

**New members of ‘closed classes’ in English<sup>1</sup>**

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## ABSTRACT

Many grammars posit a distinction between open and closed ‘word classes’ (lexical categories) in English. We demonstrate that the supposedly closed categories continue to admit new members. We document recent additions to four putatively closed categories. New determinatives are being added via branching from adjectives (e.g., *various*, *numerous*, *myriad*, *several*, *other*, *multiple*, *said*). Numerous new prepositions have emerged via branching from participles (e.g., *allowing*, *counting*, *excluding*, *including*, *pertaining*, *wanting*, *given*, *gone*, *granted*, *provided*, *approaching*, *starting*, *ending*, *continuing*, *omitting*, *based*, *compared*), branching from adjectives (e.g., *clear*, *level*, *additional*), branching from a noun (e.g., *bush*), branching from prefixes (e.g., *pre*, *post*, *anti*), and compounding (e.g., *online*, *offline*, *take away*, *in spite of*). The category of coordinators has been expanded by the addition of *as well as*, *plus*, *versus*, *cum*, and *slash*. And even the category of subordinators shows signs of adopting new uses of *if*, *when*, and *how* as added members. Such items either have not previously been documented in their new functions at all, or have been misclassified as being members of some less-closed category.

## 1 INTRODUCTION

It is traditional in English grammar to divide the ‘word classes’, or LEXICAL CATEGORIES as they are called in modern linguistics, into two sets: OPEN and CLOSED. Where the line is drawn depends on a grammar’s analytical and descriptive framework, but the ‘closed classes’ are usually said to include coordinators, subordinators, determinatives, and prepositions (perhaps also interjections, though they never get much discussion in grammars). Subcategories are also subject to this distinction: among the nouns, for example, pronouns are usually considered to be a closed subcategory, and among the verbs, the modal auxiliary verbs are similarly considered closed.

The terminology suggests an absolute distinction, but careful treatments allow that ‘the term “closed” should not be taken to imply that such expansion is strictly impossible’ (Huddleston, 1984: 121). Nonetheless, the terminology may lead to the misapprehension that these categories are (like the users’ associations for some of the more exclusive private gardens in Edinburgh) simply closed to new members. And less careful works assert just that: Carter & McCarthy’s *Cambridge Grammar of English* (2006: 894) claim that closed categories ‘do not admit new words’ (though they contradict themselves later on p. 929 when they claim that ‘grammatical words (e.g. determiners, conjunctions, prepositions) belong to closed systems, with new items only rarely being formed’).

Even if the misapprehension is not overt, it may manifest itself in reluctance among linguists, lexicographers, teachers, and grammarians to accept the notion that new ‘closed’ category members have been and are still appearing in the language with the passing years. We believe, however, that there may be more innovation happening within the ‘closed’ categories than is widely believed, and that searches for new members are likely to be fruitful.

As a basic framework of lexical categorization we standardize on the set of categories employed in Huddleston and Pullum et al. (2002; henceforth *CGEL*). Briefly, *CGEL* rejects completely the traditional category of ‘conjunctions’, comprising ‘coordinating conjunctions’ and ‘subordinating conjunctions’. The ‘coordinating conjunctions’ are assigned to a category of COORDINATORS, the markers of subordination such as *that* and *whether* are assigned to a category of SUBORDINATORS; the many other so-called ‘subordinating conjunctions’ like *after*, *although*, *because*, *before*, *now*, *since*, *though*, etc., are treated the way Jespersen (1924) recommended, as prepositions that take clause complements; and the practice of treating prepositions as having adverb alter egos of identical form and meaning when they are not followed by nouns is abandoned, words like *in* and *out* being treated as prepositions whether or not they happen to take noun phrase complements<sup>2</sup>. We also use the term DETERMINATIVE (D) for the lexical category including members such as *the*, *each*, *many*, *that*, *enough*, etc., reserving DETERMINER (Det) for the function typically performed by determinatives or genitive NPs within NPs (e.g., *the/Juan’s car*), sometimes termed SPECIFIER.

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<sup>2</sup> For more on this, see §3.

Of *CGEL*'s nine categories, we believe the cline corresponding to decreasing likelihood of addition of new members is probably like this:

noun > verb > adjective > adverb > preposition > determinative > interjection > coordinator > subordinator

It is of course very much an empirical matter whether this ordering is correct, and how it compares with similar classifications for other languages. Dixon (1982) points out, and extensively illustrates, that adjective is by no means universally well populated, or even present at all, in languages of the world. Some languages have extremely few adjectives (as few as one), and some appear to have no use for the category at all. Something similar may be true for adverb.<sup>3</sup> It is also an empirical matter whether some languages need entirely new categories of which English shows no trace. Discourse particles of various sorts are a candidate (see Zwicky 1985). Pronoun might be differentiated from noun in some languages, though *CGEL* argues that in English it is not a distinct category but fits best as a subcategory of noun.

As modern tools for relevant investigation become available – the increasing number of multi-billion-word corpora, the improving speed and power of processors and algorithms for searching, the teraword corpus of the World Wide Web, and tools like Google Trends – it should be possible to do increasingly revealing research on the rate at which new words enter a language and the categories that receive new entrants. What we do here is to encourage some rethinking of this topic by surveying some of the new entrants into the categories that are widely treated as ‘closed’: two or three subordinators, about a half a dozen each for determinative and coordinator, and about two dozen prepositions, most of which have either not previously been documented in their new functions at all, or have been generally misclassified as being members of some less-closed category.

## 2 DETERMINATIVES

Part of what makes the search for unidentified determinatives in English fruitful is the newness of the notion. The concept appears to have been introduced into the English grammatical tradition by Harold Palmer less than 100 years ago (1924: 24), and a century is a short time in the immensely conservative field of English grammar. Not many people understand what determinatives are, and hardly any of the major dictionaries even use the term. The *Oxford English Dictionary* has begun to use ‘determiner’

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<sup>3</sup> There have been periodic suggestions that the Adjective and Adverb categories may be collapsed into one, the former Adverb category being a subcategory of adjectives utilized in particular functions such as modifying constituents of categories other than Noun. Payne, Huddleston and Pullum (2010) argue at length that such a collapsing is a mistake for English. Giegerich (forthcoming) disagrees, and provides new evidence and arguments for its correctness. The controversy cannot be said to have been resolved, though we will continue here to assume the distinctness of the two categories.

as a grammatical label to qualify the use of particular words, and not as a part of speech label like noun, adjective, verb, etc.; hence entries like, say, NEITHER adj. have ‘determiner’ appended to the part of speech label in brackets. This practice was adopted for the publication of the Third Edition online (Edmund Weiner, personal communication, May 29 2008).

Most of the major language-learner dictionaries such as the *Longman Dictionary of Contemporary English* do have a lexical category ‘determiner’ (roughly equivalent to *CGEL*’s determinative), but they display a good deal of confusion when it comes to assigning words to the category (Reynolds, 2013). Lack of recognition aside, it appears that, over time, certain words from other categories are behaving increasingly like determinatives.

## 2.1 *From adjectives with plural semantics*

### 2.1.1 Various

The Latin word *various* seems to have entered English around the end of the 16th century. The *OED* cites an example from 1618<sup>4</sup>, but we have found a small number of earlier examples (e.g., Guilpin 1598: satyre III, para 5 for an example in a singular NP; King James 1616: 556 for a plural example). Currently, perhaps the most common sense of the word *various* is that which the *OED* lists as III.8., ‘With pl. n. Different from one another; of different kinds or sorts: a. In attrib. use’. Note that this sense is limited to use with plural nouns, a limitation common to many determinatives. In its early days, though, *various* seems to have also been used attributively with singular nouns, often where we would now use *varying* or *varying degrees of*. Over time, use with singular nouns became very rare while attributive usage with plural nouns continued to be common.

