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Drift and the development of sentential complements in British and American English from 1700 to the present day

1. Introduction[1]

Sentential complementation, i.e. the situation that arises when a subordinate clause functions as an argument with respect to a governing element or head, as in "I think *that it is a good idea*" or "*To refuse her request* would be unthinkable", has been a prolific area of research for many years among English historical linguists; see, among others, Warner (1982), Fischer (1988, 1989, 1995), Fanego (1990, 1992, 1996a/b/c, 1997, 2004a/b, 2006), Rohdenburg (1995, 1996, 2006), Los (1998, 2005), Rudanko (1998, 1999, 2000), Miller (2002), Wagner (2002), Vosberg (2003a/b, 2004) or, more recently, De Smet (2004, 2005) and De Smet/Cuykens (2005). Many of these studies have focused on Old, Middle and Early Modern English, while comparatively little work has been done on Late Modern and Present-day English, the main exceptions being some of the publications by

Rohdenburg, Rudanko and Vosberg, and a series of papers by Mair (2002, 2003, 2006) where he discusses the changing patterns of complementation after verbs such as *begin*, *start*, *prevent* or *remember*. Mair is also one of the few scholars who have looked at developments taking place not just in British English, but also in American English, so that, on the whole, there is still considerable work to be done in the field. In what follows, therefore, I will offer a preliminary account of my ongoing research on this complex area of English grammar from 1700 to the present day.

The paper is organized as follows. Section 2 contains a brief account of the corpus. Section 3 gives an overview of English sentential complements and summarizes their development since Old English times (700-1100),[2] with particular reference to the emergence of verbal gerunds. Sections 4 and 5 examine in greater detail the spread of subjectless gerunds (e.g. "I avoided *meeting Mary*") to the subject and object slots, at the expense of both *to*-infinitives and *that*-clauses; the decision to exclude from the discussion gerunds with an overt subject, as in "I resented *them* going without me" or "*Our finding ourselves in an awkward situation was unexpected*", is motivated by limitations of space and also by the fact that they are far less common than subjectless gerunds, both today and in earlier stages of English.[3] Section 6 closes the paper and argues, in light of the evidence presented in the preceding sections, that the massive restructuring of the complement system that has taken place in modern times as a result of the rise of the verbal gerund in Late Middle English can be characterized as a *drift* (Sapir 1921), that is, a long-

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2   Though there is no complete agreement among scholars as to when exactly one period in the history of English ends and another begins, I will here adopt the more or less traditional divisions of Old English (OE; up to about 1100), Middle English (ME; 1100-1500), Early Modern English (EModE; 1500-1700), Late Modern English (LModE; 1700-1900) and Present-day English, with a further subdivision of Middle English into Early Middle English (1100-1300) and Late Middle English (1300-1500).

3   My research so far shows, for instance, that in the eighteenth century the frequency per 10,000 words of subjectless gerunds is 49.2, that of gerunds with an overt subject 8.3. In Present-day British English the frequencies per 10,000 words of these two types are respectively 50.3 and 5.2.

term succession of changes tending in the same direction in a language or a set of related languages. In the case under discussion, the direction of the changes has been towards a greater functional specialization of the infinitive, which has largely come to be used in complementary distribution with the gerundive.

2. The corpus

To illustrate usage in Present-day English, examples have been drawn from FLOB and FROWN, the two one-million-word corpora of British and American English compiled at the University of Freiburg in the 1990s (see Mair 2002).[4]

Evidence for Late Modern English (1700-1900) is based on the Corpus of Late Modern British and American English Prose (COLMOBAENG, 1700-1879), a 1,170,000 word database comprising materials retrieved from several miscellaneous sources.[5] At present the structure of the COLMOBAENG is as shown in Tables 1-3 (see also the Appendixes).[6]

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4   FLOB and FROWN are available in Hofland et al. (1999).
5   Apart from the Century of Prose Corpus, which contains British English of the years 1680-1780 (cf. Milic 1995), to date the only historical corpus covering the Late Modern period is ARCHER (A Representative Corpus of Historical English Registers; see Biber et al. 1994). But ARCHER is not easily accessible and, in addition, when I started work on the present research I realized that some of the sections in ARCHER might prove too small for my purposes, as it comprises only 1.7 million words for the time-span 1650-1990.
6   Quotations from the COLMOBAENG are prefaced by a header block containing the following identifying information: subperiod / date of publication / surname of author / title / page number / text category. *Eg* BrE1 1725 Haywood *Fatal Secret*, 217 [Fiction].

British English	American English
BrE1 1700-1726	—
BrE2 1732-1757	AmE2 1732-1759
BrE3 1761-1797	AmE3 1774-1804
BrE4 1850-1879	AmE4 1851-1879
BrE5 1991 (FLOB)	AmE5 1992 (FROWN)

Table 1. Range of periods and dialects examined.

BrE1 (1700-1726)	BrE2 (1732-1757)	BrE3 (1761-1797)	BrE4 (1850-1879)	BrE5 (1991)
nonfiction: 76,000 w	nonfiction: 76,000 w	nonfiction: 76,000 w	nonfiction: 76,000 w	nonfiction: 40,000 w
26 texts 22 authors	27 texts 24 authors	26 texts 22 authors	15 texts 12 authors	text categories: - Press Reportage and Editorial - Skills, Trades and Hobbies - Science - Humour
fiction: 124,000 w	fiction: 124,000 w	fiction: 124,000 w	fiction: 124,000 w	fiction: 30,000 w
11 texts 8 authors	8 texts 7 authors	8 texts 8 authors	8 texts 8 authors	text categories: - General Fiction - Mistery and Detective Fiction - Romance and Love Story
Total words: 200,000	Total words: 200,000	Total words: 200,000	Total words: 200,000	Total words: 70,000

Table 2. Range of texts from British English: fiction vs nonfiction (word [w] totals).

AmE2 (1732-1759)	AmE3 (1774-1804)	AmE4 (1851-1879)	AmE5 (1992)
nonfiction: 50,000 w	nonfiction: 40,000 w	nonfiction: 76,000 w	nonfiction: 40,000 w
7 texts 5 authors	7 texts 5 authors	16 texts 12 authors	text categories: - Press Reportage and Editorial - Skills, Trades and Hobbies - Science - Humour
	fiction: 80,000 w	fiction: 124,000 w	fiction: 30,000 w
	4 texts 4 authors	10 texts 8 authors	text categories: - General Fiction - Mistery and Detective Fiction - Romance and Love Story
Total words: 50,000	Total words: 120,000	Total words: 200,000	Total words: 70,000

Table 3. Range of texts from American English: fiction vs *nonfiction (word [w] totals).*

The nonfiction samples in the first three subperiods of British English (BrE1-3) have been taken from Louis T. Milic's Century of Prose Corpus (COPC; Milic 1995), and this has influenced the choice of nonfiction texts in the rest of the database. Thus, in the interest of comparability, no attempt was made to include in BrE4 (1850-1879) or in the several subperiods of American English records of town, court and church proceedings, or the unstudied writing of unlettered individuals, as none of these would have an equivalent in the COPC.

A second criterion guiding the selection of the American English texts was the exclusion of authors born outside the United States, though exceptions were made in the case of Charles Thomson (1729-1824), whose family migrated from Ireland in 1739, Hugh Henry Brackenridge (1748-1816), born near Campbelltown, Scotland, but brought up in Pennsylvania since he was five, Alexander Hamilton (1757-1804), who at the age of fifteen moved to New York from the West Indies island of Nevis, and John William Draper (1811-1882). Draper was born in Liverpool, England, and came to the United States in 1832; he was graduated at the medical department of the University of Pennsylvania in 1836 and in 1839 became professor of chemistry at

the University of the City of New York. It seems reasonable to assume that by 1874, the date of publication of *History of the Conflict between Religion and Science*, the only work by Draper included in my corpus, his writing style would have been representative of standard American usage.

Considerable efforts were also made to leave out all American works printed in Great Britain, since, as aptly pointed out by Kytö/Rissanen (1983: 476), "there is always the possibility of British interference on the printer's side". However, in view of the scarcity of materials published in America during AmE2 (1732-1759) I finally opted for including two texts printed in London, namely John Bartram's *Observations* (1751) and Charles Thomson's *An Enquiry* (1759); see Appendix 3 for details.

Though the focus of this paper is on Late Modern and Present-day English, linguistic change is gradual, hence reference is often made in the following pages to earlier periods in the history of English, and in particular to Early Modern English (1500-1700). Evidence on this has been retrieved primarily from the Corpus of Early English Correspondence Sampler (CEECS, 1418-1680; 450,000 words), the Early Modern English section of the Helsinki Corpus of English Texts (HC, 1500-1710; 551,000 words), the Lampeter Corpus of Early Modern English Tracts (1640-1740; 1,100,000 million words), and the Newdigate Newsletters (1673/4-1692; 750,000 words).[7]

3. The development of English sentential complements: an overview

If we leave aside interrogative complements ("I'm wondering *why I should go at all*", "I doubt *whether they knew*"), five major types of

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7   All four corpora are available in Hofland et al. (1999).

complement clauses can be distinguished in English, as illustrated in (1)-(5):

(1)   *That/zero*-declaratives:
      a.   It is clear [*that*] *he made a mistake.*
      b.   He knows [*that*] *you are here.*
(2)   Bare infinitives:
      a.   All I did was *ask a question.*
      b.   We saw *Kim leave the bank.*
(3)   *To*-infinitives with and without a subject:
      a.   Max wanted *to change his name.*
      b.   The best plan would be *for them to go alone.*
(4)   *-Ing* participle clauses as complements of perception verbs:
      We saw *Kim leaving the bank.*
(5)   Gerundive clauses with and without a subject:
      a.   *Inviting the twins* was a bad mistake.
      b.   I resented *them/their going without me.*

Types (1), (2), (3), and (4) have been on record from Old English, though all four types have undergone a number of important developments since then, as discussed in detail by Warner (1982), Fischer (1988, 1989, 1995), Rohdenburg (1995, 1996), Los (1998, 2005) or Miller (2002: 157-241), among others. Most of these developments, at any rate, had been completed, or were well under way, before the start of the Early Modern period (1500-1700).

      By comparison with the other four complement types, gerundive clauses, as illustrated in (5), emerged considerably later in the language. As is well known, the *-ing* form in this type is not participial in origin, as in (4), but descends instead from an Old English derivational suffix which could be freely added to verb stems to form abstract nouns of action, as in OE *spilling* 'destruction' (< *spillan* 'destroy') or OE *wending* 'turning' (< *wendan* 'turn'). Following common practice among historians of the English language, I will employ the label 'nominal gerund' to refer to this kind of noun and to its reflexes in PDE, as in "*the exploring of the mountain* took a long time". The labels 'verbal gerund' or 'gerundive clause' will be applied to examples such as (5a) and (5b).

      As will become apparent in section 5.2.2.2 below, an aspect of the grammar of the nominal gerund which is relevant to the present

research is that, for reasons not yet well understood, it tended to occur preferably after prepositions. This is clear in the light of Houston's research (1989) on gerundial usage from the tenth to the seventeenth centuries and is also confirmed by Expósito's work (1996: 173-180) on nominal gerunds in Chancery English c1400-1450: of the 135 nominal or partly nominal gerundial structures occurring in her 48,000-word corpus 81.50% were found after a preposition, 12.60% were objects and a further 5.90% subjects; see also Fanego (1996b: 122-123).

In Old and Middle English nominal gerunds behaved like any other noun and could therefore take nominal dependents of various kinds. The following examples illustrate their use with determiners (*the*, *his*) and with *of*-phrases serving as their notional objects:

(6)   1472-1488 *Cely Letters*, 94/5 [Tajima 1985: 68]:
       at *the makyng of thys lettyr*
       "at the [moment of] writing this letter / when writing this letter"
(7)   c1385 Chaucer *Troilus and Criseyde*, V 1833 [Tajima 1985: 70]:
       And thus began *his loving of Criseyde*
(8)   c1300 (MS a1400) *English Metrical Homilies*, 112/2-4 [Tajima 1985: 76]:
       Sain Jon was [...] bisi In *ordaining of priestes, and clerkes*,
       "Saint John was […] busy ordaining priests and clerics",

As a result of very complex factors which I have discussed elsewhere (cf. Fanego 2004a), from Late Middle English (1300-1500) onwards nominal gerunds began to acquire verbal properties, a development that has ultimately led to the Present-day English situation, where gerunds have the ability to: a) govern an object or a predicative complement (*eg* "their following *the child* into England", "I don't like being *ill*"); b) be modified by adverbs or adverbials restricted to co-occurring only with verbs (*eg* "my *quietly* leaving before anyone noticed"); c) be negated by means of the VP-negating particle *not* (*eg* "my *not* leaving"); d) show tense and voice distinctions (*eg* "of *having done* it", "the necessity of *being loved*"); and e) take a subject in a case other than the genitive (*eg* "I resented *them* going without me").

Though, as noted above, the first instances of verbal gerunds can be dated back to Late Middle English, their spread across the grammar of English extended over a period of several centuries, with

some subtypes becoming possible much earlier than others. In the early stages, for instance, verbalization was largely restricted to prepositional environments (*eg* "I insisted *on wearing a suit*"), and was available only with those prepositional gerunds that lacked an explicit subject, as in (9), but not with the type exemplified by structures like (7) above (<u>*his*</u> *loving of Criseyde*), where *his* represents the notional subject of the following *-ing* form.

(9)   c1303 (MS a1400) *Handlyng Synne*, HS 408 [Tajima 1985: 76]:
        yn *feblyng þe body* with moche fastyng
        "in weakening the body by too much abstinence"

The prepositional type in (9) is thus the only verbal gerund which is found in significant numbers in Middle English (cf. Tajima 1985; Fanego 1996b, 2004a); all other gerundives develop basically within the Modern English period, and some of them have gained currency only very recently, as will become apparent in the remainder of this paper.

4. The spread of subjectless gerundives as objects[8] ("He enjoyed *playing practical jokes*")

As noted above, initially gerundives occurred almost exclusively after prepositions, as in (9) ("*yn* feblyng þe body with moche fastyng"). It is fairly generally accepted (Jack 1988; Anderson 1993; Fanego 1996b, 2004a; Miller 2002: Chapter 11) that the reason for this restriction was that prepositional contexts were the primary environment in which the

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8   The term 'object' is used here as a convenient, pre-theoretical, term for complement clauses filling the post-verbal slot also occupied by NP objects. However, as noted by Huddleston/Pullum (2002: 958, 1017-1022, 1206-1209) and others, most complement clauses are distributionally and syntactically very different from noun phrases, and hence cannot be satisfactorily analysed as prototypical objects, but rather as a different kind of complement (a catenative complement, in Huddleston/Pullum's terminology).

gerundive was not blocked by the productive *to*-infinitive, as this was available in Old and Middle English in a variety of clausal functions, but could not occur after prepositions other than *to*.[9]

   This first major difference in distribution between the infinitive and the gerundive was however unstable, because the nominal gerund, though itself closely associated with prepositional use (see section 3 above), could also occur in other clausal slots (Fanego 1996a: 38, 58; see also section 5.2.2.2). Gradually, therefore, verbal gerunds came to be licensed in functions other than that of prepositional objects, so that from the middle of the sixteenth century (Fanego 1996a) we come across scattered instances of verbal gerunds functioning as objects of verbs with which the understood subject of the complement clause is co-referential with the matrix subject and can hence be described as having a 'controlled' interpretation, as in *John$_i$ remembered PRO$_i$ seeing Bill*, where we understand John to be the one who saw Bill (on the notion of *control* see further section 4.2 below). The earliest verbs of this kind to govern gerundives were verbs of avoidance (*eg avoid, escape, forbear, refrain*, etc.) and also eggressives (*eg blin* 'stop, cease', *cease*).[10] Subsequently, the use of verbal gerunds in object position spread to more and more classes of verbs, with the result that from the late seventeenth century onwards *to*-infinitives have been yielding ground to gerundives with a wide variety of verb classes, as will be more fully discussed below.

   Table 4 reflects the profound quantitative changes that have taken place in this area of English grammar from the sixteenth century

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9   Some examples of prepositional infinitives can be found in Middle English, as discussed by Visser (1963-1973: §976) and Miller (2002: 367-368), but the type never really caught on.

