e.g. Quirk *et al.* 1985: 1193; Wierzbicka 1988: 23; Fanego 1996b) – compare in this respect the examples in (5) and (6).

- (5) When I was very young we used to stay on a farm in Cornwall, and I re-
member *learning* to milk cows, *skimming* the cream and *bicycling* down the
hills it was just wonderful. (CCB)
- (6) Remembering *to close* your curtains at dusk costs you nothing and helps to
reduce heat loss. (CCB)

As examples (7) and (8) show, the same distinction already obtained in Late Modern English, but, as is evidenced in (9), the historical material also yields examples where anteriority is not expressed by the gerund but by a perfect *to*-infinitive.

- (7) I remember once *strolling* along the margin of a stream, skirted with willows and plashy sedges, [...]. (1821-22, W. Hazlitt, *Table Talk*)
- (8) I would have you all remember, in her absence, *to let* her example and friendship fill your hearts with joy, instead of grief. (1749, H. Fielding, *The History of Tom Jones, a Foundling*)
- (9) Since I was man, /Such sheets of fire, such bursts of horrid thunder, /Such groans of roaring wind and rain, I never /Remember *to have heard*. (Fanego 1996b: 75)

This suggests that for the present-day distribution to emerge, perfect *to*-infinitives after retrospective verbs as in (9) have had to be ousted by gerund clauses. Or, as Fanego states, “the fact that in PE [Present-Day English] the perfect infinitive (*I remember to have paid it*) is no longer acceptable as a retrospective form after *remember* and after the other predicates in the class suggests that the *-ing* form has been advancing at the expense of the infinitive” (1996b: 77).

It is the construction with the perfect *to*-infinitive illustrated in (9) above that is of special interest here. The construction can be provisionally represented as in [a].

[a] RETROSPECTIVE VERB + *to* + *have* + VERB-*ed*

Figure 1 shows the frequency of the construction in [a] (and its gradual demise) for the verb *remember* in our own corpus material. Notice that the disappearance of the perfect *to*-infinitive construction is paralleled by a rise in the frequency of gerunds after the same verb, which supports Fanego’s suggestion that gerunds ousted the infinitives in this particular context (although, at the same time, gerunds also became more frequent than infinitives ever were).

Figure 1. Gerunds and perfect *to*-infinitives after *remember*
(frequencies per million words)

What makes the construction in [a] interesting is that there is a strong tendency for the complement clause embedded in the constructions to involve verbs of passive perception such as *see* and *hear*, or by extension, verbs expressing accidental encounter such as *meet with*, *read*, *come across*, etc. Consider, in this respect, examples (9) above and (10)–(12) below.

- (10) I do not remember in all my reading *to have met with* anything more truly
the language of misery than the exclamation in the last line. (1787, R. Burns,
The Letters of Robert Burns)
- (11) He did not remember *to have seen* that expression on her face before. (1902,
A. Bennett, *The Grand Babylon Hotel*)
- (12) I remember once, in passing a book-stall, *to have caught* these words from a
page of some satiric author: [...]. (1822, T. de Quincey, *Confessions of an
English Opium Eater*)

Notably, the tendency for perfect *to*-infinitives to involve verbs of perception or encounter is confirmed by the instances of the construction in [a] that are quoted in

Fanego (1996b) and Visser (1963-1973: 1324). Further, the same tendency is attested in the few instances of [a] with the verbs *recollect* or *forget* that are to be found in our own historical material, as witness example (13). The tendency is even confirmed by the only instance of [a] found in the present-day material from the CCB, rendered here as (14).

(13) I scarcely recollect *to have heard* one grunting swine or snarling mastiff during my whole progress. (1783, W. Beckford, *Dreams, Waking Thoughts and Incidents*)

(14) The sun was low now, and the shadow was halfway up the Penmawr ridge; the light was much more golden than I remembered *to have seen* it before [...]. (CCB)

The skewing of the variety of verbs occurring in [a] towards a small set of semantically related verbs calls for a reconsideration of the construction. Next to [a] – or maybe even *instead* of [a] – speakers’ linguistic knowledge clearly involved something along the lines of the construction represented in [b].