To support this observation, we turned to the corpora. We first searched for the most frequent instances of *various* + SING N (i.e., *various* [nn1\*]) in the 19th century in the Corpus of Historical American English (Davies 2010–; hereafter COHA). The top two hits were *various success* and *various knowledge*. For each, we examined the concordance and found that all hits were genuine modifier-head relationships (e.g., *There had been many sallies and skirmishes with various success*). We repeated this with plural nouns (i.e., *various* [nn2\*]), which yielded *various parts* and *various kinds* as the most common collocations.

Because the small number of hits made it difficult to determine a trend, we queried the much larger One Million Books Google Corpus (Michel et al. 2011 via Davies 2011–; hereafter OMB) to produce the graph in figure 1 of the frequency of *various knowledge* and *various success* between 1650 and 2000. Although Google’s metadata (esp. dates of publication) is notoriously suspect (Nunberg 2009), the exact frequencies are not at issue. The graphs are intended to give a general idea of the relative

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<sup>4</sup> Earlier examples are cited, but these are mentions of the Latin word, not uses of an English *various*.

frequency of *various* in attributive use with singular nouns and plural nouns. Figure 1 suggests that *various* went through a time during which it was not uncommon for it to collocate with singular nouns, but that since the end of the 19th century, this use has become much rarer. Current hits for *various* [nn1\*] in COHA are almost all spurious, having the singular noun as a modifier (e.g., *various knowledge sources*).

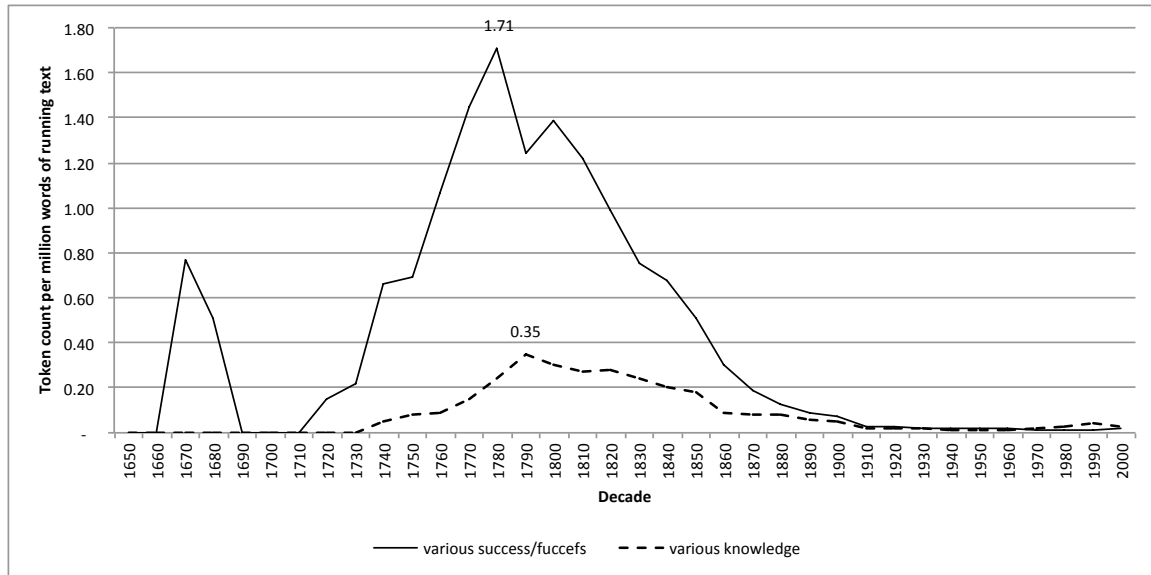


Figure 1.

*The frequency of various success/fuccefs, and various knowledge in OMB from 1650 to 2009. The string various fuccefs is included to capture the long s letterform f common until about 1810<sup>5</sup>.*

The graph in figure 2 shows the same information for *various* with two plural nouns: *various parts* and *various kinds*. For scale reference *various success* is included.

<sup>5</sup> All queries of *OMB* are case sensitive; in all cases, search string case is as shown in the legends.

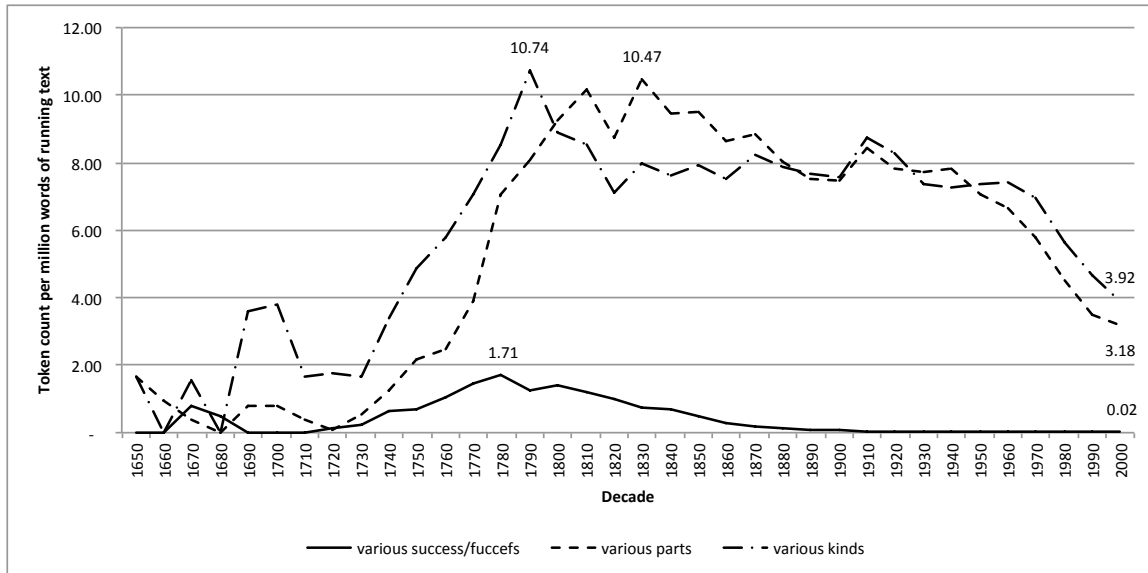


Figure 2.

*The frequency of various success/fuccefs, various parts, and various kinds in OMB from 1650 to 2009.*

The difference between *various success* – *success* being the most common singular noun to follow *various* – and the other lines suggests that *various*, in attributive modifier function, has primarily been used with plural nouns throughout most, if not all, of its history in English. This fact might lead some English speakers to perceive *various* as being analogous to *many*, *most*, *these*, *few*, and other determinatives determining only plural nouns. By analogy, then, they might use *various* in place of these words in other syntactic constructions.

It has been argued that use in the partitive construction clearly distinguishes determinatives from adjectives. Consider, for example, that *I'll take all of them* is grammatical but *\*I'll take new of them* isn't (CGEL: 539).<sup>6</sup> Examples of *various* used in this construction have been noted by some reference guides, though none identify *various* as a determinative (or 'determiner'). *Merriam-Webster's Dictionary of English Usage* (1994) says partitive *various* was first noted by *Bartlett's Dictionary of Americanisms* in 1877, which cites a correspondent in the *New York Times* (1).

(1) We talked for an hour with various of them.

It goes on to say that although the *OED* has no relevant entry, Fowler warns,

<sup>6</sup> Where traditional grammar makes a category distinction between adjective uses (e.g., *various people*) and pronoun uses (e.g., *various of the people*), we take both to be determinatives. They differ in their function rather than their category with the traditional adjective functioning as a determiner and the traditional pronoun functioning as a fused determiner-head (CGEL: 419–420).

“analogy has lately been playing tricks with the word & persuading many people that they can turn it at will, as *several, few, many, divers, certain, some, &* other words are turned, from an adjective into a pronoun... To write *various of them &c.* is no better than to write *different of them, diverse of them, or numerous or innumerable of them*” (as cited in *Merriam-Webster's Dictionary of English Usage*: 935).

*CGEL* (p. 392) was perhaps the first to recognize that this use of *various* qualifies it as a determinative, rather than a pronoun. Denison (2006: 5) dates it from the mid-nineteenth century, but we've been able to antedate that by about 50 years, as in (2).

- (2) a point of character common to various of the larger predatory animals (Phillips 1798: 113).