10   In the relevant literature aspectual verbs are often analysed as raising verbs analogous to predicates such as *appear* or *seem* (*eg* "John seemed to like Mary"), with which the higher subject (*John*) has a raised, rather than a controlled, interpretation; see Huddleston/Pullum (2002: 1193, 1197, 1227-1228). Since the distinction between raising and control is of little relevance to the topic of this paper, it will not be taken into account in the rest of the discussion; in addition, it should be borne in mind that aspectuals, at least when used with agentive subjects as in "*he* began to open/opening all the cupboards", also qualify as control verbs (see Perlmutter 1970; Brinton 1988: 62-64).

to the present day. The data in the first two columns is drawn from two samples of the Helsinki Corpus of English Texts comprising ten different genres, namely Diaries, Private Letters, Fiction, Comedies, Statutes, Philosophy, Science, Handbooks, Trials and Sermons (see for details Fanego 1996b: 100). The samples used for all other historical subperiods, whether of BrE or AmE, consist of 40,000 words of nonfiction and 80,000 words of fiction.

HC EModE2 (1570-1640) [105,098 w]	HC EModE3 (1640-1710) [108,782 w]	BrE1 (1700-1726) [120,000 w]	BrE3 (1761-1797) [120,000 w]	BrE4 (1850-1879) [120,000 w]	BrE5 (1991) [70,000 w]
0 ex.	10 ex. (0.9)	18 ex. (1.5)	28 ex. (2.3)	37 ex. (3.1)	61 ex. (8.7)
–	–	–	AmE3 (1774-1804) [120,000 w]	AmE4 (1851-1879) [120,000 w]	AmE5 (1992) [70,000 w]
			23 ex. (1.9)	39 ex. (3.3)	75 ex. (10.7)

Table 4. The spread of subjectless gerundives to object position in British and American English, based on a 953,880 word sample [in brackets: frequencies normalized per 10,000 words].

Notes:
The head verbs taking a subjectless gerundive complement in object position are the following:
a.   EModE3: *continue* (2 ex.)*, do* 'complete, finish' (OED *do* v.8), *forbear* (2 ex.), *intend*, *leave off*, *neglect*, *omit*, *use* (OED *use* v.7 'To make use of (some immaterial thing) as a means or instrument'; cf. 1699 Langford *Plain and Full Instructions*, Sample 2, 120: "Others for curiosity use graffing several kinds of Fruit on one Stock"). The earliest example of -*ing* in this period, with the head verb *omit*, dates back to 1662 (*Oxinden Letters*).
b.   BrE1: *avoid* (3 ex.), *cease*, *cannot choose* 'cannot help' (OED *choose* v.5.a), *escape* (2 ex.), *fear*, *cannot/could not forbear* (9 ex.), *leave* 'cease, desist from' (OED *leave* v.10.a).
c.   BrE3: *attribute*, *avoid* (4 ex.), *cease*, *could not defend* (1794-97 Holcroft *HughTrevor*, 93: "I could not defend having taken any part whatever in one of them"), *escape*, *fear*, *finish*, *follow* 'come after in order of time, succeed' (cf. 1778 Burney *Evelina*, 84: "I have long dreaded this meeting and its consequence; to claim you, seems naturally to follow acknowledging you:"), *cannot/could not forbear* (2 ex.), *cannot/could not help* (9 ex.), *leave off* 'cease', *propose* 'put forward as a scheme or plan to be adopted' (3 ex.; OED *propose* v.4.a), *remember*, *cannot resist* 'cannot prevent'.

d.   BrE 4: *avoid* (3 ex.), *begin* (2 ex.), *break out*, *come* (5 ex. *eg* 1861 Wood *East Lynne*, 73: "he did come courting her"; cf. OED *come* v.3.c), *continue*, *entail* (2 ex.), *give up*, *go on* (3 ex.), *hate*, *cannot/could not help* (4 ex.), *intend* (2 ex.), *keep*, *leave off* (2 ex.), *like*, *mention*, *mind* '(not) to care for, (not) to object to' (3 ex.), *prefer* (2 ex.), *remember*, *want* 'need'.

e.   BrE5: *authorize* (3 ex.), *avoid*, *can't bear*, *begin*, *end*, *enjoy* (6 ex.), *fear*, *finish*, *give up*, *go* (2 ex.), *go on*, *hate*, *cannot/could not help* (4 ex.), *include* (3 ex.), *justify*, *keep* (7 ex.), *keep on* (2 ex.), *love* (4 ex.), *not mind* (2 ex.), *recall, remember, risk, start* (6 ex.), *stop, suggest, try* (7 ex.).

f.   AmE3: *avoid* (3 ex.), *come, cannot/could not help* (5 ex.), *contemplate, decline* (2 ex.), *forbid, keep* (2 ex.), *go, get, intend, meditate, omit, prefer, propose* 'to design, purpose, intend' (OED *propose* v.4.b), *put off*.

g.   AmE4: *avoid* (2 ex.), *bear, begin* (6 ex.), *call* (1869 Higginson *Malbone*, 48: "What do you call constancy?" said she. "*Kissing a woman's picture* ten years after a man has broken her heart?"), *commence* 'begin' (3 ex.), *decline, enjoy, finish* (3 ex.), *hate, cannot/could not help* (6 ex.), *keep* (8 ex.), *like, prefer* (2 ex.), *remember* (2 ex.), *stop*.

h.   AmE5: *avoid, begin* (9 ex.), *call* (FROWN General Fiction, K05 85 "you call being the first college to admit blacks and women radical"), *cease, come* (3 ex.), *consider, continue, deny, end up* (2 ex.), *facilitate, go* (3 ex.), *go on, hate, imagine, justify, keep* (9 ex.), *love* (2 ex.), *mean* 'to signify, import' (8 ex.), *mind* (3 ex.), *miss, need, propose, quit, recall, remember* (2 ex.), *start* (10 ex.), *stop* (3 ex.), *suggest, try, understand* (2 ex.), *wind up* (OED *wind* v.24.d.(e) 'to end up, to finish up (in a certain place or condition)').

4.1. Qualitative changes

I showed in Fanego (1996a/c, 1997) that during the period 1400-1760 gerundives gradually replaced *to*-infinitives, either completely or in part, after a number of verb classes: avoidance (*avoid, escape, forbear, refrain*), declination (*decline, deny* 'refuse to do', *fail, miss, neglect, omit, refuse*), suffering and bearing (*cannot/could not abide, bear*), intention (*intend*), emotives (*fear, hate, like, love*), conatives (*attempt*), retrospectives (*remember*), aspectuals, etc. With regard to the process of implementation of the move from infinitival to gerundive complementation, I also showed that it was channelled through several gerund-promoting properties (Fanego 1996a: 57-59); those relevant to the present discussion are the following:

1) The type of verb: The earliest verbs to govern gerundives as objects were verbs of avoidance (*avoid*, *escape*, *forbear*, *refrain*, etc.) and also egressive aspectuals (*blin* 'stop, cease', *cease*);[11] witness sequences such as 1561 *They come so to purpose, that hee can not refraine telling them*; 1601 *she never would blin telling how his grace sav'd*; c1380 *I cesse not doynge thankyngis* "I do not stop saying thanks", etc.

The early association between *-ing* and these two verb classes may have been related to the original function of the English infinitive marker *to* as a preposition expressing purpose and direction towards (cf. Mustanoja 1960: 514; Los 2005: 27-28), a function which still accounts today for the specialization of *to*-infinitives in purposive clauses. It seems reasonable to hypothesize that when the gerundive became available as a new complement type in Late Middle English, it was felt to be an adequate alternative to the infinitive after verbs denoting non-realization of the complement event or negative intention and volition towards it, as is the case with both egressive and avoidance verbs.

2) Nearness in semantic space: The spread of gerundives in object position proceeded largely by diffusion across the lexicon or, as Croft (2000: 148, 154-156) would put it, 'intraference'. Croft, working within the cognitive framework of Radical Construction Grammar (Croft 2001), formulates intraference in terms of "the establishment of connections between semantically closely related forms" (2000: 154), be these single words, inflections or constructions. Intraference is thus "[the] extension of a form to a function not previously associated with that form", provided it shares "enough linguistic substance, in particular meaning" (p.148) with the form or construction normally used to express that function in the language in question.

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11   My earlier research (1996a, 1996c, 1997) on gerundives did not cover aspectuals; my observations here are based, therefore, on what can be inferred about their development from Visser's data (1963-1973: §§1255-1311, 1790-1792). See also Mair (2002: 119-121), who dates to the late eighteenth century the first occurrences of the inchoative *begin* with a verbal gerund.

In the case of the gerund, nearness in semantic space can probably account, for instance, for the seventeenth- and eighteenth-century extension of *-ing* clauses from avoidance verbs (*avoid*, *escape*, *forbear*, etc.) to verbs in the declination class (*decline*, *deny* 'refuse to do', *fail*, *miss*, *neglect*, *omit*, *refuse*, etc.; see Fanego 1996a),[12] as both these classes express negative volition and are negative implicative.[13] In other words, anyone who asserts (10) or (11) commits himself to the view that the proposition encoded in the complement clause has not taken place or will not take place:

(10)   HC a1627 Hayward *Annals*, 5: and thes alsoe were charged *to forbeare treating* of controversies in Religion
(11)   1697 Vanbrugh *The Provok'd Wife* (Mermaid), 3.2.69 [Visser 1963-1973: §1775]: He by his prerogative takes money where it is not his due; I by my privilege *refuse paying* it where I owe it.

Semantic similarity explains, too, the spread of gerundives from *remember* to other verbs of mental activity in the retrospective class (*forget*, *recall*, *recollect*, *regret*) and eventually to the conative *try* (*eg* "I tried switching on the lamp"). As is well known, the difference in time reference between the two readings of English *remember* is reflected in PDE in the choice of different types of complement; thus in:

(12)   I remembered to do it.

the *to*-infinitive is selected to indicate "that the action or event takes place after (and as a result of) the mental process denoted by the verb" (Quirk et al. 1985: 1193), while the reverse is true in (13), where the gerundive construction is used retrospectively to refer "to a preceding event or occasion coming to mind at the time indicated by the main verb":

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12   Though by the eighteenth century gerunds had become common with a good many verbs of declination, several of them (*eg decline*, *refuse*) are now preferentially followed by an infinitive; see Fanego (1996a), Rudanko (1998: 72-73) and Wagner (2002: 56-63).
13   For the label 'implicative' see Karttunen (1971).

(13)   I remembered doing it.

As discussed elsewhere (Fanego 1996c), in earlier English the contrast between the two readings of *remember* was expressed in a different way, namely through the use of a simple infinitive, when the reference was to the future, or a perfect one, when it was to the past:

(14)   Shakespeare *King Lear* (Evans), 3.2.48 [Fanego 1996c: 75]: 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.*

However, from at least the seventeenth century onwards nominal gerunds, as in (15), came to be employed after retrospective *remember* as an alternative to the perfect infinitive; this was made possible by the fact that the gerund, because of its nominal character, was indifferent to time distinctions and could thus derive its time reference from the surrounding context, unlike the *to*-infinitive, which needed an explicit marker (the auxiliary *have*) to refer to past time. By the first half of the eighteenth century verbal gerunds in retrospective function had become common, with the result that in PDE they have completely ousted the perfect infinitive.

(15)   Shakespeare *As You Like It* (Evans), 2.4.49-51 [Fanego 1996c: 75]: I remember when I was in love, I broke my sword upon a stone, and bid him take that for coming a-night to Jane Smile; and I *remember the kissing* of her batler and the cow's dugs that her pretty chopp'd hands had milk'd; and I *remember the wooing* of a peascod instead of her,
(16)   1740 Lady Mary Wortley Montagu *Complete Letters* (Halsband), 354 [Fanego 1996c: 76]: I perfectly *remember carrying back* the Manuscript you mention and delivering it to Lord Oxford.

By far the most frequent predicate in the retrospective class is *remember* (cf. Wagner 2002: 77); once the gerund was regularly available with it to denote past time, it could then diffuse to other semantically related verbs such as *forget* (first recorded use followed by a retrospective gerund: 1823), *recollect* (1740; see Wagner 2002: 81), or *recall* (1929).

Though the opposition *-ing/to* with *forget* or *remember*[14] is primarily one of tense (past *vs* future), it is clear that in most cases retrospective clauses like (16) above will refer to real events that have actually occurred; hence the *-ing* form may easily come to be interpreted as also signalling performance of the action, specially by contrast with the infinitive construction, since this, because of its future-time reference, necessarily implies potentiality or non-performance. It is no doubt this secondary association of *-ing/to* with performance *vs* non-performance that must have facilitated the diffusion of *-ing* complements to the conative *try* at some point during the nineteenth century (see Visser 1963-1973: §1780; Fanego 1997). *Try* does not belong in the class of retrospectives, but has features in common with *remember*, namely the fact that it too is polysemous, meaning either 'put to the test' (cf. (17)-(18)) or 'make an effort' (19), two readings which, like those of *remember* itself, differ in terms of performance versus potentiality, hence the alternation *-ing/to* could be exploited with *try* to mark that meaning contrast overtly.[15]

(17)   1625 Bacon *Ess., Innovations* (Arb.), 527 [OED s.v. *try* v. 11.a]: It is good also, *not to try Experiments in States.*

(18)   After everything else failed, he *tried reciting the pledge of allegiance*, but the child kept crying.

(19)   He *tried to recite the pledge of allegiance*, but no sound came out.

3) The *horror aequi* principle: The principle of *horror aequi*, a term apparently coined by Brugmann (1909, 1917/1920), is defined by Rohdenburg (2003: 236) as "the widespread (and presumably universal) tendency to avoid the use of formally (near-)identical and (near-)adjacent grammatical elements or structures". This tendency accounts, inter alia, for the restrictions on the use of two immediately

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14   *Recollect* and *recall* can only be used retrospectively (*eg* "I can't recall meeting her before"), and not with reference to the future.

15   It is worth noting that *remember* and *try* are each rendered by two separate lexemes in a language like Spanish: thus *recordar* 'recollect, remember (doing something)' contrasts with *acordarse de* 'not to forget (to do something)'. English *try*, in turn, corresponds to Spanish *tratar de* 'try to' and *probar a, ensayar* 'try Ving'.

successive *to*-infinitives or *-ing* forms, both in Present-day English and in earlier periods (see, for instance, Ross 1972; Bolinger 1979; Fanego 1996a, 1997; Rohdenburg 2003; Vosberg 2003: 315-322). In the early stages of the spread of the verbal gerund, its advance is most pronounced after the *to*-infinitive, in keeping with the *horror aequi* principle; *horror aequi* also serves to explain the choice of some unexpected *-ing* forms, as in for instance (20), where the conative *attempt* governs an *-ing* clause despite the strong preference of conatives for the infinitive pattern in all periods of the language (cf. Fanego 1996a, 1997; Huddleston/Pullum 2002: 1241; Egan 2003: 153, 409):

(20)   1724 Defoe *Roxana* (Abbey Classics), 88 [Fanego 1997: 65]: it was not safe for me *to attempt doing* him any good.

If we now go back to Table 4 above and consider the kinds of verbs taking gerundive complements in Late Modern and Present-day English, it will be seen that many of the changes since the eighteenth century have been of a distributional kind, permitting gerundives to further encroach on infinitival domains. Thus, by comparison with the period examined in Fanego (1996a, 1996c), namely 1400-1760, *-ing* complementation has become much more common with aspectuals of various classes (*eg begin*, *cease*, *commence*, *finish*, *give up*, *go on*, *quit*, *start*, *stop*, *wind up*, etc.; see Table 4 and Visser 1963-1973: §§1790-1793 for details). Gerundives have also continued to spread after verbs of intention: in addition to *intend* itself, which has been on record with an *-ing* form since about 1706 (cf. Fanego 1996a: 43), the corpus used in the present study contains examples of other intention verbs also employed in the same pattern, such as *consider*, *contemplate*, *meditate* or *propose*. The following are the earliest instances known to date of the last three verbs followed by an *-ing* form:

(21)   COLMOBAENG AmE3 1797 Tyler *Algerine Captive*, 167 [Fiction]: To avoid starving, I again *contemplated keeping* a school. In that country, knowledge was viewed as a handicraft trade.

(22)   COLMOBAENG AmE3 1797 Foster *The Coquette*, 115 [Fiction]: some
        supposed he would marry her; others, that he only *meditated adding* her name
        to the black catalogue of deluded wretches, whom he had already ruined!
(23)   COLMOBAENG AmE3 1797 Foster *The Coquette*, 48 [Fiction]: I have just
        taken leave of my fair, and *propose returning* to morrow [sic] morning.

Gerundives have also extended to conatives, a class which strongly
resisted that type of complement during the period 1400-1760;
examples include the already mentioned *try* and *risk* (first recorded
use with a gerundive: 1882; cf. Visser 1963-1973: §1781). In the same
way, several emotive predicates that did not allow *-ing* clauses prior to
the eighteenth century are regularly instanced in that pattern in my
corpus for LModE and PDE; this is the case with *enjoy*, *hate*, *like*,
love, (*not*) *mind*, and *prefer*.