[b] RETROSPECTIVE VERB + *to* + *have* + VERB OF PERCEPTION / ENCOUNTER -*ed*

The main reason for positing [b] is the high probability for the perfect *to*-infinitive following on a retrospective verb to involve a verb of perception or encounter. Tellingly, proportions (or “transitional probabilities”, cf. Krug 2003) are around 75% throughout for perfect *to*-infinitives following *remember* and built with a verb of passive perception or accidental encounter: 24/33 in the first sub-period of our corpus (1710-1780), 14/17 in the second (1780-1850), and 12/16 in the third (1850-1920). Not all instances of [a] are also instances of [b]. Example (15) shows that the more

schematic construction [a] does have (marginal) existence in the grammar of the language user – or, on a more extreme view, can be abstracted from the better-established construction [b].

- (15) I retired to my own room; and I solaced myself with the most composing pipe of tobacco I ever remember *to have smoked* in my life. (1868, W. Collins, *The Moonstone*)

On the whole, however, it is fair to say that genuine instances of [a] are rare, and that speakers apparently do not exploit the full productive potential of the syntactic rule in question.

Significantly, the impact of construction [b] on complement choice with retrospective verbs can also be observed indirectly by considering the gerund clauses following retrospective verbs. In Present-Day English retrospective verbs can take two types of gerund clauses, one involving a simple gerund as in (16), and another involving a perfect gerund as in (17).

- (16) I don't ever remember *doing* field studies. But they have done a lot of that in the past. (CCB)

- (17) Perhaps he couldn't remember *having done* any of these things. Certainly, they sounded improbable. (CCB)

Historically, however, retrospective verbs could take simple gerunds some time before they started occurring with perfect gerunds (cf. Fanego 1996b). Now, when we look at the corpus material from 1780-1850, which is the second sub-period in our corpus and the first in which retrospective verbs occurs with perfect gerunds, we find clear indications that constructions with the perfect gerund emerged through contami-

nation with the perfect infinitive. For *remember*, there are seven instances with the perfect gerund, six of which involve a verb of perception or encounter, as in (18).

- (18) At St. Jago in the Cape de Verd Islands, I remember *having seen* in a ravine a retired corner covered with bones of the goat; [...]. (1839, C. Darwin, *The Voyage of the Beagle*)

The same applies to *recollect* and the perfect gerund. The corpus material from 1780-1850 yields eleven instances of *recollect* with a perfect gerund, eight of which involve a verb that falls into the group of verbs of perception or encounter, as in (19).

- (19) [S]he recollected *having heard* Mr. Fitzwilliam Darcy formerly spoken of as a very proud, ill-natured boy. (1813, J. Austen, *Pride and Prejudice*)

After 1850 the preference for perfect gerunds to be formed on verbs of perception or encounter disappears, which strongly suggests that the constructions with the perfect gerund have originally been calqued on the example of retrospective verbs with a perfect *to*-infinitive but later broadened to more varied uses, possibly following the example of constructions with a non-perfect gerund. In this way, the emergence of perfect gerunds with retrospective verbs bears further testimony to the relatively high degree of entrenchment of construction [b] and its impact on the system of complementation. Again, it should be clear that it makes no sense to talk of the abstract construction in [a] without reference to the more specific construction in [b]. The latter is far better represented and even has a noticeable (albeit indirect) influence on developments in other, related constructions.