Again, although the metadata in the Google Books corpus underlying OMB is error-prone, it should give us a good indication of the relative change in frequency over time. A query of OMB for *Various/various of* found 21,850 instances, 21,724 of which were the partitive construction. (The other 126 were *various of stellionate*.) The change in frequency over time is shown in figure 3 and suggests that determinative *various* is catching on, or at least was until about the 1960s.<sup>7</sup>

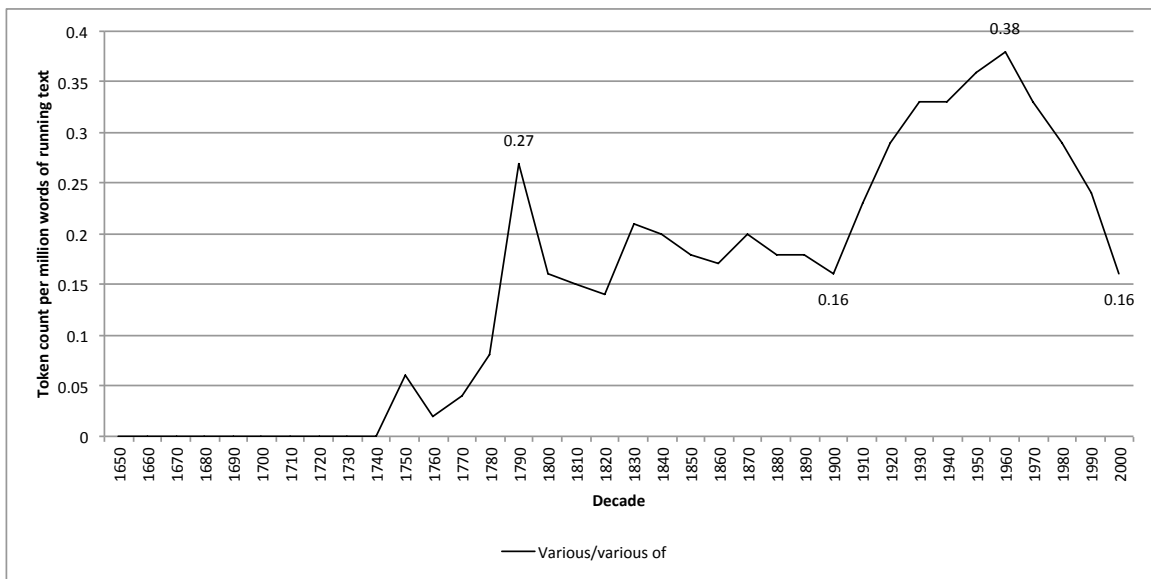


Figure 3.

*The frequency of various in the partitive construction in OMB from 1650 to 2009.*

The frequency of partitive *various* is still much lower than that of a relatively infrequent determinative like *neither*, though it is similar in frequency to *whichever*, as can be seen in figure 4.

<sup>7</sup> The frequency of the word *various* in all its uses has been falling since the 1970s and is now about the same as in the late 1800s.



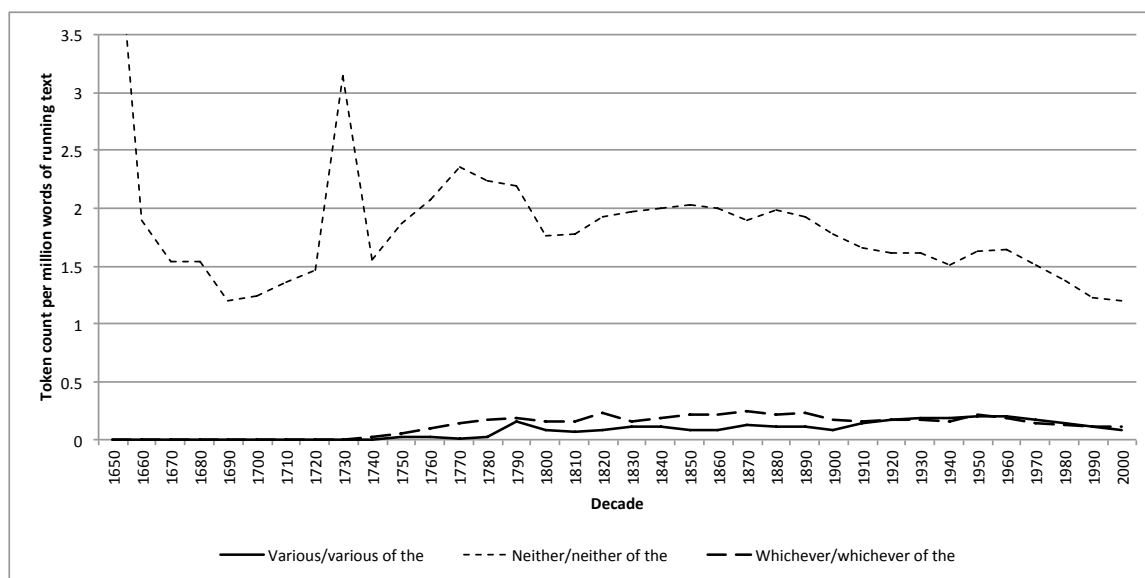


Figure 4.

*The frequency of selected D + of the in OMB from 1650 to 2009.*

### 2.1.2 Numerous

We believe *numerous* should similarly be added, although *CGEL* has it as an adjective (p. 393). The first piece of evidence would be use in the partitive construction, as discussed above. Such use of *numerous* is noted in *Merriam-Webster's Dictionary of English Usage* (1994).

Normally an adjective (“Numerous species were sighted”), *numerous* gives occasional indications of taking on the function of a pronoun (see note 6 above):

... blunted the awareness of numerous of its inhabitants to the historical significance of many of its buildings – Norman Harrington, *N.Y. Times*, 7 Apr. 1968.

*Numerous* is equivalent to *a number* or to the pronoun *many* in such constructions. Its use is similar to the use of *various* as a pronoun (as in “various of them”), except that it occurs far more rarely... Our relative lack of evidence for it suggests strongly that it is not yet established as standard. (p. 673)

Secondly, both *various* and *numerous* started life as typical adjectives, agnostic as to the number of the nouns they modify, but both have come to select plural nouns almost exclusively. For *numerous*, the *OED* gives as sense A.I.3.a., ‘Modifying a plural noun: many; great in number. Now the principal sense’. But previously, *numerous* was not uncommon with singular nouns. In COHA, the most common nouns in the frame *a*

*numerous* [nn1\*] in order are: *family, body, class, population, train, company, progeny, party, retinue, and band*.<sup>8</sup> This smaller corpus was used so that a manual check for spurious hits could be performed. We found that every hit was a genuine instance of *numerous* as a dependent of a singular noun.<sup>9</sup> We therefore assumed that most hits would also be genuine in OMB, which we preferred to COHA because of its significantly larger size (89 billion words vs 400 million) and because it includes material published earlier (<1650 vs 1800). A decade-by-decade (1810–2000) Pearson correlation between the words per million frequency of D<sup>10</sup> + *numerous* + SING N (e.g., *this numerous family*) in each corpus was extremely high ( $r = 0.97$ ).

This use with singular nouns seems to have peaked in the late 18th century and has now all but vanished, as can be seen in the figure 5. Selection of plural nouns is atypical of English adjectives but common among determinatives, showing that *numerous* has become more like a determinative in this regard.