        Important as the above changes are, the most significant
innovation taking place in the period under analysis is no doubt the
diffusion of *-ing* complements to verbs such as *facilitate*, *involve* or
suggest, which fall outside the group of subject-control predicates
with which object gerunds first became available. This major
complementation shift is discussed in the next section.

4.2. Subjectless gerundives with a non-controlled interpretation
of the understood subject

Non-finite complement clauses without an overt subject may be
interpreted as having an unspecified subject, or a subject identical to a
particular NP in the matrix expression. Thus in (24) we understand
John to be the one who travelled with Bill, while in (25) we
understand it to be Kim who was to travel by bus. Following
Chomsky (1981), it has become customary to use the term *control* to
refer to these facts, that is, in both (24) and (25) the interpretation of
the missing subject is said to be controlled by an antecedent in the
matrix clause, respectively the matrix subject (*John*) and the matrix
object (*Kim*). By contrast, in (26)-(27) there is nothing in the sentence
itself to identify the traveller: the understood subject here could be the
speaker, someone else, or a group including or excluding the speaker.

I will henceforth say that clauses of this type involve an unspecified or non-controlled interpretation of the missing subject (for discussion see Huddleston & Pullum 2002: 1193).

(24)   John remembered [travelling with Bill].
(25)   John persuaded Kim [to travel by bus].
(26)   John advised [travelling by bus].
(27)   It was necessary [to travel by bus].

In Old, Middle and Early Modern English it was possible for the intervening NP in infinitival structures such as (25) to remain implicit, either because the identity of its referent was generic or unimportant, or because it could be recovered from the context (see Visser 1963-1973: §§1195-1249; Warner 1982: 77-78; Mitchell 1985: II, 887). Present-day English, however, has largely lost the ability to have unspecified infinitival subjects, except after a few verbs such as *help* or *hear*:

(28)   *c*1280 *The Southern Passion* (EETS), 1293 [Visser 1963-1973: §1217]:
        He *fforbed to ʒiue* Cesar […] any truage.
        "He forbade giving Caesar […] any tribute".
(29)   1475 Caxton *Jason*, 34 b [Visser 1963-1973: §1207]: He *commanded to sadle* his hors.
(30)   HC 1591 Smith *Of Usurie*, Sample 1, C1R: Christe expounding the commaundement which *forbiddeth to steale*, sayth, "lende freely", shewing that Vsurie, because she lendeth not freely, is a kinde of theft
(31)   She *helped (to) organize* the party.

The gerund, being a noun, could also occur in the object slot in structures of this kind, as in (32) below. Note that the NP *etynge of ham* lacks an introductory determiner, as was often the case with abstract nominals in earlier stages of English (see also example (8) above and Fanego 2004a: 19-20):

(32)   *c*1398 Trevisa, tr. Barth, *De Propr. Rerum*, 145 b/b [Visser 1963-1973: §1785]: In olde tyme men *forbeden etynge of ham*.

In a pioneering study, Donner (1986) examined the *-ing* gerundial forms, whether nominal or verbal, quoted in the volumes of the

Middle English Dictionary running from *A* to *O*, and found that in the
fifteenth century there are almost twice as many citations for gerunds
as in the fourteenth. This apparent expansion in the use of gerunds has
later been confirmed by my own research on Early Modern English
(see in particular Fanego 1996b), where I showed that gerunds indeed
become much more frequent in the course of time.[16] This being the
case, one could predict that they would gradually spread to those
clausal positions where they could be functionally more useful; we
have seen above (4.1), for instance, that the availability of the
gerundive and the infinitive allowed for splits with verbs that admitted
more than one semantic interpretation (*eg remember*, *forget*, *try*). In
the same way, in the course of the modern period we find that the
gerund tends to replace the infinitive in constructions such as those in
(28)-(31), thus helping to establish an explicit distinction between
complement clauses with controlled and non-controlled subjects. The
corpus evidence on *forbid*, one of the verbs most commonly taking a
non-finite clause lacking an explicit controller, is illustrative in this
respect, as detailed in what follows.

 Forbid is recorded in the infinitival pattern under discussion
(see (28) above) from a very early stage (OED s.v. *forbid* v. 1.d). In
the same sense, it can occur also with a *that*-clause (33) or in the
passive voice, as in (34):

(33) 1297 R. Glouc. (1724), 496 [*OED* s.v. *forbid* v. 1.d]:
   The king […] *vorbed that me ne ssolde non of is lond sowe.*
   "The king […] forbade that anyone should sow his land".
(34) HC 1591 Smith *Of Usurie*, Sample 1, C2R: Amaziah *is forbidden to*
   strengthen himself with the armyes of Israel, onely because Israel had
   offended God;

All three patterns are well represented in the Early Modern period, as
shown by a computer search of the Corpus of Early English
Correspondence Sampler (1418-1680), the Early Modern English
section of the Helsinki Corpus of English Texts (1500-1710), the

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16 Donner (1986: 398) attributes this rise in the frequency of gerunds to "their
  utility as a ready means of deriving a noun from any verb, notably the torrent
  of French verbs that had come into the language" in Middle English.

Lampeter Corpus (1640-1740), and the Newdigate Newsletters (1673/4-1692). Also found in these four electronic corpora (2,851,000 words altogether) are 16 instances of *forbid* followed by a gerund. In eight of these, the *-ing* form is ambiguous between a nominal and a verbal reading, either because it is unmodified (*eg* HC 1694 Fox *Journal*: "Christ *forbidd swearinge*"; see further section 5.2.2.2 below) or else governs dependents that might occur readily in both NP or VP structure, as is the case in (35); in this example, the absence of a determiner introducing the gerund phrase cannot be taken as evidence supporting its analysis as a VP, for, as noted above, at this stage postmodified abstract nominals could occur with a zero article.

(35)   CEECS 1585-1586 *Correspondence of Robert Dudley, Earl of Leycester*, Leycester to Walsyngham, February 15th: I find plainly, yf you hold your hand from lycenses, and *forbid going to any other places eastward from Hamboro* hetherward, and to the Haunces but only some suche nomber of clothes as heretofore ye have allowed them, that here wylbe a notable mart for them.

Six of the remaining *-ing* phrases following *forbid* are unambiguously nominal (cf. (36)), and two are categorially hybrid, that is, they are introduced by the definite article but govern direct objects:

(36)   Lampeter 1682 Pittis *An Old Way of Ending New Controversies*: to impede, or retard, the most glorious flourish of Gospel Truth, and *forbid the spreading of the Christian Church*,
(37)   Lampeter 1679 Jones *A Sermon of Antichrist*: Another Angel declaring the downfall of that Antichristian state. (Rev.14.8.) 3. An Angel *forbidding the worshipping the beast or his image*, and receiving his mark in his forehead, or in his hand,
(38)   Newdigate 1679 December 18th: the ffrench […] are growne soe Insolent as to *forbid the Carrying Provisions to Bazell* upon paine of death

Occurrences of *forbid* in the COLMOBAENG are not very numerous, yet it is interesting to observe that while examples with a *that*-clause or in the kind of passive construction exemplified in (34) continue to be available, there are no longer any instances of *forbid* followed by an infinitive with implicit subject, as in (28) and (30) above. There is, however, one example where *forbid* takes an *-ing* complement:

(39)   COLMOBAENG AmE3 1797 Tyler *The Algerine Captive*, 149 [Fiction]: The
        landlord *forbad quarrelling* in his house.

The pattern of *-ing* complementation which can be commonly found
with *forbid* in Early Modern English may well have served as the
model for other verbs also capable of governing a complement with an
unspecified subject. Of great interest in this respect is *propose*.[17] This
is recorded from the end of the fifteenth century in the sense 'to put
before one's mind as something that one is going to do; to design,
intend' (OED s.v. *propose* v. 4.b), as in (40); in this use (henceforth
referred to as *PROPOSE₁*) *propose* governs a *to*-infinitive and qualifies
as a subject-control verb, since the understood subject of the infinitive
is co-referential with the matrix subject:

(40)   HC 1480 *Cely Letters*, George Cely to Richard Cely, November 16th: The
        Frenche Kynge has fforneshed his garysons appon the ffrontys all redy, etc.
        My lady *proposythe to ly at Sent Tomers* and the Frenche ambassett shall ly at
        Tyrwhyne iij lekys thens, etc.

According to the OED, from the middle of the seventeenth century
propose came to be employed in the related meaning 'to put forward
as a scheme or plan to be adopted; to lay before another or others as
something which one offers to do (with *simple obj.*, *obj. clause* or
inf.)' (s.v. *propose* v. 4.a). In this sense (henceforth *PROPOSE₂*) it was
usually followed by a *that*-clause (*eg* Newdigate 1691 December 8th:
"They alsoe propose that the soldiers that land in ye North from

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17   Rohdenburg (1992, 2006) briefly discusses the replacement of *to*-infinitives by
      gerundives after *advise*, another verb taking a clause with a non-controlled
      subject (*eg* "She advised *doing it in advance*"). It is unlikely, however, that
      advise may have had the same influence on the long-term development of
      gerundives as *forbid* or *propose*, as it seems to have been less common than
      either of these two verbs: it occurs only twice with a nominal gerund in the
      Newdigate Newsletters and is not recorded in the Helsinki Corpus, the
      CEECS, the Lampeter Corpus and the COLMOBAENG. In Rohdenburg's
      extensive corpus, which comprises Chadwyck-Healey's Early English Prose
      Fiction (1518-1700) and Eighteenth-Century Fiction (1705-1780), object
      gerunds after *advise* are not found until the eighteenth century, and even then
      the number of examples – just two – is very small.

Ireland may be cloathed there"), or else occurred in the passive voice with an extraposed *to*-infinitive as subject (*eg* Newdigate 1676 May 3rd: "It was proposed to move the ffrench from the advantagious post they had taken"). Occasionally, it can also be found in two other less frequent patterns, namely, with a subjectless *to*-infinitive as its object (cf. (41)), or with an *-ing* complement; the latter occurs four times in the Newdigate Newsletters (750,000 words) and once in the Lampeter Corpus (1.1 million words).[18] As was the case with the early instances of *-ing* complements after *forbid*, the gerunds following *PROPOSE₂* belong to several categorial types: (42) below is a hybrid, (43) is nominal and (44) is fully verbal. All three examples antedate by several decades the earliest recorded instances of the pattern *PROPOSE₂* V*ing* adduced in the OED (s.v. *propose* v. 4.a, quoting Defoe 1724) and Visser (1963-1973: §1783, same date):

(41)   Lampeter 1676 Anon. *An Answer to Two Letters, Concerning the East India Company*: Suppose […] that the King, to compass the obtaining and carrying on of such a Trade for the General benefit of his Kingdom, without a Tax on his People, should *propose to give and grant to all his Subjects* […] certain Priviledges and Immunities, and amongst others the sole enjoyment of the Trade of such places to them and theirs, excluding all others that should refuse to joyn therein. On such an Invitation and Proposal freely offered to all without exception, onely a certain number of Persons come in, Accept the Terms, and receive the Grant

(42)   Newdigate 1676 January 20th: Yesterday wee had a dutch post all the Newes it Brought is […] That the Brandenburg Minister at the hague *had proposed the formeing a Campe of 8000 men* Neere Ruremond to Curbe the Garison of Maistricht and for that End the Electors of Brandenburg & Collogne the duke of Newburg & the states shall Each of them furnish 2000 men

(43)   Lampeter 1697 Pollexfen *England and East India Inconsistent in their Manufactures*: And if the Author be of opinion that the Expence of Manufactured Goods from the India be so advantageous, and that Selling Cheap is the way to increase Consumption; Why *hath he not proposed the opening of that Trade,* that it may not be any longer a Monopoly, that those Goods may also Fall in Price?

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18   This corpus contains two examples of the infinitival pattern.

(44)   Newdigate 1681 October 15th: Councill on Thursday voted yt ye Sheriffs
        expences in avoiding paying ye 100 L fine shoud be defrayd out of ye chambr
        of Lond also sevll of ym made speeches yt it was a shame yt Strangrs should
        Come into ye bowells of ye City to Insure ye houses from fire & *proposd
        insuring 'em at ye same rates as ye others* & ye chambr of Lond to be ye fund

Data from the COLMOBAENG testify to the progress made by the
gerund after *PROPOSE₂* since Early Modern English times: *-ing*
complements, as in (45)-(46), are recorded in my corpus in ten cases,
to-infinitives only in five.[19] It seems likely that this rapid increase in
the use of the gerund may have been motivated by the desire to keep
apart the two different interpretations of *propose*, though it should be
recalled that, as already noted in section 4.1 above, by the end of the
eighteenth century gerundives had also spread to *PROPOSE₁* itself (cf.
example (23)).

(45)   COLMOBAENG BrE1 1725 Davys *The Lady's Tale*, 137 [Fiction]: After Tea,
        and Wine, Vanzouch desir'd to go into the Gardens, which he did, and my
        Father with him; while the young Gentleman stay'd to entertain my Mother
        and I, but his company grew tedious and tiresome, which made me, for a little
        Variety, *propose going* into the Gardens too.
(46)   COLMOBAENG BrE3 1778 Burney *Evelina*, 67 [Fiction]: I now feared what
        I had before wished, and, therefore, to avoid Lord Orville, I was obliged
        myself *to propose going down* another dance, though I was ready to sink with
        shame while I spoke.

In the course of the Late Modern period and the twentieth century, the
gerund steadily consolidated itself as a very frequent option for the
coding of non-finite object complements without a specific controller.
Its use can be observed in the COLMOBAENG with verbs such as
follow (in BrE3), *entail* and *mention* (in BrE4), *authorize, include,
justify* and *suggest* (in BrE5), *call* (in AmE4), or *call, facilitate, justify,
mean* and *understand* (in AmE5). A few relevant examples are

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19   These figures refer to the COLMOBAENG as a whole, unlike the figures in
      Table 4 above, which are based on a smaller sample. The *-ing* examples occur
      in British English fiction (8 ex., the earliest dating back to 1725; see quotation
      (45)) and in the *Autobiography* (1788-1789) of Benjamin Franklin (2 ex.); as
      regards the examples with an infinitive, 4 are found in fiction (2 ex. in BrE and
      2 in AmE) and 1 in nonfiction (in AmE).

adduced below; note that in (47) the principle of *horror aequi,* as discussed earlier, has no doubt contributed to the selection of the form *acknowledging* after the preceding *to-*infinitive (see also (46) above):

(47)   COLMOBAENG BrE3 1778 Burney *Evelina*, 84 [Fiction]: I have long dreaded this meeting and its consequence; to claim you, seems naturally *to follow acknowledging* you:

(48)   COLMOBAENG BrE4 1861 Wood *East Lynne*, 33 [Fiction]: "I have been telling Barbara that a visit to London *entails bringing* gifts for friends", returned Mr. Carlyle.

(49)   COLMOBAENG BrE4 1851 Carlyle *The Life of John Sterling*, Chapter III [Nonfiction]: In fact the Sterling household was still fluctuating; the problem of a task for Edward Sterling's powers, and of anchorage for his affairs in any sense, was restlessly struggling to solve itself, but was still a good way from being solved. Anthony, in revisiting these scenes with John in 1839, *mentions going* to the spot "where we used to stand with our Father, looking out for the arrival of the London mail:"[20]

(50)   FROWN 1992 General Fiction, K05 85: you *call being* the first college to admit blacks and women radical

(51)   FROWN 1992 Science, J22 203: positive actions which should guide employers and member states in order *to facilitate providing* equal opportunity

(52)   FROWN 1992 Press Reportage, A07 96: I cannot for the life of me *understand mobilizing* demonstrations and demonstrating against your own country

It is important to bear in mind that with some of these head verbs the spread of the gerund takes place at the expense of *that*-clauses or of NPs headed by a nominalization, rather than of *to*-infinitives, as was the case with *forbid* or *propose*. In other words, predicates like *entail, facilitate, include, justify, mean, mention, suggest* or *understand* have never governed infinitives, so it would be inaccurate to speak here of the replacement of one type of non-finite complement by another; instead, in an example like (52) above, we could hypothesize that the gerund has been resorted to as a convenient alternative to a *that*-clause with an indefinite subject (i.e. "I cannot [...] understand that *one* should mobilize", etc.), while the gerunds in (50)-(51) can be assumed

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20   Huddleston/Pullum (2002: 1232) assign *mention* to a class of catenatives having "control by subject", but this need not always be the case. In example (49) the overall context makes it clear that the unexpressed subject of the gerund includes both the speaker and his family.

to have replaced NPs such as "the fact that it is the first college" and "the provision of equal opportunity" respectively. Gerundives with unspecified subjects, once they had become well established as a complement type after *forbid*, *propose* and their analogues, could go on to be employed after any other verb capable of taking an object with the appropriate semantic characteristics. The result of this process is that, to a very large extent, the use of gerundives to encode complements with a non-controlled subject argument has now been grammaticalized,[21] in the sense that it constitutes a highly predictable feature of the grammar of Present-day English.[22]

5. Subjectless gerundives as preverbal ("*Inviting your uncle was a bad mistake*") and extraposed ("It was of no use *asking myself this question now*") subjects

5.1. Gerundives and extraposition

Old English *þæt*-clauses and *to*-infinitives, despite their similarities to ordinary NPs, lacked some of the basic characteristics of full-fledged nominals, such as the ability to be governed by prepositions (see Traugott 1992: 234; Los 2005: 9; and section 4 above) or to occur as preverbal subjects, as in PDE "*That Jane came* is true" and "*To know the truth* is essential" (see Mitchell 1985: I, 1537; Traugott 1992: 234-236, 244). From Middle English onwards both kinds of complement clause became available preverbally (cf. Warner 1982: 108; Fischer 1992: 334; Rissanen 1999: 282-283), but even today they are comparatively rare by comparison with their extraposed counterparts, as is

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21   I am using the term 'grammaticalize' in its very broad sense of "be/become part of grammar", rather than in the more narrow and specific one where it refers to processes leading towards greater grammaticality of linguistic items; for the distinction see Himmelmann (2004: 25).