4 Constructional split

One feature often associated with constructions as they are understood in a construction grammar is the occurrence of semantic idiosyncrasies. In at least some cases, such idiosyncrasies result from a process of constructional split, whereby a specific construction gets semantically dissociated from its more abstract parent construction. By way of example, Croft, referring to Goldberg (1995), mentions the ditransitive constructions involving *forgive* and *envy* as having diverged from the original semantics of the ditransitive construction in its more schematic form (*forgive* and *envy* no longer involve transfer). Importantly, this development could only take place if the specific constructions with *forgive* and *envy* were represented autonomously at the time of the split (Croft 2003: 58–59). The process of constructional split is comparable to Hopper’s (1991) “divergence”, but also to what Bybee (1985) refers to as “derivational split” and “inflectional split”, involving semantic divergence between a morphologically derived form and its parent form. For instance, ignoring its obvious etymology, the noun *clothes* has little to do with the plural of *cloth*. Instances of derivational or inflectional split, too, can only be accounted for by assuming that the derived form is stored autonomously – or, in other words, sufficiently entrenched (Bybee 1985: 88).

Constructional split is fairly common in the system of complementation, if only because complement constructions are regularly recruited as input to the development of auxiliaries and pragmatic particles (see e.g. Thompson and Mulac 1991; Heine 1993; Hopper 2001; Kuteva 2001). Interestingly, constructional split can take place at different levels of specificity – confirming the possibility of entrenchment at each of these levels. A good example of constructional split at an intermediate level of specificity is the development of the construction with *like* and the *to*-infinitive, repre-

sented in [c]. Originally, this construction resorted under the more abstract [d], but unlike other instances of [d], construction [c] has gradually acquired a habitual meaning that now co-exists with the old, volitional meaning (for a more detailed account, see De Smet and Cuyckens 2005).

[c] *Like + to + VERB*

[d] *VOLITIONAL VERB + to + VERB*

The original volitional meaning of [c] is illustrated in (20), where *like* can be paraphrased as ‘want’ or ‘wish’. By contrast, in (21), [c] signals habituality, without any obvious sense of volition, but with a strong implication of iteration and characteristic behaviour.

(20) ‘Then,’ pursued her friend, ‘came another display of firmness or obstinacy, whichever you like *to call* it.’ (1893, G. Gissing, *The Odd Woman*)

(21) Men like *to collect* money into large heaps in their lifetime; they like *to leave* it in large heaps after they are dead. (1821-22, W. Hazlitt, *Table Talk*)

In the habitual uses of [c], the *to*-infinitive has lost its purposive meaning, and the verb *like* no longer refers to a state of mind. As such, construction [c] has clearly diverged from its original semantics and from the semantics of the more abstract construction [d] under which it used to resort.

Interestingly, the same process of constructional split has repeated itself a few steps down the constructional hierarchy in the lexically fully specified construction [e].

[e] *I like to think + that-CLAUSE*

We may assume that [e] originally instantiated [c] (and/or [d]) above,³ as in (22).

However, through bridging contexts as in (23)–(24), which ‘invite’ new meanings, [e] has gradually disentangled itself from its parent construction and is now starting to

function as a parenthetical, as in (25). When used as a parenthetical, its function is no longer to express pleasure and willingness at a certain thought, but to modify the truth-value of an utterance by stressing the subjective nature of the view taken.

(22) “I shouldn’t like *to think* that you--” He bent nearer; the sentence died unfinished. (1910, E.M. Forster, *Howards End*)

(23) Kate’s support makes me stronger. I like *to think* mine does the same for her. (CCB)

(24) I like *to think* I’m relatively easy to get along with [...]. (CCB)

(25) I don’t dislike sport. In a previous life, I myself was a football fan. I’ve also swung a golf club with – I like *to think* – a certain panache and grace. (CCB)

While the semantic development is gradual, the syntactic change to parenthetical status leaves little doubt that [e] has come to be perceived as a single unit. Therefore, [e] is an example of constructional split at a maximally specific level of representation.⁴

Both [c] and [e] above instantiate constructional split in constructions at different but still fairly concrete levels of specificity. An interesting question is whether the same phenomenon can also occur at more abstract levels of representation. At first glance it seems obvious that if more schematic constructions can also be entrenched, they can, in theory, undergo the same kind of changes as more concrete constructions. The problem, however, is that the abstract constructions only exist in as far as they are instantiated at the concrete level of language use, so that change at an abstract level necessarily involves change at a lower, specific level, and is difficult to observe independently. To illustrate this point, consider the construction discussed by Noël (2001), and represented here as [f].