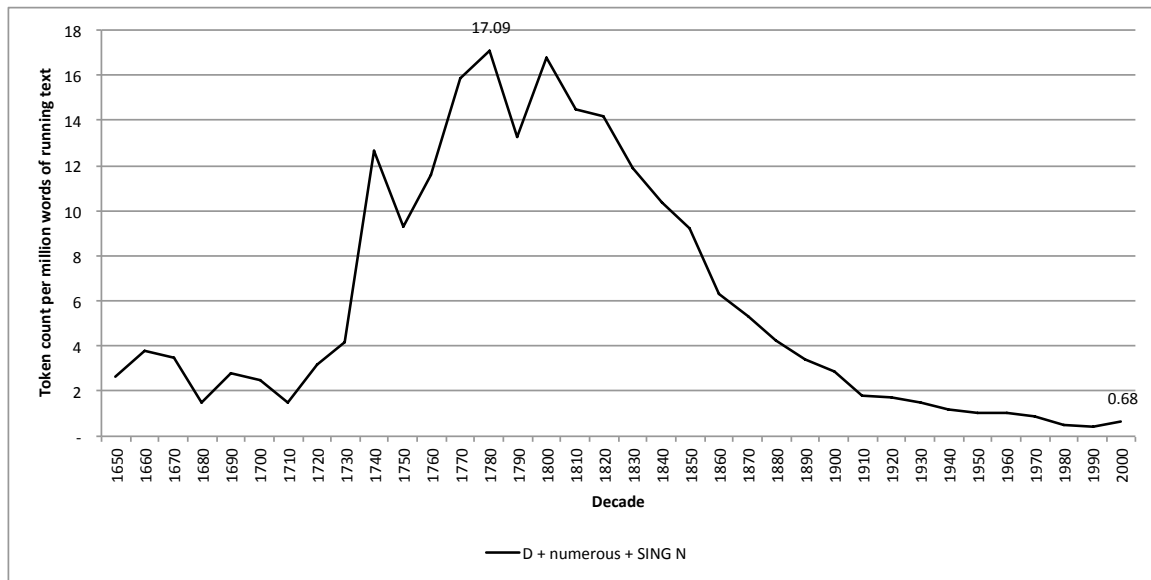


Figure 5.

*The frequency of D + numerous + SING N (e.g., this numerous family) in OMB from 1650 to 2009.*

Lastly, ‘the clearest members of the determinative category cannot combine with the articles’ (CGEL: 539). Leaving aside a few coordinations (e.g., *each and every move, this or that circumstance*), these items are also mutually exclusive: We can’t have *\*the a*

<sup>8</sup> <<http://corpus.byu.edu/coha/?c=coha&q=13762041>>

<sup>9</sup> Although we did find two instances that were duplicates and a document that was mostly gibberish.

<sup>10</sup> This includes the words tagged in COHA as ‘det’ along with those tagged as ‘art’ and largely overlaps with the set of determinatives as defined here.

generation, \*the every move, \*any much milk, \*this enough milk.<sup>11</sup> In this regard, *numerous* could be seen as becoming more determinative-like if its co-occurrence with other determinatives decreases, and this is in fact what we observe (see figure 6). In COHA<sup>12</sup>, the frequency of ‘determiners’ immediately preceding *numerous* as a percentage of all uses of *numerous* has declined from a peak of 31.33% in the 1820s to 8.64% in the 2000s. This could simply be an epiphenomenon of the increasing selection of plural nouns by *numerous*, since NPs headed by plural nouns do not require a determiner. Yet we find that, even preceding plural nouns, *numerous*’ co-occurrence with other determinatives has dropped from 14.99% in 1820 to 5.01% in 2000. Consequently, we take this as further evidence that *numerous* is becoming more determinative-like.

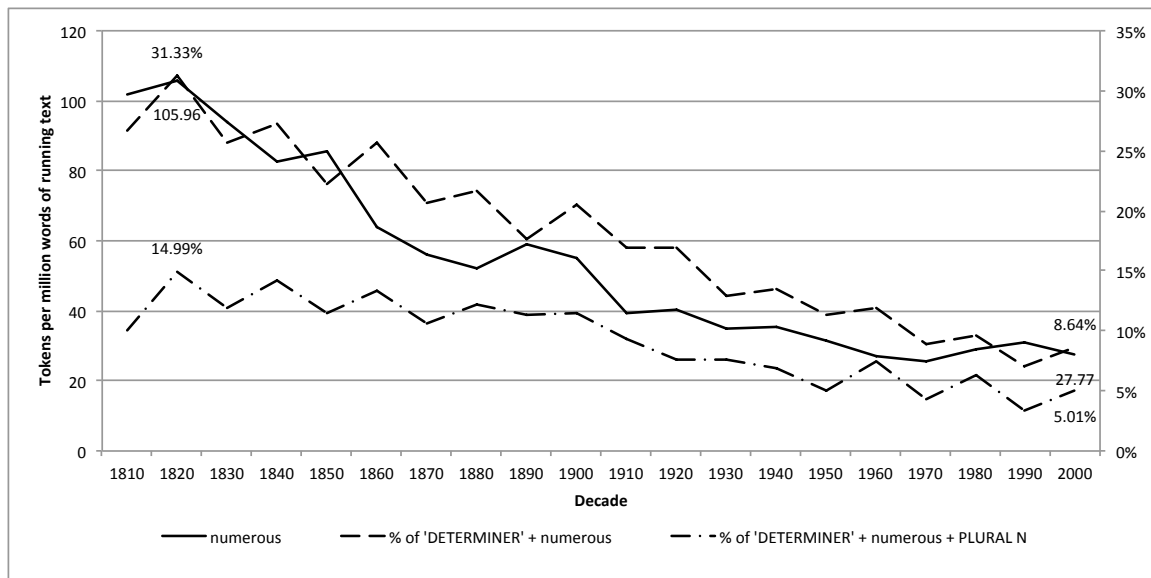


Figure 6.

*The frequency of numerous and the percentage of 'DETERMINER' + numerous and 'DETERMINER' + numerous + PLURAL N in COHA from 1810 to 2009.*

The evidence, then indicates that determinative is a category open to admitting new members, and that the behavior of those members changes over time. Adjectives which have firmly established a determinative branch similar to that of *various* and *numerous* are *several*<sup>13</sup> and *certain*, both mentioned by *CGEL*. More limited development can be seen in *divers(e)*, mentioned by Denison (2006: 455), *myriad*, *multiple* and *other*.

<sup>11</sup> They are also mutually exclusive with determiners with the form of noun phrases, except that *every* is permitted after genitives: *Jean's/her every move*.

<sup>12</sup> Here, the smaller COHA was used because the search string '[at\*][d\*] numerous [nn2\*]' returned no results with OMB, presumably because of some processing limitation or programming error.

<sup>13</sup> Microsoft Word for Mac 2011 version 14.2.3 suggests *several* as a preferred alternative to *various* in partitive constructions.

## 2.2 From adjectives with definite semantics

### 2.2.1 Said

The word *said* follows a slightly different trajectory. It spread from past participle to adjective to determinative only to gradually fade out of use, today persisting mostly in legal documents. Our basis for categorizing *said* as a determinative is that singular, countable nouns like *district* normally require a determiner, and adjectives cannot perform this function (e.g., *\*it was in good district*). The adjective and the determinative are illustrated in figure 7.

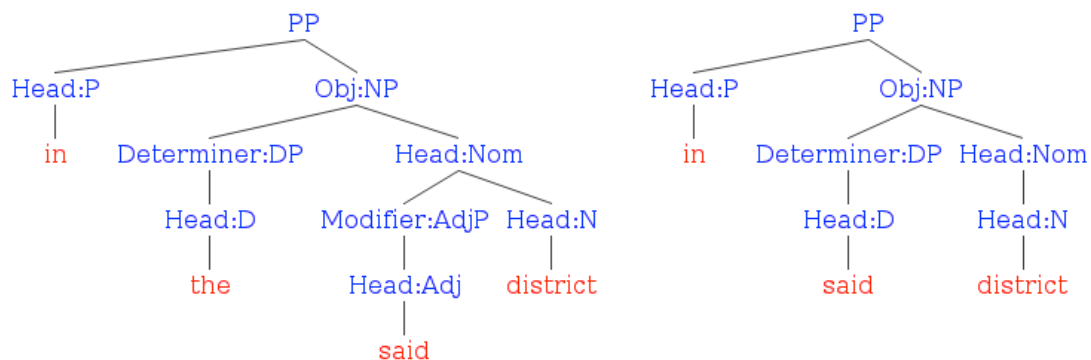


Figure 7.