22   Some discussion of gerundives as complements of verbs of non-subject control can be found in Duffley/Joubert (1999: 258-260) and Egan (2003).

clear from analyses of contemporary usage by Mair (1990), Biber et al. (1999: 674-676) or Kaltenböck (2004), and from my own research based on FLOB and FROWN. See Tables 5 and 6 for some statistics.

	Wyclifite English (c1390) [60,000 w; based on Warner 1982]	Marlowe's complete works (*ca* 1590-1600) [18,887 lines of prose and verse; based on Ando 1976]	4 Shakespearean plays [11,944 lines of prose and verse = *ca* 100,000 w; based on Fanego 1992]
preposed	2 (2.8%)	14 (12.9%)	26 (27.6%)
extraposed	70 (97.2%)	94 (87.1%)	68 (72.4%)
Totals	72	108	94

Table 5. Frequencies of extraposed and non-extraposed subject infinitives in Middle and Early Modern English.

	BrE4 (1850-1879) [120,000 w]	AmE4 (1851-1879) [120,000 w]	BrE5 (1991) [60,000 w]	AmE5 (1992) [60,000 w]
subjectless gerundives	0 / 1	12 / 1	22 / 2	19 / 2
subjectless *to*-infinitives	25 / 84	16 / 108	8 / 50	1 / 20
that-clauses	6 / 109	5 / 114	1 / 34	0 / 37

Table 6. Preverbal and extraposed sentential subjects in 19th- and 20th-century British and American English (figures for extraposed use appear to the right of the slash).

Since extraposition is essentially a property of clauses rather than of NPs (cf. Huddleston/Pullum 2002: 1407-1408),[23] one could predict that in the role of extraposed subjects, as in quotations (53)-(56) below, gerundives, because of their nominal origin, would not be serious competitors to infinitives. That this prediction is indeed correct is shown by the evidence from my corpus: in the eighteenth century the frequency of extraposed gerundives is of less than one token per 100,000 words – only two examples occur in a 340,000 word sample of the COLMOBAENG –, and it remains very low throughout the nineteenth and twentieth centuries, as can be seen from Table 6,

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23 Extraposition of NPs is largely limited to structures of the type "It's incredible *the things they get up to*", where the matrix VP gives an exclamatory meaning and the NP concerned has the form *the* N + relative clause.

specially by comparison with the figures for extraposed infinitives over the same period. With regard to the twentieth century in particular, a recent study by Kaltenböck (2004) confirms that *-ing* extraposition continues to be rare today: he records only 48 extraposed gerundives in the one million word ICE-GB corpus, the British component of the International Corpus of English. Included in that figure are gerunds with an overt subject (*eg* "It was good *his talking to your uncle*"); though these extrapose much less readily than subjectless gerunds (cf. Huddleston/Pullum 2002: 1407), it seems likely that the actual number of extraposed subjectless *-ing* clauses in Kaltenböck's corpus may be even lower than 48.

Also worthy of mention in connection with extraposed *-ing* subjects is that, as has been pointed out by other researchers (Quirk et al. 1985: 1393; Collins 1994: 12-13), it is not always clear whether they are to be interpreted as genuine cases of extraposition or rather as right-dislocated constituents, with *it* functioning as a referential pronoun referring cataphorically to the event expressed in the *-ing* clause; witness in this respect (55)-(56), which I counted as cases of extraposition, but might well involve right dislocation instead.[24] Bearing in mind that right dislocation is found predominantly with noun phrases (Collins 1994: 12-13; Huddleston/Pullum 2002: 1411-1414), the syntactic indeterminacy between the extraposed and right-dislocated readings of many *-ing* subjects[25] is further evidence of the nominal traits which gerundives have retained even into Present-day English.

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24   Witness Quirk et al.'s (1985: 1393) remark on the sentence *It's fun being a hostess*: "[t]he *-ing* clause often shows itself incompletely adapted to the extraposition construction, notably by being resistant to bearing the main information focus […] We might conclude from this that the participial clause has just as much affinity with a noun-phrase tag (*eg He's a friend of mine, that man*) as with a genuine extraposed subject".

25   This ambiguity is mostly restricted to written English, where the clue of intonation is lacking and the comma punctuation which normally sets apart right-dislocated constituents (e.g. "It was all very well, turning herself into the latter day answer to Ava Gardner") may be absent too. In speech, extraposition and right dislocation would be distinct prosodically since, unlike the extraposed constituent, the dislocated constituent is almost invariably separated from the nucleus of the clause by an intonational boundary.

(53) COLMOBAENG BrE4 1861 Dickens *Great Expectations*, 70 [Fiction]:
Would he believe that I was both imp and hound in treacherous earnest, and had betrayed him? It was of no use *asking myself this question now*. There I was, on Joe's back, and there was Joe beneath me,

(54) COLMOBAENG AmE4 1852 Stowe *Uncle Tom's Cabin*, 314 [Fiction]:
Miss Ophelia: "Don't you have some place here on purpose for things to be washed?"
Dinah: "Well, Mas'r St. Clare got dat ar chest, he said, for dat; but I likes to mix up biscuit and hev my things on it some days, and then it an't handy *a liftin' up the lid*".

(55) FROWN 1992 Skills/Trades/Hobbies, E01 133: the event raises money for the Safe-House for Battered Women in Denver. With 4,373 finishers in 1991, the race raised $20,000 for the shelter. "It was a very neat experience *being with all women and seeing the men and staffers and friends on the side cheering*", says Keeler. "And what I really liked was the idea of women helping women".

(56) FLOB 1991 Humour, R08 56: She thought of the days when it had taken her five minutes to get dressed to go out. Those simple days when it was a matter of which pair of jeans was clean. […] It was all very well *turning herself into the latter day answer to Ava Gardner*, but no one had warned her about all the work involved.

Turning now to the kinds of texts where extraposed gerundives tend to occur, their association with informal registers has often been noted in the literature dealing with extraposition in Present-day English. See in this connection Quirk et al. (1985: 1393), who claim that extraposition of *-ing* clauses is "uncommon outside informal speech", or Collins (1994: 10), who found "in the spoken conversational data" all but one of the eight tokens of extraposed *-ing* clauses occurring in his corpus of 200,000 words of spoken and written Australian English. In the ICE-GB corpus, which has an equal share of spoken and written language, 58.3% of all extraposed *-ing* clauses occur in the spoken material (Kaltenböck 2004: 224). These findings are in agreement with my data from FLOB and FROWN – two of the extraposed *-ing* subjects occur in dialogue, another one is found in a direct speech quote (see (55)) and the fourth in the text category Humour (see (56)) –, and also with the historical evidence. Thus, the two eighteenth-century examples of *-ing* extraposition referred to at the beginning of this section occur in private correspondence (Chesterfield's *Letters*, 1745-1748) and in fiction dialogue (Defoe's *Moll Flanders*, 1722); the two recorded in a 240,000 word nineteenth-century sample (see Table

6 and quotations (53)-(54)) are found in fiction monologue and dialogue.

5.2. *Preverbal subjectless gerundives (“*Inviting your uncle *was a bad mistake”): a preliminary overview*

The nominal traits that render gerundives unfit for extraposed use could, by contrast, be expected to contribute to their increasing occurrence as preverbal subjects, at the expense of other types of sentential complements. And indeed, as will become apparent in the following pages, non-extraposed gerundives have been encroaching upon preverbal *to*-infinitives in recent times, and specifically from the nineteenth century. Prior to this, *-ing* clauses as non-extraposed subjects, as in (57)-(58) below, were very uncommon (see Table 7), probably as a result of processing difficulties having to do with the cognitive principle of 'transparency' (Rohdenburg 1995, 1996).[26] This claims, essentially, that dependent clauses used in cognitively

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26   The avoidance of gerundives preverbally can be related as well to the kind of
      structural factor which I have discussed in detail in Fanego (2004a). Following
      Timberlake's hypothesis (1977: 157) that the actualization and generalization
      of syntactic change at the observable level of language use is systematic, in the
      sense that changes "will be actualized earlier for terms […] which are
      unmarked, or more natural, contexts for the change in question and later for
      terms which are marked, or less natural, contexts for the change", I argued that
      the spread of gerundives proceeded largely according to a grammatical rela-
      tions hierarchy, from peripheral adverbials and oblique complements (as in,
      respectively, "*on hearing a cry*, I dashed into the garden" and "I insisted *on
      being given every detail*") to core complements internal to VP (i.e. objects, as
      in "I avoided *meeting Mary*") to, eventually, external core complements, that
      is, subjects. Each of these clause constituents could be described as being
      progressively more marked with respect to the specific syntactic context – the
      clause slot following prepositions – where the verbal gerund originated, as
      predicted by Timberlake's (1977) views on the factors constraining the
      directionality of actualization. This account of the diffusion of gerundives
      across the grammar of English does not contradict the above comments on
      subject gerundives and difficulties of cognitive processing: linguistic options
      which score high on the hierarchy of markedness are also cognitively more
      complex.

complex environments will tend to "make their sentential status more explicit" (Rohdenburg 1995: 368) by resorting to stronger grammatical marking. Thus, to exemplify with finite clauses, when these function as postverbal objects (*eg* "I think [*that*] *it is a good idea*") the complementizer *that* may be absent, but becomes obligatory when the clause is a subject or otherwise precedes the matrix predicate, as in "*That Jane came* is true" or "*That he really intended to cheat us* I still can't believe", since it has then the essential role of signalling the start of a subordinate clause rather than a main clause. For much the same reason, bare infinitivals (*eg* "All I did was *ask a question*") cannot occur as preverbal subjects,[27] in other words, a sequence like "*Know the truth* is essential" is ungrammatical in English.

(57)　HC 1699 Langford *Plain and Full Instructions to Raise all Sorts of Fruit-Trees that Prosper in England*, Sample 2, 114: *Slitting the bark* is an excellent additional help to most of the aforesaid evils, and also for bark-binding.

(58)　COLMOBAENG BrE3 1778 Walpole *Life of Mr. Thomas Baker*, 130/077-P19 [Nonfiction]: The sufferings of Charles I whose crimes were not of the magnitude of his son's, had raised a spirit of enthusiasm in his partisans, and conjured up in their minds a profane idolatry of kings, that was inconsistent both with true religion and common sense; and had been extended even to genealogic succession – as if *being born of a certain race* could entitle any family to a right of violating with impunity all laws, both divine and human.

As I have discussed in detail elsewhere (Fanego 2004b, 2006), during the seventeenth and eighteenth centuries the lack of an overt complementizer analogous to *that* or *to* to introduce subject gerundives was often solved by resorting to a hybrid structure with an initial definite article:

(59)　HC 1676 Walton *Compleat Angler*, 213: and though I profess no knowledg of the Law, yet I am sure the regulation of these defects might be easily mended […] But above all, *the taking Fish in Spawning time*, may be said to be against nature;

27　An exception to this generalization are reversed versions of the specifying *be* construction containing the verb *do* in the internal complement, as in "*Plead mitigating circumstances* is all you can <u>do</u>". See further Fanego (2004b: 323-324).

(60)   COLMOBAENG BrE1 1725 Haywood *Fatal Secret*, 217 [Fiction]: believing
        that if he were refused there, he should never get an Opportunity of applying
        to the young Lady, he chose to make the first Declaration to herself; *the
        gaining her Affections* being the material Point, he considered all others of
        little Consequence.

(61)   COLMOBAENG AmE2 1754 Edwards *Freedom of the Will*, 355
        [Nonfiction]: But *the making the requisite distinction* requires more care of
        reflection and thought than most men are used to.

(62)   COLMOBAENG AmE3 1788-1789 Franklin *Autobiography*, 96 [Nonfiction]:
        These proverbs, which contained the wisdom of many ages and nations, I
        assembled and form'd into a connected discourse prefix'd to the Almanack of
        1757, as the harangue of a wise old man to the people attending an auction.
        The bringing all these scatter'd counsels thus into a focus enabled them to
        make greater impression.

There are grounds to suggest (cf. Fanego 2004b) that the function of
the in such instances was no longer to indicate definite reference, but
rather to provide the following verbal gerund with an introductory
element of some kind; in other words, *the* was basically a semantically
empty grammatical marker or complementizer serving to license the
-ing clause at a time when subjectless verbal gerunds in preverbal
position were probably not yet fully acceptable.

   The-hybrids in subject function were relatively common in the
seventeenth and eighteenth centuries;[28] thus in a 340,000 word sample

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28   The majority of *the*-hybrids in my corpus occur as subjects – there are 21
     examples in the complete British section (800,000 words) of the
     COLMOBAENG –, but they can also be found as objects, predicatives and
     appositives; see Fanego (2004b: 331-332) and examples (i)-(ii) below and
     (37)-(38) above. In all such cases, the function of the complementizer *the*
     appears to be the same, namely helping to clarify the immediate constituent
     structure. Prescriptive condemnation of hybrid gerunds, as discussed below,
     applied to *all* hybrids, and not just to those occurring in the subject slot.

     (i)   COLMOBAENG BrE2 1744 S. Fielding *David Simple*, 71: She
            certainly would soon have broke her Heart, had she known that all this
            Misery [...] was her own Fault; but as she thought it his Inconstancy, to
            his Generosity, in not telling her the Truth, she owed *the avoiding that
            painful Reflection*.

dating back to subperiods BrE1-3 (1700-1797) I recorded seven examples, as opposed to just six unintroduced subject gerundives (see Table 7). In the case of AmE2 (1732-1759; 50,000 words) the figures for *the*-hybrids and unintroduced gerundives were respectively three and one; in AmE3 (1774-1804; 120,000 words), seven and six. Yet despite the fact that in the eighteenth century hybrids were therefore a frequent option to code *-ing* subjects, by the second half of the nineteenth they had completely disappeared in American English – no examples occur in my material for AmE4 (1851-1879; 200,000 words) – and had declined in frequency in British English (only 2 ex. found in 200,000 words).[29] Taking into account that, starting with Robert Lowth's *Short Introduction to English Grammar* (1762: 111-114), hybrids were stigmatized and heavily condemned in grammar books of the time, both in Britain and on the other side of the Atlantic, I have suggested in earlier research (Fanego 2006) that normative pressures played a role in their loss. Whether this view is accepted or not – analysts are often sceptical about prescriptive grammars having an impact on language use (see, for instance, van der Wurff 1993; Beal 2004: 114, 123) –, it seems reasonable to assume that the disuse of hybrids must have facilitated the diffusion of unintroduced verbal gerunds to the subject slot (*eg* "*Inviting your uncle* was a bad mistake"), a clausal position in which they start to become more common, at least in American English, from the second half of the nineteenth century, as discussed in the next section.

(ii)   COLMOBAENG BrE1 1711 Addison *Spectator*, 114/040-P06: There is one piece of sophistry practiced by both sides, and that is *the taking any scandalous story that has been ever whispered or invented of a private man, for a known undoubted truth,* and raising suitable speculations about it.

29   The decrease in *the*-hybrids in nineteenth century British English, whether as subjects or in other functions, was in fact more pronounced than these data suggest, as becomes clear if we compare the 32 and 35 instances found, respectively, in BrE1 (1700-1726; 200,000 words) and BrE2 (1732-1757; 200,000 words) with the 10 examples recorded in BrE4 (1850-1879; 200,000 words).