[f] *Be VERB-ed to VERB*

The construction is found with a wide variety of complement-taking verbs, including *believe, claim, feel, find, know, rumour, say, think*, and many others. Some Present-Day English examples are:

(26) The battle was said *to have taken* place at Ginda [...]. (CCB)

(27) The camp is believed *to house* several hundred political prisoners. (CCB)

Noël convincingly argues that in examples such as (35)–(36) *was said to* and *are believed to* fulfil an evidential function, and are involved in a process of incipient grammaticalisation. The question is, however, what exactly is grammaticalising: is it the relatively concrete lexical strings like *be said to, be believed to*, and several others, or is it the more abstract construction rendered in [f]? Noël himself does not rule out the latter possibility (2001: 286), presumably because seeing [f] as the grammaticalising construction provides a way of accounting for the high number of concrete verbs that all show similar evidential uses. An important disadvantage of the view is that it cannot accommodate the finding that different verbs seem to engage in evidential uses to different degrees. Still, while at least part of the development must take place at the level of concrete lexical verbs, it is not implausible that the more abstract [f], too, has come to be associated with evidentiality.

5 *Conservative behaviour*

While in the case of constructional split, entrenchment or autonomous storage is a prerequisite to linguistic change, entrenchment can also resist change – especially when change involves the replacement of one variant by another. This kind of conservative behaviour is well known from morphology – think, for instance, of the reten-

tion of highly frequent forms such as *doth* or *hath* during the final stages of the change from *-th* to *-s*-endings in the English third person singular (Ogura and Wang 1994; Krug 2003: 19–22). If entrenchment affects syntactic patterns in the same way it affects morphophonological patterns, it is to be expected that the same kind of conservative behaviour will be found in the area of complementation, in particular when an old and a new variant are competing for the same complement slot.

It is also important, however, to recognise that conservative effects in their ‘pure’ form will presumably be hard to find. First, in complementation the old and new variants are often only approximately equivalent in meaning or function, and, as a result, entrenchment is unlikely to be the sole factor in the competition between the two variants. Second, even if a new form is generally equivalent to an older, rival form, it may not be equivalent to constructions originated from the older form by constructional split: a genuine off-split can no longer be expected to participate in the competition between old and new variants that its parent is engaged in.

To illustrate these different points, we take as an example the emergence of gerund clauses with emotive verbs during Late Modern and Present-Day English. As Figure 2 shows, the frequency of gerunds as complements to the three most frequent emotive verbs, *like*, *love*, and *hate*, has steadily increased over the last three hundred years.⁵

Figure 2. Gerunds after emotive verbs (frequencies per million words)

It is reasonable to assume that this increase has led to a certain degree of (still ongoing) competition between the gerund and the *to*-infinitive, the other complement type associated with the emotive verbs. As might be expected, the two complement-types are not exactly synonymous, but there are contexts where the semantic difference between the two is negligible (Visser 1963-1973: 1866; Kempson and Quirk 1971: 552; De Smet 2004). This is, for instance, reflected in inconsistent uses such as the following:

- (28) Teachers are very much <tc text=pause> individuals who want to work in closed units <F01> Mm. <M01> and often don't like people *coming* in and *watch* what they're doing etcetera. (CCB)
- (29) He does not like *to be* in a frenzied atmosphere and hates *being hurried* into making a quick decision. (CCB)

Judging from this indeterminacy of choice and from the growing use of gerunds over the past three hundred years, it is plausible that gerunds have been gradually replacing the *to*-infinitive as verbal complement to the emotive verbs, at least in those contexts where the semantic difference between the two complement types is minimal.