*Syntax trees showing in the said district, with said as an adjective, and in said district, with said as a determinative.*

While the words in section 2.1 have likely branched towards determinative status because of their plural semantics, *said* has likely done so because of its definite semantics. In OMB, there are no relevant instances of *a said* + N, but there are over 5 million of *the said* + N. In these cases, *said* is clearly not a determinative, since it appears with *the*, but it is rather unusual for an adjective in its apparent exclusive selection of definite nouns.

Determinatives typically function as determiners, and determiners ‘add a specification of definiteness (as with *the* or *Ally’s*) or indefiniteness (*one*)’ (CGEL: 355). Modifiers in NP structure, on the other hand, don’t specify in the same way. Even adjectives such as *specific* or *particular*, which obviously have some semantic overlap with *said*, occur freely with both definite and indefinite articles. This characteristic of *said* has likely led some English speakers to feel a certain redundancy in *the said*, which, in turn, may have led to determinative *said*; why use *the said district*<sup>14</sup> when *said district* will do?

<sup>14</sup> A search of COHA shows that *district* is the noun most commonly modified by adjective *said*.

In OMB, there are more than 2 million instances each of Prep<sup>15</sup> + *the said*, where *said* could be an adjective<sup>16</sup> and Prep + *said*, where *said* must be a determinative (see figure 11). A reanalysis of this word appears to have happened in the 1790s, where a clear inflection point is visible. The data suggests that most people initially reanalysed *said* as an adjective but this fashion had largely passed by the 1830s. At the same time, the determinative *said* grew more gradually, peaking in the 1910s almost a full century after the adjective peaked. Between the first decade of the 20th century and the middle of the 1930s, *said* was actually more common as a determinative than as an adjective, at least directly after a preposition. While instances of determinative *said* are still attested today<sup>17</sup>, it, along with the adjective, has lost most of its currency. This may be an example of a word that gained determinative status in one part of the population only to largely lose it again.

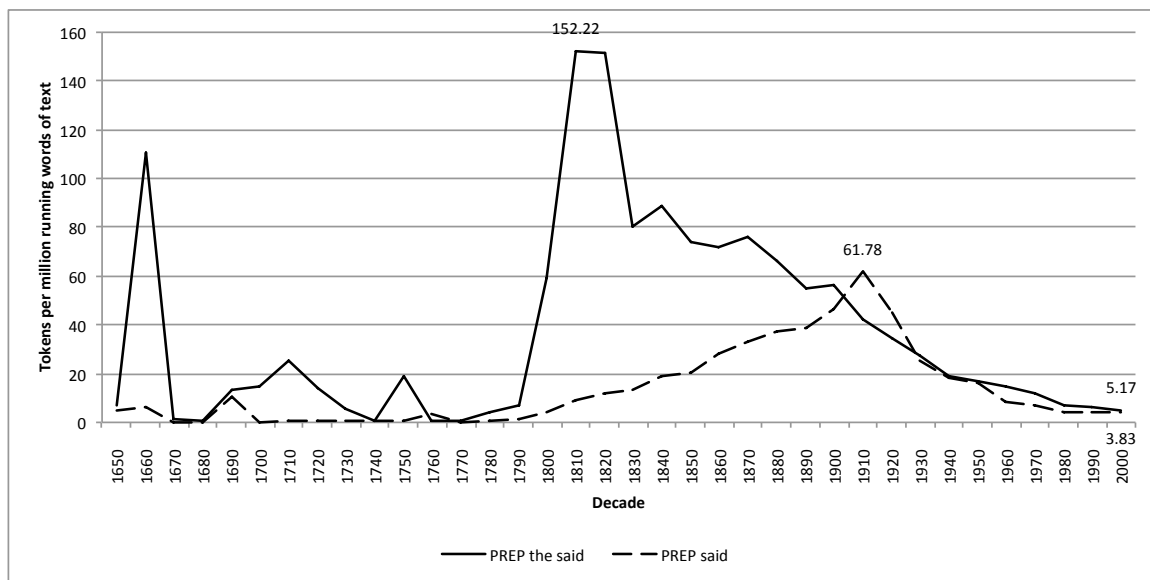


Figure 8.

*The frequency of Prep + the said (said as Adj) and Prep + said (said as D) in OMB from 1650 to 2009.*

<sup>15</sup> The leading preposition is a query strategy to ensure that no determiner appears before *said* and to reduce spurious instances of past-tense *said*. A search for *of the said company* and *of said company* is even more specific to the forms of interest and reveals a similar pattern, though instances are far less frequent and the data, therefore, much noisier. Of course, it is still possible that spurious hits such as *the man he was speaking of said company officials were considering an appeal* will still intrude.

<sup>16</sup> Some determinatives do co-occur, as in *the many ways*, where *many* functions as a modifier. This doesn't clearly mark *said* as an adjective, but neither does it provide evidence for a determinative analysis, so it is more conservative to consider it an adjective.

<sup>17</sup> For example, 'Then Tim reminded me that on said trip to see our New York friends...' (Hinman 2010).

The adjective *aforesaid* shares a virtually identical meaning with *said* and similarly possesses the property of selecting almost exclusively definite nouns. There is some small evidence that *aforesaid* was briefly used as a determinative by a small number of writers around the 1820s, but this use apparently did not catch on, and determinative *aforesaid*<sup>18</sup> has never been more common than the adjective.

It is unclear what sparks these fashions and why some survive while others die out. The most obvious element is chance, but this will likely be mediated by syntax (we do not see any evidence of coordinators, for example, becoming determinatives), frequency, semantics, and even changes in other words. It may be, for instance, that a shift in how we view collective nouns in terms of number has influenced how we analyse the word *numerous*. It is coincidental that in the 1850s *family* began to agree more often with *is* than with *are* for the first time<sup>19</sup>, just as *numerous* was becoming determinative-like. Finally, although we have presented many examples in which adjectives have branched out into the so-called closed category of determinatives, it is worth noting that in none of these cases is there evidence of the pre-existing adjective being eliminated, although at least with *said*, we see suggestions that the determinative was, for a time, dominant.

### 3 PREPOSITIONS

There are various sources for the creation of new prepositions. The most important are borrowing from other languages, conversion from other categories, and compounding. We will say nothing about borrowing other than to note the occurrence in English texts of loanword prepositions such as *à la*, *chez*, *circa*, *contra*, *minus*, *modulo*, *pace*, *per*, *plus*, *pro*, *qua*, *re*, *sans*, *versus*, *via*, and *vis-à-vis*. The following remarks concern the creation of prepositions via conversion and compounding. It should be noted that we adopt without discussion the position advocated compellingly by Jespersen (1924: 87–89), Emonds (1972), Jackendoff (1973), and *CGEL* (pp. 598–601, 612–617; for counterarguments, see Leech 2004: 131–134) concerning the breadth of the category of prepositions: We take words like *after*, *although*, *because*, *since*, etc., to be prepositions taking clauses as complements (not ‘subordinating conjunctions’ as traditional grammar has it); we take words like *by*, *in*, *over*, *through*, etc., to be always prepositions (not merely when they have NP complements, and adverbs when they do not); and we take words like *abroad*, *away*, *back*, *out*,<sup>20</sup> etc., to be prepositions even though (like *because*) they do not take NP complements at all.

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<sup>18</sup> We are grateful to Leo Schmitt (personal communication, July 12, 2012) for suggesting *aforementioned*. Examples of the determinative can be found here: <http://googlebooks.byu.edu/?c=1m&q=17370768>

<sup>19</sup> <http://googlebooks.byu.edu/?c=1m&q=17370890>

<sup>20</sup> *Out* takes an NP complement in a semantically delimited minority of its occurrences in American English (when the reference is to an avenue of egress from an enclosed space, as in *Throw it out the window*), but in British English it takes either no complement or a PP headed by *of*; see Pullum (2009: 268).

### 3.1 Conversion from participles

It has long been recognized that certain participles, mostly gerund-participles, become prepositions. For instance, in its entry for *concerning*, prep., the *OED* prompts the reader to, ‘compare the similar use of *regarding*, *touching*: so modern French *concernant*, *touchant*. See also *according to*, *during*, *notwithstanding*, *pending*, in which prepositions, or prepositional phrases have in different ways arisen out of participles’. This has been going on almost as long as English has had the participle forming *-ing* suffix<sup>21</sup>. The earliest known example may be *passing*, cited in the *OED* from c1370. The cited de-participial prepositions are shown in table 1.