BRITISH ENGLISH	HC EModE2 (1570-1640) [105,098 words]	HC EModE3 (1640-1710) [108,782 w]	BrE1 (1700-1726) [120,000 w]	BrE2 (1732-1757) [100,000 w]	BrE3 (1761-1797) [120,000 w]	BrE4 (1850-1879) [120,000 w]	BrE5 (1991) [70,000 w]
gerundives	1 (0.09)	3 (0.27)	1 (0.08)	2 (0.2)	3 (0.25)	0	24 (3.4)
to-infinitives	Shakespeare's English [100,000 w of prose and verse; based on Fanego 1992] 26 (2.6)	not analysed	not analysed	12 (1.2)	30 (2.5)	25 (2.08)	8 (1.2)

AMERICAN ENGLISH	AmE2 (1732-1759) [48,000 words]	AmE3 (1774-1804) [120,000 words]	AmE4 (1851-1879) [120,000 words]	AmE5 (1992) [70,000 words]
gerundives	1 (0.2)	6 (0.5)	12 (1.0)	24 (3.5)
to-infinitives	23 (4.8)	26 (2.17)	16 (1.3)	2 (0.28)

Table 7. Frequencies of subjectless gerundives and infinitives as preverbal subjects from Early Modern to Present-day English, based on a 1,201,880 word sample [in brackets: frequencies normalized per 10,000 words].

Notes on Table 7:
1. The figures for hybrid gerunds (*the gaining her Affections*) as subjects are the following: BrE1 = 2 ex.; BrE2 = 4 ex.; BrE3 = 1 ex.; BrE4 = 2 ex.; AmE2 = 3 ex.; AmE3 = 7 ex.; AmE4 = 0 ex.
2. In one of the six examples of gerundives recorded in AmE3 the gerund is left-dislocated and a recapitulatory *it* fills the subject slot. Cf. 1774 Woolman *Journal*, 306: "A ship at sea commonly sails all night, and the seamen take their watches four hours at a time. *Rising to work in the night*, *it* is not commonly pleasant in any case, but in dark rainy nights it is very disagreeable".
3. The application of the chi-square test to the data for gerundives and infinitives in AmE3 and 4 yields the following results: chi-square = 4.1326; *p* is less than or equal to 0.05. The distribution is significant.

5.2.1 *The spread of gerundives to preverbal subject position in Late Modern and Present-day English*

Table 7 gives comparative figures for the development of preverbal gerunds and infinitives since about the late sixteenth century. As can be inferred from the empty cells in the table, I have not checked the frequencies of occurrence of both kinds of clause in all historical subperiods, yet it is clear that in earlier stages of the language preverbal *to*-infinitives were more common by far than gerundives. These appear to increase slightly already in AmE3 (1774-1804; 6 examples), but it is difficult to tell whether this increase has any statistical significance, as my data for AmE2 (1732-1759) are retrieved from a much smaller, less representative sample comprising only a few nonfictional texts (see Table 3). There can be no question, though, that coinciding with the second half of the nineteenth century preverbal *to*-infinitives (16 ex.) begin to yield ground to gerundives (12 ex.) in American English, a trend that is amply confirmed for both Present-day British and American English by the evidence from FLOB and FROWN, which show an almost complete reversal in the frequencies of gerunds and infinitives with respect to the earlier subperiods. Note, too, that in Present-day American English the process of replacement of non-extraposed subject infinitives (2 ex. only) by gerunds (24 ex.) seems to be more advanced than in British English (8 infinitives *vs* 24 gerunds); the same seems to be suggested by Duffley's figures for the Brown and LOB corpora as discussed in the next paragraph.

The status of gerundives as the unmarked option to code preverbal sentential subjects in Contemporary English is also quite clear from recent research by Kaltenböck (2004): in the ICE-GB corpus, which consists of one million words of spoken and written British English produced between 1990 and 1993, he found 34 preverbal *to*-infinitives and 665 extraposed, as opposed to 128 preverbal gerunds and 48 extraposed. These figures seem particularly striking when compared to those reported in Duffley (2003: 335) for preverbal gerunds and infinitives in two corpora the same size of Kaltenböck's, but comprising texts printed during the calendar year 1961, namely the Brown University Corpus of American English and the Lancaster/Oslo/Bergen Corpus of British English (LOB):[30] in the Brown corpus there were 82 occurrences of *-ing* and 61 *to*-infinitives; in LOB 65 *-ing* and 67 *to*-infinitives.[31] As indicated in Table 8, the application of the chi-square test shows that the differences between the two corpora of British English (LOB and ICE-GB) are statistically significant; in other words, preverbal gerundives have become much more common in British English over the last thirty years, an increase that cannot be ascribed simply to differences in the overall structure of those corpora or to the fact that the ICE-GB, unlike the LOB, contains spoken and written material. As is clear from my own research (see section 5.2.2.2 below) and from Kaltenböck (2004: 224, 226), the frequency of preverbal *-ing* clauses is not directly linked to the for-

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30   It deserves mention that Duffley erroneously gives 1964 and 1978 as the dates of publication of the texts making up BROWN and LOB, but see respectively Francis/Kucera (1964) and Johansson et al. (1978).

31   Another study containing information on subject gerunds and infinitives in Contemporary English is Mair (1990: 84-92). In a large corpus (895,000 words) of British English dating back mostly to the 1960s and 1970s, he records 52 subjectless infinitives in preverbal position (p.22) and 80 preverbal gerunds, but this figure is not completely reliable, as he has included in the count (cf. p.245) examples such as "*anchoring* is impossible in deep water" or "*banking* is free", despite the fact that there are no grounds for deciding whether these and other analogous sequences are verbal or nominal: unmodified abstract nouns do not take articles in Present-day English, hence "*anchoring* is impossible in deep water" is not necessarily more verbal than "*entrance* is free" or "*education* is important". See further section 5.2.2.2 below.

mality-informality continuum; in fact, according to Kaltenböck, they are more common in written (62.5 per cent) than in spoken (37.5 per cent) English, so that if the ICE-GB contained only written texts the overall number of preverbal gerundives would probably be higher than 128. All this suggests, I believe, that before long non-extraposed *to*-infinitives will become even more marginal than at present, thus leaving gerundives as the only type of sentential complement generally available for preverbal use; in connection with this it should be recalled that non-extraposed *that*-clauses, though not directly in competition with either infinitives or gerundives, have always been very uncommon in English (see Table 6), to the extent that only 12 examples are recorded in the one-million-word ICE-GB.

	preverbal gerundives	preverbal *to*-infinitives
BROWN (1961)	82	61
LOB (1961)	65	67
ICE-GB (1990-1993)	128	34

Table 8. Gerundives and infinitives in subject position in three one-million-word corpora (after Duffley 2003 and Kaltenböck 2004). [BrE diachronic: p ≤ 0.001; the distribution is highly significant.]

The dramatic increase in the use of preverbal gerundives since the late nineteenth century may help to explain another interesting development which is going on in recent American English. As discussed at length in Hogan/Hogan (1998) and Fanego (2004b), sentences such as (63)-(64) are becoming frequent in American undergraduate writing, where they occur, on average, about 15 times per 100,000/125,000 words:

(63) *By trying to make his mother happy* proved unlucky for the character Paul in
      this story.
(64) *By simply taking an average of the survey responses on why customers
      purchased the product,* would be to disregard the great extremes customers
      indicated.

According to Hogan/Hogan (1998: 184, 201), these structures appear in appreciable numbers since the early 1980s, though examples can be found from about 1960. They have not yet made their way into

standard American usage and convey the same conceptual information expressed in standard English by the corresponding constructions without an initial *by*, as in (63b)-(64b) below, but differ from these in that the preposition – henceforth referred to as *impertinent by* – has been recruited to license the *-ing* subject. In the process, it has become desemanticized and has evolved from an element coding circumstantial meanings (i.e. 'by means of') into a semantically empty complementizer.

(63b) *Trying to make his mother happy* proved unlucky for the character Paul in this story.

(64b) *Simply taking an average of the survey responses on why customers purchased the product* would be to disregard the great extremes customers indicated.

I argued in Fanego (2004b) that impertinent *by* replicates the use of *the* found with eighteenth-century hybrid gerunds (*eg* "*the* gaining her Affections"; see section 5.2 above), and that both syntactic devices are manifestations of the cognitive principle of 'transparency' (Rohdenburg 1995, 1996) referred to earlier in this paper. *The*-hybrids came into use mostly from the second half of the seventeenth century, when the nominal system of gerundial complementation inherited from Old English was breaking down and verbal gerunds were beginning to spread outside their original prepositional environment to other clause functions; impertinent *by*-clauses, in turn, seem to have arisen coinciding with the widespread generalization of *-ing* subjects in American English. In both cases, the difficulties of language users to handle the novel structures probably prompted the resort to complement clauses with more explicit grammatical marking.

It seems appropriate to conclude this section by alluding briefly to a recent paper by Mair/Leech (2006) where they carefully document current changes in English syntax and the influence of American English on British English. This 'Americanization' of British English, to use Mair/Leech's label, can also be seen at work in the area of sentential complementation, as shown by Mair's analysis (2003) of the changing complementation patterns of *begin* and *start* in twentieth-century English, or by Rohdenburg's (1996: 169) research on the omission of *in* from constructions following the verb *spend* (*eg*

"I spend a great deal of time *in responding* to her questions"), where the use of the preposition was virtually obligatory until well into the nineteenth century. Both developments were spearheaded by American English,[32] and the same seems to hold true for the specific change, the increase in preverbal *-ing* subjects at the expense of *to-*infinitives, that I have considered in this section.

5.2.2. Variables controlling the choice between gerundives and infinitives in preverbal position

5.2.2.1. Earlier research

Research on sentential complementation in Present-day English has attempted to define the semantic differences between the gerund and the infinitive in terms of notions such as the following:

a) general scope or validity (for which the *-ing* form is used) versus reference to a particular occasion (expressed by the infinitive); see for instance Zandvoort (1975[1957]: 29) or Poutsma (1904: 622, 625), who contrasts *He dreaded not engaging with the highest species of his art* with *I dread to hear you speak.*

b) factivity, or presupposition of the truth of the complement, versus non-factivity; see among others Kiparsky/Kiparsky (1971: 347-348) or Miller (2002: 347), who alludes to the split along factive/non-factive lines between gerundives and infinitives, and dates to sometime in the sixteenth century the loss of the infinitive's "ability to occur in factive contexts".

c) closely related to (b) above, fulfilment of the action versus potentiality, the infinitive being considered to denote "yet unrealized activities" (Dixon 1984: 590) or to have a "bias towards potentiality [that] tends to favour its use in hypothetical and nonfactual contexts" (Quirk et al. 1985: 1191-1192, also 1062-1063), as in, for instance, *Brian would loathe to live in the country*, as opposed to *Brian loathed living in the country*. See also Jespersen (1940: 166) or Huddleston/ Pullum (2002: 1254-1255), who compare *To have paid off the*

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32   Other complementation changes where American English is distinctly further advanced than British English are discussed in Vosberg (2003b: 314-315) and Rohdenburg (2006).

mortgage <u>would have put</u> us in a strong position with *Paying off the mortgage <u>has put</u> us in a strong position*.

Few of the above proposals have focused specifically on gerundive and infinitival subject clauses, and fewer still have been corpus-based. Three notable exceptions are Mair (1990), Egan (2003) and Duffley (2003), which are to date the main approaches to the topic under discussion. Starting with Egan (2003), the central concern of this long cognitive analysis is the semantics of *to*-infinitives and gerunds in object position; these are defined, respectively, as denoting "a situation viewed as a whole [and] profiled as the more likely of several alternatives in some domain", and a "situation profiled as ongoing in some domain" (p.307). In order to check whether these characterizations can account for the distribution of infinitives and gerunds in other clause functions, Egan devotes a few pages (307-310) to their use as preverbal subjects. For this purpose he relies on a random sample of tokens of utterances downloaded from the British National Corpus containing 40 *to*-infinitives and 65 gerundives. By comparing the tense, aspect and modality of the matrix predicates governing each complement clause (see Table 9) he shows that the main difference between the two types of construction is "the incidence of their occurrence with predicators in the past/perfect" (p.308), as gerundives are governed much more frequently by predicates in the past tense (in 34% of all cases) than do infinitives (in only 10% of the examples). Within Egan's framework the collocation of gerundives with past-tense matrices was predictable, as gerundives are argued to denote ongoing situations and these can be located at the same time as, before, and after the time of the main verb (*eg* "*Writing a novel* was/is/will be easy"), but the infinitive, by contrast, would not be expected to occur with past-tense predicates, since, as noted above, it is an "alternative-evoking form" which in its use as object is never found in "backward-looking complement constructions" (p.309). In view of the fact that subject infinitives can and do refer to events that took place prior to the time denoted by the higher verb, as is the case in (65), Egan concludes that "the substitution of *-ing* clauses for the *to*-infinitive [in such instances] would not result in any great change of meaning" (p.308) and that "there would appear to be rather less

form-function isomorphism with respect to the use of the form[s] in subject position" than in other positions (p.309).

(65)   *To live in such a castle* meant demands on the purse. (Egan 2003: 308)

	present	past	present/ past perfect	modal	Totals
to-infinitives	28 (70%)	4 (10%)	0	8 (20%)	40
gerundives	30 (46%)	17 (26%)	5 (8%)	13 (20%)	65

Table 9. Tense, aspect and mood/modality of matrix predicates with to-*infinitive and* -ing *subjects in Contemporary English [from Egan 2003: 308].*

Egan's inconclusive findings regarding the differences between subject gerunds and infinitives are problematic for the cognitive linguistics creed that "every lexical and grammatical choice has semantic import" (Langacker 1999: 339). Similar difficulties beset another semantically-oriented approach to the topic, namely Duffley's functional analysis (2003) of the 147 occurrences of the *-ing* form and 129 of the *to*-infinitive in the Brown University Corpus of American English and the Lancaster/Oslo/Bergen Corpus of British English (LOB), both of which comprise texts printed in 1961. As in the rest of his research on sentential complementation (1992, 1999, 2000, 2004, Duffley/Joubert 1999, Duffley/Tremblay 1994), Duffley follows a "meaning-motivated" approach (2003: 352) and proposes a number of subtle semantic distinctions which are, at best, vague, and sometimes plainly erroneous, as will become apparent below.[33] After observing that corpus examples contradict the claims of earlier research on the semantics of the infinitive and *-ing* (see the opening paragraphs of this section), he puts forward as an "explanatory hypothesis" that "the *-ing* form and the *to* plus infinitive construction […] have an inherent meaning that preexists and is stored outside of any particular use that is made of them" (p.329). In the case of *-ing*, this inherent meaning is to "denote the total interiority of an event, produc[ing] an impression very close to that of a verbal noun. It evokes the event as a

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33   For other inaccuracies in Duffley's paper see footnote 30 above.

homogeneous whole made up of all the internal positions of the spatial support" (p.331).[34] The *to*-infinitive, in turn,

> is [...] similar to the gerundive *-ing* in that both evoke an event as a whole. What distinguishes them lies in the fact that whereas the *-ing* evokes the totality of what is involved in the event (i.e., an inside view), the *to*-infinitive phrase views an event from the outside, evoking the latter as the end point of a movement leading up to its actualization. In the case of the *-ing*, the actualization of the event is not at issue, but rather the event is seen in and for itself. (Duffley 2003: 333)

Duffley then goes on to apply these alleged meaning distinctions to the data retrieved from his corpora. Thus, he devotes one section (pp.345-348) to the variation between the gerund and the infinitive in "equative contexts", that is, in sentences of the following form:

(66)   *Complimenting* is lying. [gerund + gerund]
(67)   *To be different* is to invite shame and doubt. [infinitive + infinitive]
(68)   *To teach a boy merely the nature of things* would be giving him but a shallow conception of the universe. [infinitive + gerund]
(69)   **Seeing her* is to love her. [gerund + infinitive]

About the subtype in (66), Duffley notes that "the idea expressed is that of an identity between two actions: complimenting and lying are presented as being one and the same thing" (p.345). In other words,

> the copular connection of two gerunds [...] can only evoke a relation of identity due to the gerund's resemblance to a substantival noun: it evokes an event as an entity being equated with another entity and can therefore be compared to the sentence with two nouns *Politics is trickery* (p.346).

In the case of (67), infinitive + infinitive, Duffley, following Jespersen (1940: 168), observes that it denotes that "the second act or state is regarded as a necessary or immediate consequence of the first". This, in his view,

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34   Duffley's account of *-ing* seems to be indebted to Langacker (1992: 306), who argues that *-ing* "focuses on the interior of the verbal process [and] imposes on that process a profile which comprises a series of component states but excludes both endpoints".