However, even if this is on the whole not untrue, matters are definitely more complicated. The spread of the gerund does not occur evenly over all of the different grammatical environments in which emotive verbs can be used, nor is the increase of gerunds paralleled by an equally marked decrease in the frequency of the *to*-infinitive. The spread of the gerund is least impeded in contexts where the emotive verb is not modalised by an auxiliary, such as *would* or *should*. Figure 3 shows the ratio of gerunds to *to*-infinitives with unmodalised *like*, *love*, and *hate*.⁶ As the curves (indirectly) indicate, before 1850 the frequency of the *to*-infinitive briefly increased at a higher rate than that of the gerund, but after 1850 the gerund again caught up with and even overtook the *to*-infinitive. On the whole, we can say that unmodalised environments have seen a clear spread of the gerund.

Figure 3. Ratio gerund/infinitive with unmodalised *like*, *love*, and *hate*

Still, even in these unmodalised contexts certain well-entrenched constructions involving a *to*-infinitive appear to withhold the gerund. A probable example is construction [g], in which an emotive verb combines with the infinitive *to see*, which is used to introduce another complement clause.

[g] EMOTIVE VERB + *to* + *see* + CLAUSE

The construction is already well attested in the Late Modern English material, as the following examples illustrate.

(30) [S]he better liked *to see* him free and happy, even than to have him near her, because she loved him better than herself. (1841, C. Dickens, *Barnaby Rudge*)

(31) With extraordinary rapidity she had formed a habit of preaching moderation to Gerald. She hated *to 'see* money thrown away,' [...]. (1908, A. Bennett, *The Old Wives' Tale*)

Turning to Present-Day English, we find that the spread of gerunds lags behind in the context of *see*-complements. Thus, the complements of the verbs *hate* and *like* are significantly less likely to be a gerund when the complement-verb is *see*, as is shown for *hate* and *like* in Present-Day English in Tables 2 (χ^2 10.4; $p < 0.01$) and 3 (χ^2 17.0; $p < 0.001$).⁷

	<i>Hate</i> + VERB- <i>ing</i>	<i>Hate</i> + <i>to</i> + VERB
<i>Hate</i> + <i>see</i> -complement	234	191
<i>Hate</i> + other complement	7	22

Table 2. Unmodalised *hate* with *see*-complement in CCB

	<i>Like</i> + VERB- <i>ing</i>	<i>Like</i> + <i>to</i> + VERB
<i>Like</i> + <i>see</i> -complement	66.5	126.3
<i>Like</i> + other complement	5	59

Table 3. Unmodalised *like* with *see*-complement in CCB

There is more than one possible explanation for this discrepancy. The most obvious one is that the combination of *hate* and *like* with *to see* is a well-entrenched unit of

language use and consequently resists the spread of the gerund more strongly than other, less-entrenched combinations. However, as pointed out above, one must also consider the possibility that the use of *to see* in these constructions has become somewhat specialised and that the figures in Tables 2 and 3 are therefore not indicative of conservative behaviour but of (some weak form of) constructional split. It is true that the verb *see* often does not refer to actual seeing (even if a sense of ‘being witness to’ is retained), but rather serves to introduce another complement clause, possibly so as to avoid raising. This is already the case in Late Modern English (see e.g. (30)–(31) above), and, moreover, applies also to uses of *to see* with other predicates than the emotive verbs.

(32) [...] they wondered *to see* themselves pass undistinguished along the streets.

(1759, S. Johnson, *Rasselas*)

(33) She was sorry *to see* her instructions had no better effect on me. (1749, S.

Fielding, *The Governess*)

(34) With what reluctance the emperour of Germany would consent *to see* troops placed in the provinces bordering upon his dominions [...]. (1740-41, S.

Johnson, *Parliamentary Debates*)

This suggests that *to see* has developed a somewhat complementiser-like use. Still, it is not impossible for gerunds to fulfil a similar function, even though examples are rare. In (35)–(36), the gerund form *seeing*, like *to see* elsewhere, does not refer to visual perception, but mainly serves to introduce the following clause:

(35) He was willing to pay this price himself, but he hated *seeing* his friends run the same risks. (CCB)

(36) It's a nice piece of work, but still, you know, it's--it's not Chief Seattle, you know, and so I don't really like *seeing* it credited to Chief Seattle [...].