Table 1

*De-participial Prepositions Cited in the Oxford English Dictionary Online with Date of First Citation*

<i>passing</i> c1370	<i>touching</i> <sup>†</sup> a1375	<i>noughtwithstanding</i> <sup>†</sup> c1384
<i>during</i> c1385	<i>nought-againstanding</i> <sup>†</sup> 1393	<i>out-taking</i> <sup>†</sup> 1397
<i>not againstanding</i> <sup>†</sup> a1400	<i>notwithstanding</i> c1400	<i>considering</i> c1405
<i>saving</i> c1405	<i>providing</i> <sup>c</sup> 1423	<i>concerning</i> a1425
<i>non obstante</i> 1441–3	<i>seen</i> <sup>†‡</sup> 1470–85	<i>reserved</i> ?1473
<i>moyenant</i> ?1473	<i>barring</i> 1481–90	<i>nongainstanding</i> <sup>†</sup> c1485
<i>withstanding</i> <sup>†</sup> 1490	<i>indurand</i> <sup>†</sup> 1490	<i>depending</i> 1503–4
<i>moyening</i> <sup>†</sup> 1512	<i>enduring</i> <sup>†</sup> a1513	<i>being</i> <sup>c</sup> 1528
<i>according</i> <sup>t</sup> ?1532	<i>reserving</i> 1541	<i>respecting</i> 1548
<i>bating</i> 1568	<i>excepting</i> 1618	<i>abating</i> <sup>†</sup> 1631
<i>pending</i> 1642	<i>ensuing</i> <sup>†</sup> 1661	<i>owing</i> <sup>t</sup> 1744
<i>regarding</i> 1779	<i>failing</i> 1810	<i>following</i> 1947

*Note.* Words marked <sup>†</sup> are marked archaic or obsolete in the *OED*; <sup>‡</sup> denotes a ‘quasi-preposition’. A <sup>t</sup> signifies an obligatory *to*-phrase complement, and <sup>c</sup> indicates a word marked as a conjunction by the *OED* but considered a preposition here.

From table 1, we can deduce that in the 440 years between 1370 and 1810, a new de-participial preposition arose, very roughly, once every 12 years, but the rate, far from constant, has dropped off significantly since the 1400s, as shown in figure 13.

<sup>21</sup> ‘The final result was the predominance of the form *-inge*, and its general substitution for *-inde* in the 14th c’ (*OED*: *-ing*, suffix2).

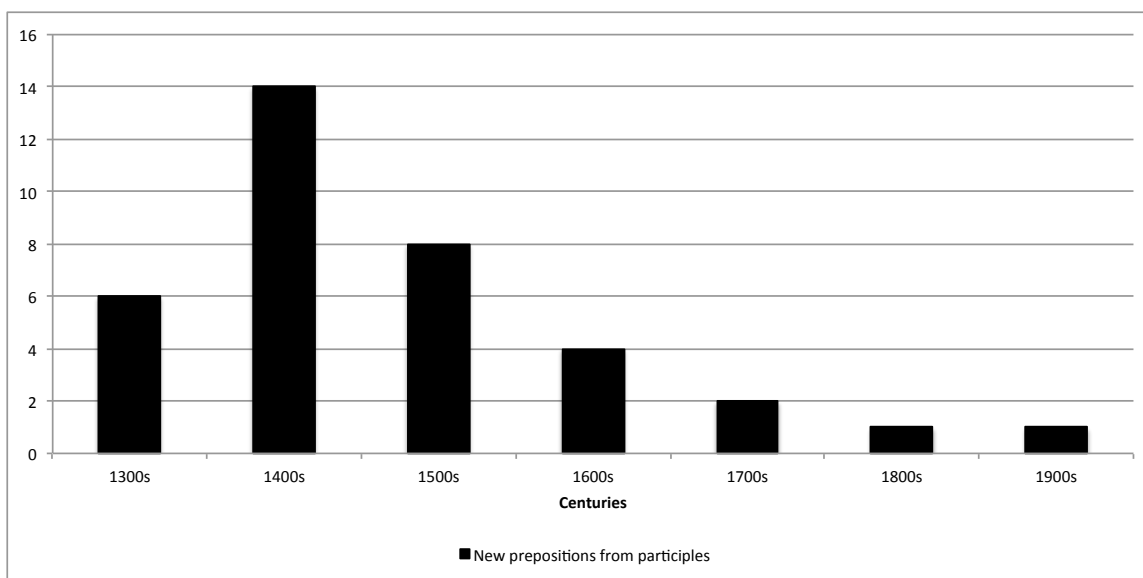


Figure 9.

*The rate of addition of new de-participial prepositions listed in the OED by century since the 1300s.*

The decreasing rate shown in figure 9 suggests that the category of prepositions may be progressively less open to new members, at least to participles. On the other hand, there could be other explanations. It might simply be an artifact of the publication schedule of the *OED*, or, if lexicographers believe that the category of prepositions is closed, they may not be finding new prepositions because they are not expecting them. Alternatively, while gerund-participles may be losing their momentum, past participles may be taking over. There is, in fact evidence that more recent additions, including words that began as past participles have been overlooked. Follett and Wensberg (1998: 96) list as ‘benign danglers’ the words in table 2.

Table 2.

*De-participial prepositions listed in Follet and Wensberg (1998)*

<i>acknowledging</i>	<i>admitting</i>	<i>assuming</i>	<i>conceding</i>	<i>granting</i>
<i>leaving</i>	<i>looking</i>	<i>meaning</i>	<i>reading</i>	<i>reckoning</i>
<i>recognizing</i>	<i>speaking</i>	<i>taking</i>	<i>viewing</i>	<i>beginning</i>

To these lists, *CGEL* (p. 611) adds the words listed in table 3.



Table 3.

*De-participial prepositions listed in CGEL*

<i>allowing<sup>f</sup></i>	<i>counting</i>	<i>excluding</i>	<i>including</i>	<i>pertaining<sup>t</sup></i>
<i>wanting</i>	<i>given</i>	<i>gone</i>	<i>granted</i>	<i>provided</i>

*Note.* An <sup>f</sup> indicates the word takes a *for*-phrase complement, a <sup>t</sup> a *to*-phrase complement.

And we suggest that the following might reasonably be added to this list: *approaching*, *starting*<sup>22</sup>, *ending*, *continuing*, *omitting*, *based*<sup>23</sup>, and *compared*<sup>t</sup>.

3.1.1 Beginning, starting, and other gerund-participles

The preposition *beginning* seems to have begun life around the end of the 19th century. The earliest example we've found is (3).

- (3) I know at Yale, beginning in 1701 and coming down, a period of nearly two hundred years, there has never been a time when that great University has not been under the rule and presidency, chiefly, of an illustrious clergyman (*Official report*... 1890: 1068).

The basis for identifying this instance of *beginning* as a preposition and not as a participle is that it has no understood subject derivable from the superordinate clause. This is the same argument that Olofsson (1990) makes in respect to *following*, when he says that it looks like a dangling modifier but that most people would regard it as acceptable. By 1914, we find a flurry of examples; we cite five representative uses in (4).<sup>24</sup>

- (4) (a) Beginning in September the rate was increased to the full amount permitted by the charter.
- (b) Beginning in 1825, the accounts of the various funds were stated separately.
- (c) Beginning in 1910, tubercular meningitis was compiled as tuberculosis instead of meningitis.
- (d) Beginning in February, the census certificate has been furnished in 95 cases.

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<sup>22</sup> Prepositions *beginning* and *starting* typically take an *in*-phrase complement, but there are also examples with a *with* phrase. In fact, a variety of temporal expressions should be possible complements: *several years ago*, *last year*, *only quite recently*, and so on.