> falls in very nicely with the hypothesis proposed here concerning the meaning of the *to*-infinitive. In these uses, the significate of *to* is used to evoke the arrival at actualization (i.e., the occurrence) of the first event as the condition responsible for the occurrence of the second one; that is to say, the use of two infinitives evokes a relation between two comings-to-actualization. (p.346)

By contrast, the construction in (68), with infinitive + gerund,

> resembles the gerund + gerund structure in that it never expresses the notion of consequence but always that of identity […] The absence of the consequential interpretation can be readily explained by our hypothesis: since the *-ing* does not evoke the coming to actualization of the second event but merely its nature, it can only denote an identification of the nature of the first event. (p.346)

Finally, given that the combination in (69), gerund + infinitive, is not attested in BROWN and LOB, Duffley concludes that it is unacceptable in English, and accounts for its avoidance on the basis of the awkward "shift in point of view from the entitative to the eventive" (p.346).

Apart from the fact that it is difficult to find any historical or synchronic justification for why *-ing* should denote "total interiority" and the *to*-infinitive "view an event from the outside, evoking the latter as the end point of a movement leading up to its actualization", it does not require much searching to find examples which show that Duffley's claims lack any factual basis (see further examples (94)-(97) below). Thus, despite his predictions about the unavailability in English of the gerund + infinitive pattern in (69), examples of this kind can easily be found in FROWN and FLOB, as is clear from (70) below; that they do not occur in Duffley's material is probably just a reflection of the fact that gerundives in subject function are much more frequent today than in the texts making up BROWN and LOB, as these date back to 1961 and no longer represent current usage.

(70)   FLOB 1991 Science, J50 102: The strength of claims based on a right to
         reproduce depends on the way in which infertility is classified. If *being
         infertile is to be ill*, then overcoming it can more easily be said to be a state
         responsibility. The National Health Service Act 1977 creates a duty to provide
         services for the diagnosis and treatment of illness (section 3) and defines
         "illness" as "any injury or disability requiring medical or dental treatment or
         nursing" (section 128). Yet […] in the view of some […] "Infertility is a grief,
         not a disease. Those who suffer it are not in pain and are not ill".

The rest of Duffley's semantic analyses are equally unconvincing.
Thus, irrespective of the varied interpretations he proposes for
sentences (66)-(68), they are all examples of *pseudo-equatives*;[35] these
are structures in which both the subject and the internal complement
are clausal, the matrix predicates are verbs like *be*, *indicate*, *show* or
mean (see (71) below), and the construction as a whole denotes "what
the situation described in the subject entails or necessarily involves"
(Huddleston/Pullum 2002: 1256; see also Fanego 2004b), so that it
can generally be paraphrased by means of an *if … then* construction, as
in (71b):[36]

(71)   FLOB 1991 Humour, R04 159: Being got onto the guest list involves a fair
         amount of industry, including phone calls, general hustling, grovelling, pulling
         strokes or sheer bluff. Saying: "I'm a friend of Boy George", can be effective.
         Possibly. Alternatively, being a Face will get you in. *Being a Face means you
         are someone who gets regular mentions in the gossip columns of NME and
         Melody Maker*,
(71b)   If you are a Face, then you are someone who gets regular mentions in the
         gossip columns of NME and Melody Maker,

Where the higher verb is *be*, as in (66)-(68) and (70), pseudo-
equatives look like genuine equative constructions, but differ from
these in that they are not reversible, as aptly noted by Jespersen

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35   English grammars do not use a specific term to refer to this type of sentence;
      here and in Fanego (2004b) I have opted for 'pseudo-equative', an adaptation
      of Hernanz's (1994) 'pseudoecuativo', which she applies to Spanish infinitival
      structures such as *Querer es poder*, literally "To want to is to be able to" (i.e.
      "You can do it if you really try").
36   In early generative treatments, pseudo-equatives were derived from condi-
      tional sentences; see Stockwell/Schachter/Partee (1973: 597-598).

(1958[1924]: 154) with respect to both the patterns gerund + gerund (see (66) above) and infinitive + infinitive (see (67)):

> In some idiomatic uses we may be inclined to take *is* as implying identity, e.g. "to see her is to love her". "Seeing is believing". But the identity is more apparent than real. It would be impossible to invert the terms, and the logical purport of the saying is merely this: seeing immediately leads to, or causes, love, or belief. Thus also: "To raise this question is to answer it", etc.

The irreversibility of the terms is clear too in the case of the pseudo-equatives under discussion here; witness in this respect the ungrammatical or illogical sequences which result from inverting (66), (67) and (70) respectively: **Lying is complimenting, *To invite shame and doubt is to be different, *To be ill is being infertile*. None of these examples denotes, therefore, a relation of identity, as argued by Duffley with regard to (66) or (68) above; but, by contrast, all of them are open to a consequential interpretation and hence accept finite paraphrases with an *if*-clause:

(66)   Complimenting is lying.
(66b)   If you compliment, then you lie.
(67)   To be different is to invite shame and doubt.
(67b)   If you are different, then you invite shame and doubt.
(70)   Being infertile is to be ill.
(70b)   If you are infertile, then you are ill.

The fact that these various pseudo-equative patterns behave alike both syntactically and semantically shows the futility of Duffley's attempt to distinguish them by reference to the inherent meanings he proposes for the *-ing* form and the *to*-infinitive. His analysis suffers, in fact, from the same flaws exhibited by Egan (2003) and most other functional and cognitive research on sentential complementation (see Fanego 2004c for an overview), in that his claims regarding the existence of a systematic semantic distinction between gerundives and infinitives are made in advance, with the corpus examples being then interpreted in that light.

    Unlike Egan (2003) and Duffley (2003), Mair (1990: 84-92) has a firm basis in the linguistic evidence retrieved from a large database (895,000 words) of spoken and written British English dating back to

the 1960s and 1970s. In the light of the 80 non-extraposed gerundives[37] and 52 infinitives recorded in his corpus Mair concludes that the variables invoked by earlier research to account for the choice of gerunds and infinitives cannot explain their distribution in preverbal position, as both types of clause can convey either potential events or events that have actually taken place, and both can refer, too, to an action in general or to a particular occasion:

(72) *To do nothing* would lead […] to the cathedral becoming a ruin. (Mair 1990: 37)

(73) *to maintain and increase the grants from these bodies* was one of the lesser known triumphs of recent years (Mair 1990: 86)

(74) *Distributing cheap or free butter to European households* would spoil the market for the farmers, (Mair 1990: 88)

(75) *Seeing you at Spode that week end* most certainly made my week end. (Mair 1990: 87)

Mair suggests instead that the preponderance of non-extraposed gerundives over infinitives has to do with information packaging and the marked status of infinitival non-extraposition. As already discussed in section 5.1 above, the preferred position in English for both subject infinitives and *that*-clauses has been, at all times, after the matrix predicate (*eg* "It is essential *to know the truth*"); typically, as shown by Mair (1990) and others, such extraposed clauses encode new information, in accordance with the so-called 'information principle', that is, the tendency for new information to come later in the sentence than given information. When absence of extraposition occurs, this implies, according to Mair (1990: 37-39), that the speaker or writer wishes to achieve one or both of the two following effects:[38]

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37 But note that the actual number of gerundives in Mair's corpus is probably lower than this, for the reasons expounded in footnote 31 above.

38 In addition, absence of extraposition is obligatory in pseudo-equative constructions, that is, when the predicate contains another subordinate clause as complement, since this makes extraposition virtually impossible; consider, for instance the sequence *To present yourself at a person's front door in the company of two known troublemakers is to invite civil proceedings on a summons of malicious trespass*, but not **It is to invite civil proceedings on a summons of malicious trespass to present yourself at a person's front door in*

a) appropriate distribution of given and new information within a single sentence if, for some reason or other, the clausal subject is discourse old rather than discourse new and conveys states-of-affairs which are in some sense retrievable from the preceding co(n)text.

b) strengthening of cohesion across sentences: non-extraposed subject clauses which contain anaphoric references to previous sentences serve as a cohesive link.

In such cases, as in example (76) from my own material, gerundives are "the most likely structural choice" (Mair 1990: 91) because of their greater frequency in preverbal position by comparison with infinitives; as Mair puts it (1990: 88), "it is extraposition, that is a positional factor, and not modality [TF: i.e. semantics], which is chiefly responsible for the distribution of infinitival and gerundial subject clauses in modern English". Basically the same point is made by Huddleston & Pullum (2002: 1254), who note that "to a significant extent the difference between infinitival and gerund-participial is a matter of information packaging: end position tends to favour the infinitival while basic subject position tends to favour the gerund-participial".

(76)   FROWN 1992 Science, J23 164: The existence of a large number of firms seeking profits from a common pool of consumers produces pressure for survival. Over time those firms that employ less efficient techniques <u>lose profits</u> to those that are more efficient. *Losing profits* eventually translates into extinction. As the competitive process continues, only those firms that use efficient techniques survive.

Mair's account of the factors governing the choice between preverbal gerunds and infinitives in Present-day English seems convincing. However, since in earlier stages of the language gerundives in subject function were rarely used, the question I will try to answer in the next section is how the statistical tendency towards a complementary distribution of gerundive and infinitival subjects with regard to extraposition which is so prominent today was developed.

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the company of two known troublemakers. According to Biber et al. (1999: 726-727) structures of this kind account for over 30 per cent of all non-extrapositions in English.

5.2.2.2. The corpus evidence

Turning then to the specific features displayed by preverbal infinitives and *-ing* clauses in the early stages of the process of replacement of the former by the latter, Kaltenböck (2004: 224-226) has shown for Present-day British English that non-extraposed gerundives occur more frequently in written (62.5 per cent) than in spoken (37.5 per cent) English, and that in the written register their occurrence is not directly linked to the formality-informality continuum, but rather associated to text types such as reportage and press editorials, which yield more than twice as many *-ing* clauses (3.0 and 4.0 occurrences per 10,000 words) as the average written text (1.3 occurrences). The samples used in my historical analysis are too limited to warrant reliable conclusions on whether the advance of the gerundive at the expense of the infinitive correlates with any register in particular, but its frequent use in Essays and Periodicals, as shown in Table 10, ties in well with Kaltenböck's findings. In general, since non-extraposition takes the focus of information off the subject clause and makes the matrix predicate, i.e. the speaker's/writer's comment or evaluation, the main focus of the message (see in this connection quotations (77)-(81) below), one would expect non-extraposed clauses to occur more frequently in text categories expressing writer stance, such as newspaper editorials, essays and the like.

	BrE1-4 (1700-1859) [300,000 w of fiction / 160,000 of nonfiction]	AmE2-4 (1732-1879) [160,000 w of fiction / 130,000 of nonfiction]
Fiction	6	16
(Auto)biography	1	2
Diaries	0	1
Essays	3	4
Periodical essays	3	2
Press reportage	1	0
Science	1	0
Travelogue	0	4
Totals	15	29

Table 10. Non-extraposed gerundives (unintroduced + hybrid) in the COLMOBAENG text categories.[39]

With respect to other variables mentioned in the literature (see section 5.2.2.1) as influencing the distribution of subject gerunds and infinitives, it is clear from my data that, as also shown by Mair (1990) for Present-day English, there is no significant difference between the gerund and the infinitive as to their capacity of expressing particularity or generality. No differences were found either in the tense or aspect of the matrices governing each of these types of clause, and both the infinitive and the gerund can be used to denote potential events (see (77)-(79)) and events that have actually taken place (see (80)-(81)). There might be some correlation, however, between the choice of an infinitive and the presence of a modal, in particular *would*, in the matrix, at least in American English, where infinitives occur in 12 out of the 13 sentences containing *would* in the higher predicate (see Tables 11-13 and quotations (77) and (78)); but since in the majority (9) of those 12 cases the infinitival clause is longer than the matrix clause, the use of the infinitive could also have to do with syntactic weight, as discussed further on. In British English, at any

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39   The label 'Periodical essays' refers to short pieces published in magazines such as *The Covent Garden Journal* (1752), *The London Magazine* (1732-1785) or *The Atlantic Monthly* (1857-), while 'Essays' subsumes longer works on subjects so diverse as philosophy, history or politics. 'Press reportage' is used for Meredith's *Letters Written to the 'Morning Post' from the Seat of War in Italy* (1866).

rate, modal matrices governing preverbal gerundives are frequent (see (79)): they occur in 5 out of the 15 instances of preverbal gerundives recorded in BrE1-4, and in two cases the modal is *would*.

Examples (77)-(81) and Tables 11-13 reflect all these various aspects; note that the tables refer solely to American English, since it is in this dialect variety that the advance of gerundives is chiefly discernible during the period examined.

(77)   COLMOBAENG AmE4 1856 Melville *Bartleby*, Part II [Fiction]: I slowly went downstairs and out into the street, and while walking round the block considered <u>what</u> I should next do in this unheard-of perplexity. Turn the man out by an actual thrusting I could not; *to drive him away by calling him hard names* would not do; *calling in the police* was an unpleasant idea; and yet, permit him to enjoy his cadaverous triumph over me -- this, too, I could not think of. What was to be done?

(78)   COLMOBAENG AmE3 1804 Brackenridge *Modern Chivalry*, 49 [Fiction]: The Scripture has been well explained, and frequently preached over; every text and context examined, and passages illustrated […] Are there <u>any new doctrines to discover</u>? I should think it impossible. At any rate, I should conceive it unnecessary. There are <u>enough</u> in all conscience: *The inventing more,* would be like bringing timber to a wood, or coals to Newcastle.

(79)   COLMOBAENG BrE3 1778 Walpole *Life of Mr. Thomas Baker*, 130/077-P19 [Nonfiction]: The sufferings of Charles I whose crimes were not of the magnitude of his son's, had raised a spirit of enthusiasm in his partisans, and conjured up in their minds a profane idolatry of kings, that was inconsistent both with true religion and common sense; and had been extended even to <u>genealogic succession</u>- as if *being born of a certain race* could entitle any family to a right of violating with impunity all laws, both divine and human.

(80)   COLMOBAENG AmE3 1797 Tyler *The Algerine Captive*, 71 [Fiction]: I found one of the larger boys <u>sitting by the fire in my arm chair</u>. I gently requested him to remove. He replied that he would, when he had warmed himself; "father finds wood, and not you". *To have my throne usurped, in the face of the whole school,* shook my government to the centre. I immediately snatched my two foot rule, and laid it pretty smartly across his back.

(81)   COLMOBAENG AmE3 1797 Foster *The Coquette*, 17 [Fiction]:
       Mrs. Richman: "What, my dear, is your opinion of <u>our favorite</u> Mr. Boyer?"
       Eliza: "*Declaring him your favorite*, madam, is sufficient to render me partial to him".

	present	past	present/ past perfect	modal	Totals
to-infinitives	18	0	0	5 (4 ex. with *would*)	23
gerundives	1	0	0	0	1
the-hybrids	3	0	0	0	3

Table 11. Tense, aspect and mood/modality of matrix predicates governing preverbal infinitives and gerundives in AmE2 (1732-1759), based on a 50,000-word sample.

	present	past	present/ past perfect	modal	Totals
to-infinitives	5	12	2	7 (5 ex. with *would*)	26
gerundives	3	2	1	0	6
the-hybrids	3	1	1	2 (1 ex. with *would*)	7

Table 12. Tense, aspect and mood/modality of matrix predicates governing preverbal infinitives and gerundives in AmE3 (1774-1804), based on a 120,000-word sample.

	present	past	present/ past perfect	modal	Totals
to-infinitives	7	3	0	6 (3 ex. with *would*)	16
gerundives	8	3	1	0	12

Table 13. Tense, aspect and mood/modality of matrix predicates governing preverbal infinitives and gerundives in AmE4 (1851-1879), based on a 120,000-word sample.

The possibility that information packaging could account for the spread of gerundives to subject position is not confirmed by the corpus evidence either: preverbal infinitives and gerundives behave exactly alike in typically encoding given information and containing anaphoric references to prior discourse. We can illustrate this with examples (77)-(81) above, where I have underlined the trigger entity in the preceding context to which the subject clause is anaphorically and/or informationally linked.

	BrtE1–4 [460,000 words]			AmE2 [48,000 words]			AmE3 [120,000 words]			AmE4 [120,000 words]		
	longer	shorter	same length	longer	shorter	same length	longer	shorter	same length	longer	shorter	same length
to-infinitives	not analysed	not analysed	not analysed	12	7	1	17	5	0	11	3	1
gerundives	1	5	0	0	1	0	1	5	0	5	6	1
the-hybrids	1	6	2	0	3	0	3	3	1	0	0	0

Table 14. Length of LModE preverbal subject clauses relative to matrix clauses.