(CCB)

If *seeing* is found in functionally equivalent uses to the infinitive *to see*, entrenchment rather than functional specialisation may be the main reason for the marked preference for *to*-infinitives in *see*-complements. In other words, the fact that gerunds remain underrepresented in *see*-complements is likely to be an instance of conservative behaviour.

A second possible example of the conservative effect of entrenchment on the spread of the gerund is found in contexts where the emotive verb is preceded by an auxiliary, yet here the pressure of constructional split on the competition between the gerund and the infinitive is much greater than in the case of *see*-complements. The basic empirical facts are clear and well-known. The gerund is, and has always been, remarkably unsuccessful with modalised emotive verbs, especially when the auxiliary preceding the emotive verb is *would* or *should* – to the point that some have claimed the gerund to be ungrammatical in these contexts (cf. Visser 1963-1973: 1866; Bladon 1968: 210). The *to*-infinitive, by contrast, thrives well with *would* or *should* and seems sufficiently common to postulate a construction of the form represented in [h] and illustrated in (37).

[h] *Would / should* + EMOTIVE VERB + *to* + VERB

(37) I come from a very close family and I would love *to have* children of my own. (CCB)

If, indeed, [h] has construction status, and is, therefore, an entrenched unit of language use, this may go some way to explaining its resistance to the gerund.

Figure 4. *Like* with the *to*-infinitive (frequencies per millions words)

This becomes particularly clear when we look at the oldest variant of the construction, [i], which, as Figure 4 shows, is attested from the eighteenth century onwards and has grown more and more frequent ever since.

[i] *Would / should + like + to + VERB*

What is more, while the simple string frequencies presented in Figure 4 may already give some indication of high entrenchment, the transitional probability figures in Table 4 below suggest that throughout Late Modern and Present-Day English *would / should like* has been much more closely associated with a *to*-infinitive than unmodalised *like*, even at the time when the former was still relatively infrequent.⁸ In other words, unlike unmodalised *like*, the string *would / should like* creates a strong expectation for a following *to*-infinitive. Taken together, string frequency and transitional probability are strongly indicative of solid entrenchment, which may at least partly explain why the gerund never really succeeded in finding its way to contexts where *like* is preceded by *would / should*.

	1710-1780	1780-1850	1850-1920	CCB
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<i>Should / would like</i> + <i>to</i> -infinitive	35%	60%	67%	72%
Unmodalised <i>like</i> + <i>to</i> -infinitive	7%	14%	21%	19%

Table 4. Transitional probability figures for *like* and the *to*-infinitive

However, the situation is more complex, as the absence of the gerund after *would / should like* is no doubt also due to internal developments in [i]. In the course of the last three centuries, the construction [i] has acquired specialised uses in which replacement of the *to*-infinitive by a gerund is unacceptable. In the eighteenth century, [i] is an expression of hypothetical enjoyment or hypothetical volition. At this point, semantics is predictable from the form of the pattern: the meaning of the unmodalised construction (pleasure or will) is rendered hypothetical or conditional by the preceding auxiliary.

(38) I should not like *to have* my enemy take a view of my mind when I am going to ask protection of any man; [...]. (1759-67, L. Sterne, *The Life and Opinions of Tristram Shandy*)

(39) I should like *to see* their loves woven into a French opera: La Chétardie's character is quite adapted to the civil discord of their stage: and then a northern heroine to reproach him in their outrageous quavers, would make a most delightful crash of sentiment, impertinence, gallantry, contempt, and screaming. (1744, H. Walpole, *Letters*)

From hypothetical enjoyment or volition, [i] soon comes to mark the subject's will – the link is probably metonymic: we typically want the things (we think) we would enjoy. This is reflected in the fact that during the first half of the nineteenth century [i] begins to be used to support requests or offers, or to form indirect requests or offers.

In such uses, *would / should like* has become equivalent to volitional verbs such as *wish* or *want*, which are used in the same type of (conventionally) indirect speech-acts.