<sup>23</sup> Preposition *based* takes *on*- or *upon*-PP complements. *Based on* is mentioned by Gunnell & Hoffmann (2001).

<sup>24</sup> All sentences in (4) and (5) can be retrieved by searching for them surrounded by quotes in the Google Books corpus <http://books.google.com/>

(e) Beginning in the remote past before the Carboniferous period, the reader is lead through various changes of landscape to the present.

The same process seems to have hit *starting* in the mid 1800s, (5), the earliest example we were able to find, being from 1861.

- (5) Starting in July, then, you could not come through in the same season; and wintering in the mountains northeast of us would cause much expense, the loss of many animals, and much suffering amongst the men.

And today, both *starting* and *beginning* are commonplace in these constructions. Similar arguments can be made for the gerund-participles listed in tables 2 and 3 and immediately below that. None of these are entirely typical prepositions. Rather they seem to blur the distinction between participle and preposition. They are somewhat more participle-like in the dependents they permit, particularly adjuncts (e.g., *turning briefly to weather*; see *CGEL*: 611).<sup>25</sup> This demonstrates the perhaps obvious point that branching into categories is gradual both within populations – not everyone internalizes the innovations at the same time – and within individuals, the word taking on some characteristics of the new category while retaining elements from the old. It appears, then, that the process of reanalysing gerund-participles as prepositions has not slowed down as much as was previously assumed.

### 3.1.2 *Granted, given*, and other past participles

It is also worth considering past participles as a source for new prepositions. Notably, we identify six past participles that have become prepositions (*given, granted, gone, provided, based* and *compared*) where the *OED* lists none. It does, however, label words like *provided* as ‘conjunctions’. While we have not tracked down the history of each, we find that prepositions *granted* and *given*, at least, are newer than all but the newest of the examples in table 1. The reason for assigning these to the category of determinatives, as with *beginning*, is the ability to function as a non-predicative adjunct, as in (6), the earliest we were able to discover in COHA.

- (6) (a) Given the planet, it is still necessary to add the impulse; (1844)
- (b) Given that wealth is to be sought, this and that is the method of gaining it. (1852)
- (c) Given the velocity at any distance from the centre of rotation, the velocity at any other distance can be determined. (1851)
- (d) Granted that the act of a cruiser in visiting the wrong vessel, like that of the sheriff in arresting the wrong person, is a tort, must there be no cruisers to break up the slave trade, and no sheriffs to arrest persons by due process? (1858)

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<sup>25</sup> Thanks to Vedran Dronjic (personal communication, July 13, 2012) for pointing this out.

(e) Granted the necessity of an organized service, how shall appointments be made? (1896)

(f) Granted the idea of an alphabet, it requires no great reach of constructive genius to supply a set of alphabetical characters; (1904)

It is difficult to automatically identify *given* and *granted* as prepositions since the participles are far more common, the prepositions are not tagged as such in the corpora, and we have been unable to identify search strings that are unique to the preposition. The best search strategy we discovered was to search for these as the first word in a sentence followed by subordinator *that*, but even this is far from perfect. Thus, figure 10 showing the frequency of the strings *Given that* and *Granted that* should be taken as very tentative. It indicates that, at least in this extremely limited syntactic environment, the words began their reanalysis, in the 1850s, with this use of *granted* peaking in the 1960s at 0.94 tokens per million words of running text. Just as *granted* was losing steam as a preposition, *given* appears to have taken over, its frequency climbing dramatically each decade from the 1960s to the 2000s.

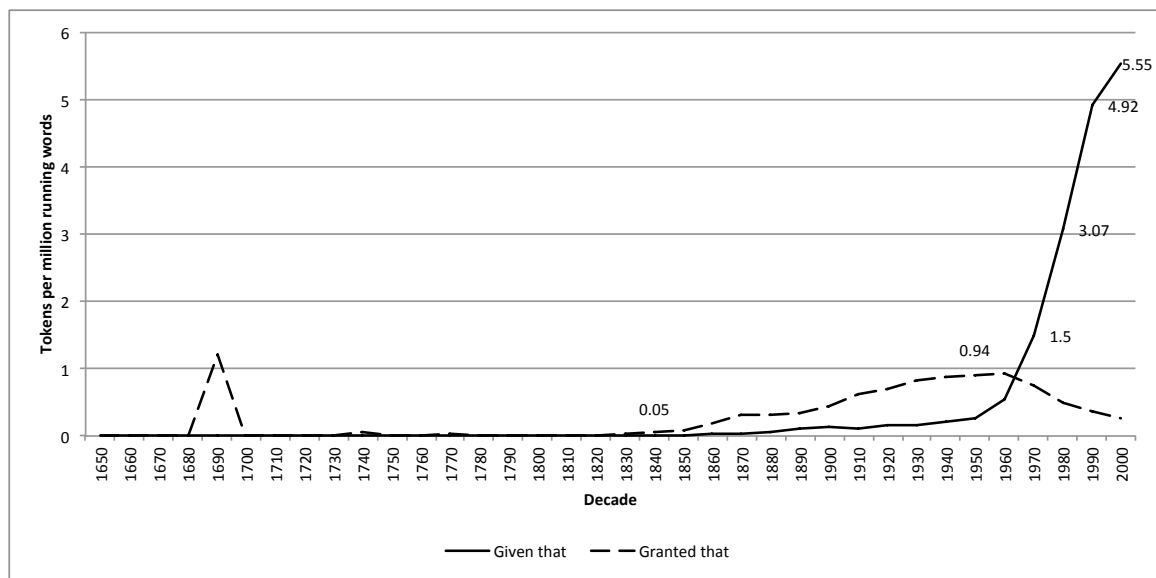


Figure 10.

*The frequency of Given that and Granted that in OMB from 1650 to 2009. The blip in the 1690s is three spurious hits.*

A final example of a recent de-participial addition to the preposition category is *based*. The sense of interest is that listed by the *OED* as *base*, v.3 2., ‘*trans.* To place *on* (also *upon*) a foundation, fundamental principle, or underlying basis. Freq. in *pass.* Cf. *BASED adj.*<sup>3</sup> 2. (Now the dominant use.)’ As with the other de-participial prepositions, our classification is based on its ability to function as a non-predicative adjunct, as in (7).

(7) (a) He has been vilified by journalists who obviously (based on what they write) understand little about social-science research. (Smith 2012)

(b) Based on the literature, we recommend that elementary school counselors do their part by encouraging more collaboration among all relevant stakeholders. (OMB)

(c) Based on an analysis of 46,000 audited tax returns from 2001, the Internal Revenue Service estimates that the government loses about \$300 billion a year. (OMB)

(d) Based on the April selling rate, present stocks equal a 58-day supply. (OMB)

This function is particularly common at the beginning of sentences, so, in an effort to capture prepositional *based*, we searched OMB for *Based on*, and, as shown in figure 11, found that there has been a dramatic increase in this usage, its frequency being almost 19 pmw in the 2000s, more than 20 times its frequency a century earlier.

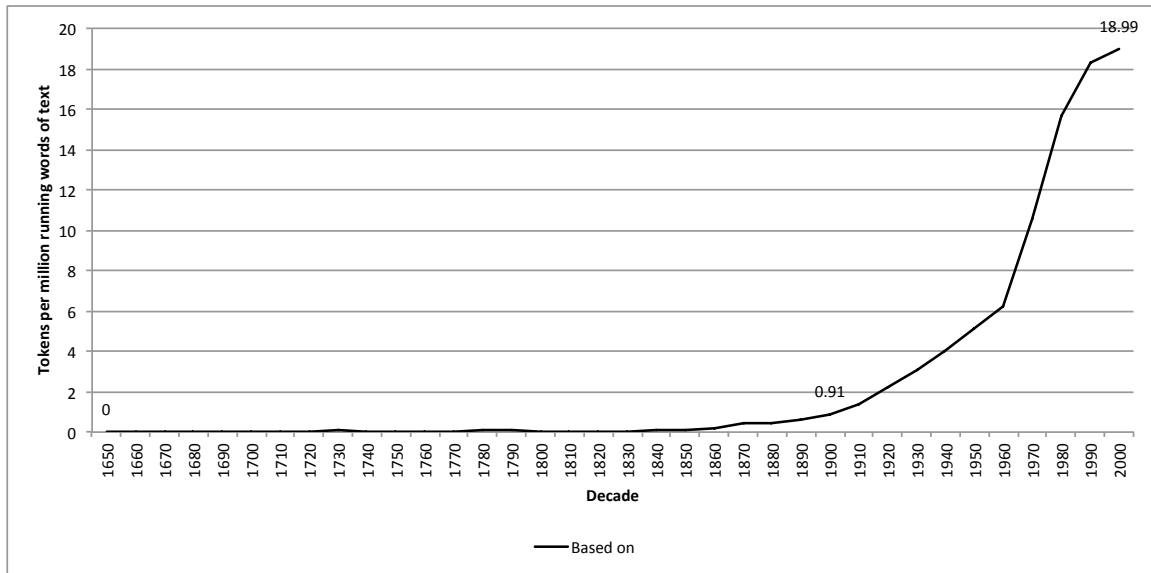


Figure 11.