In view of the inconclusive results yielded by the variables mentioned so far, I decided to check whether syntactic weight could have a bearing on the long-term replacement of preverbal infinitives by gerundives. That weight might be a factor was suggested by Kaltenböck's finding (2004: 227-229) that in Present-day British English non-extraposed gerundives, with an average length of 6.9 words, are shorter than their matrix predicates (average length = 7.5 words), whereas non-extraposed infinitives (10.5 words) tend to be longer than their matrices (7.5 words). Kaltenböck does not seem to be aware of the implications of this statistical difference, but as will become clear in what follows, weight appears to have been the major factor in the spread of gerundives to preverbal subject position in modern times. Table 14 gives information[40] on the length of Late Modern English preverbal infinitives and gerundives relative to their matrix clauses, and shows that at every stage gerundives were, on average, lighter than infinitives. Table 15, in turn, combines the totals for infinitives and unintroduced gerundives in AmE2-4 (1732-1879) and confirms that their distribution in terms of syntactic weight is statistically significant. Finally, examples (57)-(61) and (77)-(81) quoted earlier illustrate the clear contrast in length between both types of non-finite clause; note in particular (77), where a long subject infinitive and a short *-ing* clause occur in succession. It could be argued about this example that Melville's change of clause type is motivated by stylistic considerations and the need for variety, but this would not explain why it is precisely the longer subject that is coded as an infinitive, and the shorter one as an *-ing* clause; an additional factor promoting the choice of an infinitive in the first sentence ("*to drive him away by calling him hard names* would not do") could be the presence of *would* in the matrix predicate, though, as pointed out

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40   Concerning the data in this table, note that sequences of two or more coordinated subject clauses, as in (i) below, have been counted as one clause.

(i)   COLMOBAENG 1788 Hamilton *The Federalist Papers*, March 14th: And *to take the senator of any State from his seat as senator, to place him in that of President of the Senate*, would be to exchange, in regard to the State from which he came, a constant for a contingent vote.

above, I think further evidence is needed before we can establish a link between modals and use of the infinitive.

Such a link does not seem to be at work in Present-day English, to judge at least from the evidence provided by two 70,000 word samples from FLOB and FROWN (see also Egan 2003: 307-310 and Table 9 above). In FROWN the two matrix predicates containing a hypothetical modal form, namely *would*, selected *-ing* clauses as subjects (see (82)); in FLOB *-ing* clauses governed by modal matrices (5 ex., 3 with *would* and 2 with *could*) outnumbered infinitival clauses (2 ex., with *would*); see (83)-(84).

| | AmE2-4 [1732-1879; 290,000 w] | | |
	longer	shorter	totals
to-infinitives	40	15	55
unintroduced gerundives	6	12	18

Table 15. Length of preverbal subject clauses relative to their matrix predicates in earlier American English. [p is ≤ 0.01; the distribution is very significant]

(82)   FROWN 1992 Science, J44 142: Pound's call was for a true "scientific jurisprudence" based on the use of experts to make the legal system more efficient. *Making judges 'scientists'* <u>would instill</u> in judges an expertise which would create a greater efficiency in the administration of justice.

(83)   FLOB 1991 Mystery and Detective Fiction, L03 221: Charles felt heavily ballasted with Jam Roly-Poly as he walked out of the canteen. *Spending much time round Delmoleen, he realised,* <u>would have</u> a devastating effect on his waistline (though, actually, these days it was more a general area than a precise line).

(84)   FLOB 1991 Press Reportage, A02 23: At the end of the first ballot, *to go on and to win this battle by a small majority – I did not even think she would win it, I thought she would lose it –* <u>would have meant</u> her authority was broken.

By contrast, my PDE data confirmed Kaltenböck's (2004) finding that the form of the subject clause is sensitive to syntactic weight, as can be seen from Tables 16-17. Examples (84) above and (85)-(86) below illustrate some of the preverbal infinitivals recorded in my data; example (85) in particular, which can be replaced by a *that*-clause or a *fact that*-construction (i.e. "The fact that anyone should render men slavering idiots with an ankle made Ryder shake his head") will serve as a reminder that infinitives did not lose "the ability to occur in

factive contexts" around the sixteenth century, as claimed by Miller (2002: 347).

	longer	shorter	BrE5 (FLOB) [70,000 words]	
			same length	Totals
to-infinitives	5	2	0	7
gerundives	8	15	0	23

Table 16. Length of preverbal subject clauses relative to their matrix predicates in Present-day British English.[41]

	longer	shorter	AmE5 (FROWN) [70,000 words]	
			same length	Totals
to-infinitives	2	0	0	2
gerundives	5	17	2	24

Table 17. Length of preverbal subject clauses relative to their matrix predicates in Present-day American English.

(85)   FROWN 1992 Romance and Love Story, P09 162: He turned back to Grayson. The man was still staring at her, slavering like a dog over a bone that wouldn't ever be his because other bigger dogs had staked claim. […] "Ah", said Ryder, his voice a nice blend of irony and contempt. "Onward, Grayson. Pull your tongue back into your mouth, if you please. I see flies hovering". Samuel Grayson managed it, not without some difficulty, for the woman in question was being helped down from her mare by a white man, and she'd just shown a glimpse of silk-covered ankle. *To render men slavering idiots with an ankle* made Ryder shake his head.

(86)   FROWN 1992 Skills/Trades/Hobbies, E09 100: "I keep hearing that we're not doing well because of me. We're not doing well because we all have to try harder", she said. "*To blame all our problems on one thing* is a real cop-out. Just like our economy, it runs in cycles".

The question that remains to be considered before concluding this section is why length has come to play such a major role in determining the form of the subject clause. The answer to this, I believe, is rooted in the syntactic behaviour of the nominal gerund. I pointed out in section 3 that in Middle and Early Modern English nominal gerunds tended to occur preferably after prepositions; however, unmodified *-ing* nominals such as those adduced in (87)-

41   In this table I have excluded from the count one coordinated infinitive and one coordinated gerund.

(89) below have been relatively common in both subject and object position at all stages of English, as I have shown in earlier research (Fanego 1996a: 38, 58, 1996b: 116). Thus, in a 317,621 sample from the Early Modern English section of the Helsinki Corpus I recorded 16 instances of this kind functioning as subjects, which is by no means an inconsiderable number.[42] In this use, gerunds exhibited the topical, anaphoric function that characterizes all preverbal subjects, whether clausal or nominal:

(87)   HC 1591 Smith *Of Usurie*, Sample 1, B5V: First, they [the Jews] did <u>lend</u> vppon Vsurie to straungers; after they began to <u>lend</u> vppon Vsurie to their brethren, and now there be no such Vsurers vppon earth as the Iewes which were forbidden to be Vsurers. Wherby you may see how the malice of man hath turned mercie into crueltie. For whereas *lending* was commaunded for the benefite of men, Vsurie hath turned it to the vndoing of men:

(88)   HC 1608 Armin *A Nest of Ninnies*, 10: […] to anger him throughly, one of the minstrels whispers a gentleman in the eare, and said, If it pleased him, hee would; whereat the gentleman laught. The knight demaunded the reason of <u>his laughing</u>. I pray you tell me (quoth hee) – for *laughing* could neuer come in a better time – the foole hath madded me.

(89)   HC 1699 Langford *Plain and Full Instructions to Raise All Sorts of Fruit-Trees that Prosper in England*, Sample 1, 37: And lastly, if it should miscarry (as it seldom doth) it will be perceived by Midsummer, and the stock may be <u>enoculated</u> again the same year.
        4. Where *inoculating* succeeds well, it is to be prefer'd before Graffing.

As long as the gerund remained a member of the category of nouns, these *-ing* forms would pattern with deverbal substantives like *entrance* ("*entrance* is free") or *education* ("*education* is important"); but with the acquisition of verbal syntax by the gerund, (87)-(89) and other analogous sequences became ambiguous between a nominal and a verbal analysis, as they still are in Present-day English (for discussion see Quirk et al. 1985: 1065). From this moment, it was

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42   Table 3 in Fanego (1996b: 116), which is based on the same sample, gives 20 unmodified gerunds as subjects, but this figure includes a few examples of postposed subjects, as in "if there be required *mundifying* and *clensing*" (HC 1602 Clowes *Treatise for the Artificiall Cure of Struma*, 32).

only a matter of time before gerundives started to encroach upon preverbal infinitives.[43]

Studies on syntactic change have shown that its diffusion through the grammar is orderly and systematic, and tends to occur first in those environments which are "more natural contexts for the change" (Timberlake 1977: 157; see also Harris/Campbell 1995: 101), or where it is "least noticeable" or "least salient" (Warner 1982: 148-151; Naro/Lemle 1976). If we apply these parameters to the case under discussion, it is easy to see that, once unmodified *-ing* nominals had been reanalysed as VPs, the innovated analysis was likely to surface earlier in sentences containing short, simple VPs as preverbal subjects, as in (90)-(91) below, than in sentences with longer, more complex subjects, as in (92)-(93).

(90)   HC 1699 Langford *Plain and Full Instructions to Raise all Sorts of Fruit-Trees that Prosper in England*, Sample 2, 114: *Slitting the bark* is an excellent additional help to most of the aforesaid evils, and also for bark-binding.

(91)   COLMOBAENG BrE3 1777 Boswell *Hypochondriack*, 005/020-P01 [Nonfiction]: Men of the greatest parts and application are at times averse to labor for any continuance; and could they not employ their pens on lighter pieces, would at those times remain in a total inactivity. *Writing such essays therefore* may fill up the interstices of their lives, and occupy moments which would otherwise be lost.

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43   The nominal pattern N*ing of*-phrase illustrated in examples (8) ("bisi In *ordaining of priestes, and clerkes*") and (32) above ("men forbeden *etynge of ham*") could also occur in preverbal position, as in (i), but was extremely infrequent: there is one example in Tajima's (1985: 63) extensive collection of Middle English data, one (doubtful) instance in the 317,621 word sample from the Helsinki Corpus referred to above, and just two cases in the COLMOBAENG (1,170,000 words). It is unlikely, therefore, that this nominal type may have been the source of the gerundive in subject function.

     (i)   COLMOBAENG BrE1 1704 Evelyn *Memoirs for his Grandson*, 3H06 0032/075-P0: […] storing it with timber trees, oak, ash and elm, frequent copses, which in few years will prove of incredible emolument and restore the name of Wotton, otherwise in danger to be lost and forgotten, *planting of timber trees* being in truth the only best and proper husbandry the estate is capable of.

(92)   COLMOBAENG BrE2 1750 Smith *History of Astronomy*, 024/072-P05
       [Nonfiction]: *To suppose that the sphere of the planet should by its own
       motion, if one may say so, sometimes roll forwards, sometimes roll backwards,
       and sometimes do neither the one nor the other*, is contrary to all the natural
       propensities of the imagination,

(93)   COLMOBAENG BrE3 1791 Boswell *Life of Johnson*, 001/048-P01
       [Nonfiction]: *To write the life of him who excelled all mankind in writing the
       lives of others, and who, whether we consider his extraordinary endowments,
       or his various works, has been equalled by few in any age*, is an arduous, and
       may be reckoned in me a presumptuous task.

In addition, there can be little doubt that the association of the
gerundive with light subjects can also be related to the cognitive
principle of 'transparency', as defined earlier (section 5.2), since in
structures involving an increased processing load, such as (92)-(93),
the more explicit *to*-infinitive would tend to be preferred. In
connection with this, it seems appropriate to conclude this section by
quoting the three occurrences in BROWN and LOB of the verb
require with a sentential subject;[44] note the difference in length
between the infinitive in (94) and the gerundives in (95)-(96), and also
Duffley's (2003) unsuccessful attempt, quoted as (97), to account in
semantic terms for the choice of complement clause in these
examples:

(94)   BROWN 1961 Skills/Trades/Hobbies, E12 0100: Now, to add to the already
       unbelievable extremes found in one nation, we have the two new states of
       Hawaii and Alaska. *To hope to cover just one region of this land and to enjoy
       all of its sights and events and, of course, to bring back pictures of your
       experiences*, requires advance planning.

(95)   BROWN 1961 Skills/Trades/Hobbies, E28 0360: Second, in a competitive
       market, the customer feels his weight and throws it around. *Providing good
       customer service* requires as thorough a marketing and general management
       planning job as the original selling of the product.

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44   This refers only to occurrences of *require* in the present tense; I have not
     checked whether there are any examples of sentential subjects governed by
     require in tenses other than the present.

(96)   BROWN 1961 Belles Lettres/Biographies/Essays, G30 1620: 'De
       Revolutionibus' is not just a collection of facts and techniques. It is an
       organized system of these things. *Solving astronomical problems* requires, for
       Copernicus, not a random search of unrelated tables, but a regular employment
       of the rules defining the entire discipline.

(97)   Although the *to*-infinitive could be substituted for the *-ing* in (56) and (57) [i.e.
       (95) and (96)] the *-ing* could not be substituted for the *to*-infinitive in (55) [i.e.
       (94)]. The impression of an event whose realization is very hard to achieve
       and may not even be guaranteed by respecting the requirement mentioned does
       not fit with the gerund. This can be explained by the fact that *to* can present
       the infinitive's event as something aimed at but whose achievement remains
       prospective, an element of meaning that is absent from that of the *-ing*. In (56)
       and (57) [i.e. (95) and (96)], the gerund places more focus on what is involved
       in providing good customer service and solving astronomical problems, an
       impression that is consonant with the meaning of the gerund as defined above.
       (Duffley 2003: 341)

6. Summary and conclusions

English is unlike all other European languages in having two different
types of non-finite sentential complement,[45] one of which, the verbal
gerund, arose in Middle English probably as a result of systemic
pressure to develop a clausal pattern capable of following
prepositions, as the infinitive was disallowed in that environment (see
section 4 above, and Fanego 2004a for further discussion). As long as
the gerundive continued to be restricted to prepositional contexts, it
remained functionally different from the infinitive, but this
distribution was unstable because the nominal gerund, though itself
closely associated with prepositional use (see section 3), could also
occur in other clausal slots; see, for instance, (87)-(89) above. From
around the sixteenth century, therefore, the gerundive gradually

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45   In most languages having two kinds of non-finite complement one of them is
     infinitival and the other a participial complement used with predicates of
     immediate perception; see Noonan (1985: 133-135).

gained ground at the expense of the infinitive in both object and subject position.

In object position (section 4) gerundives soon invaded the domain of the infinitive in the complements of negative implicatives ("I avoided meeting her") and of many aspectuals, among other verb classes. With retrospectives like *forget* or *remember* the specialization of the gerundive to denote past time, as in (16) above ("I perfectly remember carrying back the Manuscript you mention and delivering it to Lord Oxford"), was largely a consequence of the fact that its nominal origin made it indifferent to time distinctions and enabled it to derive its time reference from the surrounding context, unlike the *to*-infinitive, which needed the support of the auxiliary *have* to refer to past time (*eg* "I never remember to have heard such groans of roaring wind"). From the eighteenth century the contrast between *-ing/to* in terms of tense (past versus future) was well established with retrospectives.

Retrospective clauses usually refer to events that have actually occurred, so that it is easy to interpret the opposition *-ing/to* as also signalling performance of the action versus potentiality. This, as suggested in 4.1, most probably accounts for the extension of *-ing* complements to the conative *try*, a polysemous verb with which the potentiality/performance distinction was relevant. On the model of *try*, other conative verbs (*eg risk*) have subsequently come to also govern *-ing* forms.

As discussed in 4.2, the availability of the gerundive was also exploited to establish a clearer contrast between object clauses with controlled ("I want *to see Mary*") and non-controlled ("A visit to London entails *bringing gifts for friends*") implicit subjects, the latter type of clause being now regularly encoded as a gerundive.

In subject position (section 5) the current distribution of the gerundive and the infinitive is intimately related to the nominal origin of the *-ing* form. This accounts, in the first place, for the oft-noted resistance of *-ing* clauses to be extraposed (section 5.1). By contrast, the nominal properties of gerundives have favoured their spread to preverbal subject position (section 5.2), a clausal slot where they have been gaining ground at the expense of infinitives since about the eighteenth century. This trend, which appears to have been spear-

headed by American English (see section 5.2.1 and Table 7), has now led to the complementary distribution of gerundives and infinitives with regard to extraposition, such that end position in the clause tends to favour infinitivals, while basic subject position overwhelmingly favours gerundives (see 5.2.2.1). Finally, section 5.2.2.2 showed that syntactic weight, and not semantics, was and still is the major factor controlling the process of replacement of preverbal infinitives by gerundives.