(40) Stop, let us come a little this way; I see a leaf which I should like *to examine*. (1841, F. Marryat, *Masterman Ready*)

(41) “How should you like *to go* to the play with me to-morrow?” said Corkscrew. (1796-1801, M. Edgeworth, *The Parent’s Assistant*)

The last step in the development is that [i] comes to function as a (conventionally) indirect way to realise the speech-act referred to in the complement clause. This use is very current in Present-Day English, but its predecessors are already found at the end of the Late Modern period.

(42) But there are also some foreign events which have illustrated it, and of these I should like *to say* a few words. (1867, W. Bagehott, *The English Constitution*)

(43) Is there any one to defend him now, I should like *to ask*? (1870, G. Meredith, *The Adventures of Harry Richmond*)

(44) However, we should like *to suggest* that if they are to publish anything in the media, even if critical, that the content be at least factual. (CCB)

(45) I would like *to thank* you all very much for coming along this evening (CCB)

In these last uses, the original sense of hypothetical enjoyment is only vaguely present. Alternatively, we could say that the meaning of [i] has become increasingly “interpersonal” (Traugott 1989). In this respect, it seems fair to see the development of [i] as an instance of constructional split, and incipient grammaticalisation – a view that fits in well with the marked rise in the construction’s frequency.

The changes in [i] are likely to interfere with the competition between the *to*-infinitive and the gerund in contexts with *would* or *should*. From the few instances in which the gerund combines with *would / should like* it is immediately clear that the whole development undergone by construction [i] has not affected the meaning of the equivalent construction with the gerund, which quite straightforwardly expresses hypothetical enjoyment:

(46) Would she get much bigger physically? Would delivery be very painful?

Would she like *breastfeeding* her infant? (CCB)

(47) It's pride, see, not many men would like *working* for a lady, mind. (BNC)

Therefore, the *to*-infinitive is only threatened by the gerund in the original uses of [i], as in (48)-(49).⁹

(48) How would you like *to meet* a fish that navigates by electricity? (CCB)

(49) Because she made me feel at home in the Middle Ages and persuaded me that I would have liked *to live* in the 12th century. (CCB)

It may be assumed that the reason why in these examples the *to*-infinitive is preferred over the gerund is that the construction [i] is so deeply entrenched that the choice for the *to*-infinitive has become nearly automatic in the environment with *would / should like*. Thus, while we should not overestimate the growth-potential of the gerund with *would / should like*, it is nonetheless likely that the spread of the gerund in this particular environment has largely been checked by the well-established construction [i].

6 Conclusion: implications for the matching problem

The preceding discussion has only surveyed a fraction of the English system of complementation, but nevertheless its findings may have wider bearing. Within a constructional framework, we have tried to show that entrenchment affects complement constructions in various ways, both synchronically and diachronically. Returning to the matching problem, this implies that complement choice is not always determined by principles that operate at an abstract level between the inventory of complement-taking verbs and the different complement types the language user has at his/her disposal. Instead, all sorts of idiosyncrasies and irregularities can be seen to creep into the system. First, the verb in the complement clause (rather than the complement-taking verb) may have an influence on complement choice. This is the case when a complement construction pre-specifies the verb (or kind of verb) to be found in the complement clause. For example, when the complement-verb is *see*, complement-taking verbs such as *hate* or *like* prefer the *to*-infinitive. Similarly, complement-taking verbs such as *remember* or *recollect* take a perfect *to*-infinitive much more easily when the complement clause involves a verb of perception or encounter. These effects are due to the existence of fairly specific constructions that are part of the language user's grammar.

Second, while it is undoubtedly true that the distributions of different complement types display semantic regularities that could be rephrased as matching principles, semantic regularity is easily disturbed by the development of new meanings and functions at the level of specific constructions. In what preceded we have discussed several instances of constructional split, such as the development of *like to*, *I like to think*, and *would / should like to*. In all of these cases, constructional split was only possible because the constructions involved were stored as autonomous units. As the examples

further show, different uses of the same verb can develop into very different directions independent of one another.

Third, from this one may expect that when a verb comes to be used with a new complement type, this does not happen at the same pace in all of the different environments in which the verb occurs. We have suggested that in certain cases the spread of a new complement type can be hindered by the existence of strongly entrenched constructions that block ‘free’ variation in one particular context. Two probable cases are constructions with a *see*-complement, and constructions with a modalised emotive verb. It seems that in contexts with a *see*-complement or with a modalised emotive verb the gerund fails to develop its full syntactic potential – occasional instances apart. Again, then, complementation is not only a matter of matching a verb with the right complement type: the particular match made at one point can become consolidated and start to lead its own life, regardless of subsequent developments in the system of general matching principles.

Notes

- * This paper is dedicated to Prof. Dr. Günter Rohdenburg on the occasion of his 65th birthday. It pays tribute to Prof. Rohdenburg’s work on complementation in English, which has been an important source of inspiration for our own work.
- 1. Our research has been made possible by the financial support from the Research Fund of the University of Leuven (project number OT/2003/20/TBA) and from the Fund for Scientific Research (FWO) – Flanders. We would like to thank one

anonymous reviewer for their careful comments on an earlier version of this paper.

2. The examples taken from the *Collins Cobuild Corpus*, marked (CCB), are reproduced here with the kind permission of HarperCollins Publishers.
3. Only when the meaning of *I like to think* shows traces of volition, may we claim it resorts under [d], and even in those cases it *also* resorts under [c] (which is, after all, an independently entrenched construction, as shown above). When *I like to think* expresses pleasure and habit, it simply resorts under [c]. The diachronic material is not extensive enough to determine from exactly which uses the parenthetical [e] developed.
4. In connection with [e], it is worth noting that *to think* not only frequently combines with the verb *like*, but is, in fact, commonly found with emotive expressions of various syntactic form, for example *I rejoiced to think* (1887, H.R. Haggard, *She*), *I am sorry to think* (1821-22, W. Hazlitt, *Table Talk*), *his kind heart grieved to think* (1847-48, W.M. Thackeray, *Vanity Fair*), *it breaks my heart to think* (1749, S. Fielding, *The Governess*), etc. If it is justified to have the above variety of syntactic patterns resort under a single schematic construction, [e] has an alternative ‘parent’ – a situation not disallowed in construction grammar (Tuggy forthc.).
5. Frequencies for *like* and *love* in the CCB are based on a 1000-hit sample.
6. In frequencies per million words, the gerund/infinitive ratios per sub-period in Figure 3 are for *like*: 2.6/5.3 (1710-1780), 5.5/56.9 (1780-1850), 20.3/59 (1850-1920), 26.2/50.8 (PDE); for *love*: 3.2/17.4 (1710-1780), 1.6/14.1 (1780-1850), 3.8/13.7 (1850-1920), 11.6/8.6 (PDE); and for *hate*: 2.1/2.9 (1710-1780), 1.8/5.4

(1780-850), 4/6.3 (1850-1920), 4.2/3.7 (PDE). The frequencies for Present-Day English are based on 1000-hit samples.

7. The figures for *like* followed by a complement without *see* are estimates that have been arrived at by extrapolating the total number of *to*-infinitives and gerunds following *like* in the CCB on the basis of two 1000-hit samples, then subtracting the number of actually attested *see*-complements, and finally re-extrapolating the result to the size of the less representative of the two samples.
8. The transitional probability figures for *should* / *would like* and infinitival *to* have been arrived at by dividing the total number of instances of *should* / *would like* by the total number of instances of *should would like to* in each sub-period of the corpus. The figures for unmodalised *like* and infinitival *to* have been arrived at in the same way, but on the basis of 500-word samples in which the verb *like* was distinguished from the preposition *like*.
9. Even in those cases where replacement of the *to*-infinitive by a gerund is not inconceivable, gerund and *to*-infinitive are not without their semantic differences: following Langacker (1991), the gerund presents a situation as ongoing, whereas the infinitive presents it holistically. However, there is no obvious reason why these slight differences should exclude one form or the other.

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