The present study has also shown the connection between the principle of transparency (Rohdenburg 1995, 1996) and some of the developments undergone by the English complement system in modern times, such as the emergence of two different comple-mentizers – *the* in seventeenth and eighteenth-century English, *by* in some varieties of Contemporary American English (see respectively sections 5.2 and 5.2.1) – intended to make the subordinate status of the *-ing* clause more explicit. The fact that the preverbal *to*-infinitive has survived longer in sentences containing long, complex subjects (see section 5.2.2.2) can likewise be seen as another manifestation of the transparency principle.

By way of conclusion, we can now go back to the notion of drift with which this paper started. Sapir's original definition (1921: 155) of this term is well known: "the unconscious selection on the part of […] speakers of those individual variations that are cumulative in some special direction". More recently, the notion has received considerable attention in the literature (see, among others, Hawkins 1986, 2004: 166-167; Lass 1987; Andersen 1990, 2001; Ferguson 1996; Nevalainen/Raumolin-Brunberg 2000; Trudgill et al. 2000; Butters 2001; Kastovsky 2001) and has been applied to global or big system changes such as the movement of many Germanic languages from a relatively synthetic grammatical structure to a relatively analytic structure, or the creation of a category of modal verb in English, which in turn was instrumental in grammaticalizing the *do*-periphrasis. Unlike individual changes, "which run their course within the lifetimes of at most a few generations of speakers" (Andersen 1990: 1), global changes or drifts are long-lasting phenomena which may take several centuries, sometimes even millennia, to work their way through the community and the language. They comprise a

multiplicity of apparently separate changes that nevertheless share a common direction and "feed one another, reinforce one another, merge with one another […] it is as though the members of the speech community are opportunistic, that when the language offers a feature that can be modified in a direction that fits the drift an innovator may pick up on it and the community may go along with it" (Ferguson 1996: 194). As can be easily seen, this characterization accurately describes the long-range trend towards functional specialization that has marked the development of gerundives and infinitives since Middle English times, despite the seemingly random variation observable in the early stages of the spread of the gerundive.

Appendix 1. A Corpus of Late Modern British and American English Prose (COLMOBAENG)

The corpus comprises materials from the following sources:

a) electronic databases:

COPC   Century of Prose Corpus (Milic 1995).
Denison   A Corpus of Late Modern English Prose (Denison 1994).
EAF   Early American Fiction, Chadwyck-Healey.
ECF   Eighteenth-Century Fiction, Chadwyck-Healey.
GUT   Project Gutenberg.
NCF   Nineteenth-Century Fiction, Chadwyck-Healey.
UPenn   Online Books Page, University of Pennsylvania.
UVirg   Electronic Text Center, University of Virginia.

b) printed texts:

Edwards, Jonathan 1735. *Letter to Rev. Dr. Benjamin Colman*. In Baym, Nina (ed.) *The Norton Anthology of American Literature*, Vol.I: *Literature to 1820*. New York: W.W. Norton & Company, 2003.
Edwards, Jonathan 1754. *Freedom of the Will*. In Ramsey, Paul (ed.) *The Works of Jonathan Edwards*, Vol. I. New Haven: Yale University Press, 1957.
Emerson, Ralph Waldo 1862. *Thoreau*. In Poirier, Richard (ed.) *The Oxford Authors: Ralph Waldo Emerson*. Oxford: Oxford University Press, 1990.

Thoreau, Henry David 1851-1862. *The Correspondence of Henry David Thoreau*, Harding, Walter / Bode, Carl (eds). New York: New York University Press, 1958.

Woolman, John 1754. *Some Considerations on the Keeping of Negroes*. In Baym, Nina (ed.) *The Norton Anthology of American Literature*, Vol. I: *Literature to 1820*. New York: W.W. Norton & Company, 2003.

Appendix 2. COLMOBAENG fiction texts

Unless otherwise indicated, all extracts have around 20,000 words and are taken from Chadwyck-Healey's electronic text collections. Dates of publication are given after each title; birth-dates in brackets.

a. Subperiod BrE1 (1700-1726)

Anonymous. *The Adventures of Lindamira, a Lady of Quality*, 1702. [2,000 words]. COPC

Barker, Jane (1675-1743). *The Amours of Bosvil and Galesia*, 1719. [14,000 words]

Barker, Jane (1675-1743). *Exilius: or, The Banish'd Roman*, 1719. [6,300 words]

Davys, Mary (1674-1732). *Familiar Letters Betwixt a Gentleman and a Lady*, 1725. [13,110 words]

Davys, Mary (1674-1732). *The Lady's Tale*, 1725. [7,240 words]

Defoe, Daniel (1660-1731). *The Fortunes and Misfortunes of the Famous Moll Flanders*, 1722.

Haywood, Eliza Fowler (1693?-1756). *Fantomina: or, Love in a Maze*, 1725. [11,900 words]

Haywood, Eliza Fowler (1693?-1756). *The Fatal Secret: or, Constancy in Distress*, 1725. [9,100 words]

Hearne, Mary (dates unknown). *Lover's Week*, 1718. [2,000 words]. COPC

Manley, Mary de la Rivière (1663-1724). *The Secret History of Queen Zarah and the Zarazians*, 1705.

Swift, Jonathan (1667-1745). *Gulliver's Travels*, 1726.

b. Subperiod BrE2 (1732-1757)

Cleland, John (1709-1798). *Memoirs of a Woman of Pleasure*, 1749.

Coventry, Francis (died 1754). *Pompey the Little*, 1752. [2,000 words]. COPC

Fielding, Henry (1707-1754). *A Journey from this World to the Next*, 1743.

Fielding, Sarah (1710-1768). *The Adventures of David Simple*, 1744.

Fielding, Sarah (1710-1768). *The Governess*, 1749. [2,000 words]. COPC

Haywood, Eliza Fowler (1693?-1756). *The History of Miss Betsy Thoughtless*, 1751.

Richardson, Samuel (1689-1761). *The History of Sir Charles Grandison*, 1754.

Smollett, Tobias (1721-1777). *The Adventures of Roderick Random*, 1748.

c. Subperiod BrE3 (1761-1797)

Burney, Frances (1752-1840). *Evelina, or, a Young Lady's Entrance into the World*, 1778.
Godwin, William (1756-1836). *Things as They Are; or, The Adventure of Caleb Williams*, 1794.
Holcroft, Thomas (1745-1809). *The Adventures of Hugh Trevor*, 1794-1797.
Jenner, Charles (dates unknown). *The Placid Man*, 1770. [2,000 words]. COPC
Johnstone, Charles (c1719-c1800). *Chrysal or, The Adventures of a Guinea*, 1761. [2,000 words]. COPC
Mackenzie, Henry (1745-1831). *The Man of Feeling*, 1771.
Reeve, Clara (1729-1807). *The Old English Baron: A Gothic Story*, 1780.
Scott, Sarah Robinson (1723-1795). *The History of Sir George Ellison*, 1766.

d. Subperiod BrE4 (1850-1879)

Blackmore, Richard Doddridge (1825-1900). *Lorna Doone: A Romance of Exmoor*, 1869.
Braddon, Mary Elizabeth (1837-1915). *Lady Audley's Secret*, 1862. [2,000 words]
Dickens, Charles (1812-1870). *Great Expectations*, 1861.
Gaskell, Elizabeth Cleghorn (1810-1865). *North and South*, 1855.[2,000 words]
Le Fanu, Joseph Sheridan (1814-1873). *Uncle Silas: A Tale of Bartram-Haugh*, 1864.
Linton, Elizabeth Lynn (1822-1898). *The True History of Joshua Davidson*, 1872.
Oliphant, Mrs. (Margaret) (1828-1897). *Salem Chapel: Chronicles of Carlingford*, 1863.
Wood, Mrs. Henry (1814-1887). *East Lynne*, 1861.

e. Subperiod AmE3 (1774-1804)

Belknap, Jeremy (1744-1798). *The Foresters, an American Tale*, 1792.
Brackenridge, Hugh Henry (1748-1816). *Modern Chivalry: Containing the Adventures of a Captain and Teague O'Regan, His Servant*, 1804.
Foster, Hannah Webster (1759-1840). *The Coquette; or, The History of Eliza Wharton*, 1797.
Tyler, Royall (1757-1826). *The Algerine Captive; or, The Life and Adventures of Doctor Updike Underhill*, 1797.

f. Subperiod AmE4 (1851-1879)

Alcott, Louise May (1832-1888). *Little Women*, 1869. [2,060 words] UVirg
Bennett, Emerson (1822-1905). *Ellen Norbury; or, The Adventures of an Orphan*, 1855. [2,080 words]
Davis, Rebecca Harding (1831-1910). *Margret Howth: A Story of Today*, 1862. UVirg
Hawthorne, Nathaniel (1804-1864). *The House of the Seven Gables*, 1851.
Higginson, Thomas Wentworth (1823-1911). *Malbone: An Oldport Romance*, 1869.
Melville, Herman (1819-1891). *I and my Chimney*, 1856. [5,480 words] UVirg
Melville, Herman (1819-1891). *Bartleby, the Scrivener*, 1856. [14,540 words]
Spofford, Harriet Prescott (1835-1921). *In a Cellar*, 1859. [8,250 words]
Spofford, Harriet Prescott (1835-1921). *Dark Ways*, 1863. [11,940 words] UVirg
Stowe, Harriet Beecher (1811-1896). *Uncle Tom's Cabin, or, Life among the Lowly*, 1852.

Appendix 3. COLMOBAENG nonfiction texts

a. Subperiod BrE1 (1700-1726)

8 extracts of 5,000 words each from Part A of the COPC (the texts by Addison 1710-1711, 1715-1716; Berkeley 1709, 1710; Defoe 1715, 1724; Steele 1705-1710, 1710-1711).
18 extracts of 2,000 words each from Part B of the COPC, decades 3 and 4.

b. Subperiod BrE2 (1732-1757)

9 extracts of 5,000 words each from Part A of the COPC (the texts by Bolingbroke 1738; Chesterfield 1745-1748, 1753-1754; H. Fielding 1742, 1752; Hume 1739, 1741-1742; Smith 1750; Johnson 1751). The extracts by Smith and Johnson are shorter, about 2,500 words each.
18 extracts of 2,000 words each from Part B of the COPC; eight texts from decade 6 (Egmont 1739, Hales 1739, Holmes 1739, Lediard 1736, *London Magazine* 1736, Neal 1732, J. Richardson 1734, R. Walpole 1734), nine texts from decade 7, and one from decade 8 (Wood 1757).

c. Subperiod BrE3 (1761-1797)

8 extracts of 5,000 words each from Part A of the COPC (the texts by Boswell 1777-1779, 1791; Gibbon 1781, 1790; Johnson 1765-1771, 1775-1781; Walpole 1767, 1778).
18 extracts of 2,000 words each from Part B of the COPC, decades 9 and 10.

d. Subperiod BrE4 (1850-1879)

Arnold, Matthew (1822-1888). *The Study of Celtic Literature*, 1867. [5,000 words] GUT

Arnold, Matthew (1822-1888). *Culture and Anarchy: An Essay in Political and Social Criticism*, 1869. [5,080 words] GUT

Bagehot, Walter (1826-1877). *Physics and Politics or Thoughts on the Application of the Principles of 'Natural Selection' and 'Inheritance' to Political Society*, 1869. [5,050 words] GUT

Borrow, George (1803-1881). *Wild Wales: Its People, Language and Scenery*, 1862. [5,300 words] GUT

Burton, Richard F. (1821-1890). *The Land of Midian (Revisited)*, 1879. [5,180 words] GUT

Carlyle, Thomas (1795-1881). *Latter-Day Pamphlets*, 1850. [5,060 words] GUT

Carlyle, Thomas (1795-1881). *The Life of John Sterling*, 1851. [5,100 words] GUT

Darwin, Charles Robert (1809-1882). *On the Origin of Species by Natural Selection*, 1859. [5,070 words] GUT

Private Letters by John Richard Green and Lord and Lady Amberley, 1861 and 1872. [5,000 words] Denison

Meredith, George (1828-1909). *Letters Written to the 'Morning Post' from the Seat of War in Italy*, 1866. [5,110 words] GUT

Meredith, George (1828-1909). *On the Idea of Comedy and of the Uses of the Comic Spirit*, 1877. [5,210 words] GUT

Mill, John Stuart (1806-1873). *Considerations on Representative Government*, 1861. [5,080 words] GUT

Mill, John Stuart (1806-1873). "The Contest in America", *Fraser's Magazine*, 1862. [5,080 words] GUT

Morris, William (1834-1896). *Hopes and Fears for Art*, 1877-1879. [5,080 words] GUT

Ruskin, John (1819-1900). *Sesame and Lilies*, 1865. [5,060 words] GUT

e. Subperiod AmE2 (1732-1759)

Bartram, John (1699-1777). *Observations on the Inhabitants, Climate, Soil, Rivers, Productions, Animals, and Other Matters Worthy of Notice Made by Mr. John Bartram, in his Travels from Pensilvania to Onondago, Oswego and the Lake Ontario, in Canada*, 1751. [11,510 words] UPenn

Edwards, Jonathan (1703-1758). *Letter to Rev. Dr. Benjamin Colman*, 1735. [4,510 words]

Edwards, Jonathan (1703-1758). *Freedom of the Will*, 1754. [10,970 words]

Franklin, Benjamin (1706-1790). *Poor Richard's Almanack*, 1733-1758. [5,900 words] UPenn

Franklin, Benjamin (1706-1790). *Proposals Relating to the Education of Youth in Pensilvania*, 1749. [2,483 words] UPenn

Thomson, Charles (1729-1824). *An Enquiry into the Causes of the Alienation of the Delaware and Shawanese Indians from the British Interest*, 1759. [10,135 words] UPenn

Woolman, John (1720-1772). *Some Considerations on the Keeping of Negroes*, 1754. [4,731 words]

f. Subperiod AmE3 (1774-1804)

Franklin, Benjamin (1706-1790). *The Autobiography. Part Three*, 1788-1789. [10,100 words] UVirg

Hamilton, Alexander (1757-1804). *The Federalist Papers*, 1787-1788. [7,700 words] UVirg

Hamilton, Alexander (1757-1804). *Letters to Angelica Schuyler Church*, 1789-1801. [2,300 words] UVirg

Jay, John (1745-1829). *The Federalist Papers*, 1787-1788. [5,200 words] UVirg

Jefferson, Thomas (1743-1826). *Notes on the State of Virginia*, 1781-1782. [5,000 words] UVirg

Jefferson, Thomas (1743-1826). *Letters*, 1797-1799. [5,260 words] UVirg

Woolman, John (1720-1772). *Journal*, 1774. [Chapter XI, written in 1772; 5,000 words] UVirg

g. Subperiod AmE4 (1851-1879)

Abbott, John S.C. (1805-1877). *David Crockett: His Life and Adventures*, 1874. [5,020 words] UVirg

Draper, John William (1811-1882). *History of the Conflict between Religion and Science*, 1881[1874]. [5,120 words] UVirg

Emerson, Ralph Waldo (1803-1882). *The Conduct of Life*, 1860. [6,010 words] UVirg

Emerson, Ralph Waldo (1803-1882). *Thoreau*, 1862. [4,544 words]

Fiske, John (1842-1901). *Spain and the Netherlands*, 1868. [5,040 words] UVirg

Fiske, John (1842-1901). *Athenian and American Life*, 1873. [5,130 words] UVirg

Holmes, Oliver Wendell (1809-1894). *The Autocrat of the Breakfast-Table*, 1858. [5,050 words] GUT

Holmes, Oliver Wendell (1809-1894). *Medical Libraries*, 1878. [5,120 words] GUT

Motley, John Lothrop (1814-1877). *The Life and Death of John of Barneveld, Advocate of Holland with a View of the Primary Causes and Movements of the Thirty Years' War*, 1874. [5,040 words] GUT

Several authors. A group of private letters, 1861-1867. [about 3,800 words] UVirg

Spooner, Lysander (1808-1887). *No Treason: The Constitution of No Authority*, 1870. [5,020 words] UVirg

Stowe, Harriet Beecher (1811-1896). *The Education of Freedmen*, 1879. [5,100 words] UVirg

Thoreau, Henry David (1817-1862). *The Correspondence of Henry David Thoreau*, 1851-1862. [Three letters from the years 1851 and 1862; 1,260 words.]

Thoreau, Henry David (1817-1862). *Walden, or, Life in the Woods*, 1854. [5,040 words] UVirg

Twain, Mark (1835-1910). *Innocents Abroad*, 1869. [5,000 words] UVirg

Whitman, Walt (1819-1892). *Memoranda during the War*, 1875-1876. [5,100 words] UVirg

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