*The frequency of Based on in OMB from 1650 to 2009.*

All in all, then, it seems the process of creating new prepositions from participles, continues at a rate of perhaps a few per century. It may even be the case that, as the number of de-participial prepositions increases, these may invite even more innovation.

### 3.2 Conversion from adjectives

There is evidence that some adjectives, too, have recently become prepositions. These include *clear*, *level*, and *additional*. *CGEL* proposes a number of tests to distinguish between adjectives and prepositions:

- i Prepositions but not adjectives can occur as head of a non-predicative adjunct in clause structure.

- ii AdjPs, other than those restricted to attributive or postpositive function, can mostly occur as complement to *become*; in general, PPs cannot.
- iii Central adjectives accept *very* and *too* as degree modifiers, and have inflectional or analytic comparatives and superlatives; in general, prepositions do not.
- iv Central prepositions license NP complements; in general, adjectives do not.
- v Central prepositions accept *right* and *straight* as modifiers; adjectives do not.
- vi Prepositions taking NP complements can normally be fronted along with their complement in relative and interrogative constructions, as in *the knife [with which she cut it]* or *I don't know [to whom you are referring]*; in general, adjectives cannot. (p. 606)

An observation that might be added is that PPs, but not AdjPs or adverb phrases (AdvPs), function as goal complements to certain verbs such as *put*, *place*, *stay*, *head*, *dart*, and *slither* (CGEL: 605).

### 3.2.1 *Clear*

There is no reason to doubt that in cases like *The water is clear* the word *clear* is a predicative adjective. It is the OED senses A.18.c., ‘with *of*. Quit, rid, free’, and d., ‘in such phrases as to *get or keep (oneself) clear*, to *steer clear*, *go clear*, *stand clear*’, that we are interested in. For d., the OED comments that ‘the adjective passes at length into an adverb’. Under the CGEL framework, though, *clear* in both senses is a preposition, usually taking an *of*-PP complement, in virtually all respects. It does not behave like a preposition with respect to tests i and iv, but in all other respects the word is similar to many prepositions in its syntactic distribution.

Test ii argues against the relevant senses of *clear* being an Adj. The string <sup>?</sup>*\*become clear of* (including all forms of *become*) does not appear in the 450 million word Corpus of Contemporary American English (Davies, 2008–). In COHA, it appears only twice. OMB shows the string as consistently around 0.01 tokens per million words of text (pmw), and the majority of these appear to be spurious hits (e.g., *became clear of mind*). In contrast, in 2000s, the string *become clear* (again, including all forms of *become*) occurs with a frequency of 8.87 pmw, and the string *clear of* (excluding the verb *clear*) is 3.57 pmw. Thus, *become/became clear of* is three orders of magnitude less common than either *become clear* and *clear of*. The frequency data, then, suggests that with respect to test b), *clear* is more like a preposition than an adjective for the relevant senses.

Considering tests iii and v together, we find evidence for *clear* both as an adjective and as a preposition. There is only one example in COHA (7c) and no instances of *too/straight/right clear of* in COCA, and only one of the eight examples of *very clear of* is relevant (i.e., *I'd steer very clear of politics*). OMB shows all four strings to be extremely rare in published books (each < 0.03 pmw in 2000). The string *very clear of* is

most common, about one order of magnitude more so than *too clear of* and *right clear of*, but most of its hits pertain to sense other than the one we are interested in. In a broader Google search, however, there are many relevant instances of both *right clear of* as in (7a) and even a number for *straight clear of* as in (7b), which provide some weak support for *clear* as a preposition.

- (7) (a) The ship lifted right clear of the water, then dropped back on the sea.
- (b) When tuna are targeting half beaks, the bluefins will often propel themselves straight clear of the water.
- (c) commonly when a man comes to a certain age he steps right clear of the law. (COHA)
- (d) He pulled right clear of Lewis, who is one of the best sprinters in Australia when fresh. (OMB)

Turning to test iv *clear* is unlike the core prepositions in that, rather than taking an NP object, it requires an *of*-PP complement. Nevertheless, passing test iv should be seen as evidence against an adjective analysis, but failing it should not be taken as evidence against a prepositional categorization because many prepositions do not take NP-object complements, as we explained in the introduction. Thus, this test is inconclusive.

Test vi concerns preposition fronting. Fronting, itself, belongs to formal registers, and so we are unlikely to find it with innovative prepositions, if *clear* is newly a preposition (note that it may be the case that *clear* has been a preposition for centuries and has simply escaped our notice. Plausible examples exist from at least 1600 (i.e., 1600 Shakespeare *Merchant of Venice* i. i. 134 *How to get cleere of all the debts I owe.*)). Nevertheless, examples can be found, even in published academic books, as in (8) from OMB.

- (8) (a) By degrees, our road led us through a wood composed of lofty trees, such as are common in the West India Islands; having got clear of which, we at length began to descend... (OMB)
- (b) The necessary result is the veto to which he so much objects; and to get clear of which, he informed us, was the object for which the present Constitution was formed. (OMB)
- (c)...she forgot the font, so that her toes stumped against its estrade; in getting clear of which, she stumbled... (OMB)

Up to this point, we have been chiefly interested in distinguishing between the adjective *clear* and a preposition *clear*. But as pointed out earlier, the *OED* posits an adverb as well. A situation that clearly distinguishes between prepositions and adverbs is in the goal complement function to *put*, *head*, and *dart*. ‘Prototypical adverbs, those formed from adjectives by suffixation of *-ly*, do not occur in these positions’ (*CGEL*: 605). We were unable to find examples in COCA, COHA, or OMB of *put* (something)

*clear of, head clear of, or dart clear of.* In a Google news search, however, relevant examples do occur, mostly in sports contexts, as they do in a general Google search. They are not, however, common. Much more frequent are *steer, stay, keep, get, stand, and remain clear of.*

Overall, then, it seems that *clear* has developed as a marginal preposition, acceptable mostly in informal situations among a limited set of English speakers.

### 3.3 Conversion from nouns

It is highly unusual for conversions from noun to preposition to occur, but there does appear to be a recent case of this in Australian English. The noun *bush* has acquired a use as an intransitive preposition meaning ‘into the hinterland’. Australians who enjoy camping talk about ‘going bush for a few days’. A plaque in the Brisbane Arboretum giving information about the habits of the brush turkey says that the eggs are incubated in a large mound of composting material assembled by the mother, and when they hatch the chicks ‘scramble to the surface and head bush on their own’. The verb *head* takes an obligatory directional PP complement (*We headed into town* but not \**We headed*). *Bush* is not destination-oriented (which is why it cannot be modified by *right* like destination-oriented directional prepositions), but does act as a directional preposition.

### 3.4 Conversion from prefixes

We also find prefixes becoming unglued from their bases and developing preposition branches. The pair *pre* and *post* along with *anti* seem to be closest to having evolved full prepositional status. The *OED* lists *pre* and *post* as prepositions with the earliest attested uses being 1960 and 1965 respectively. A search for the string *pre or post the*, turns up nothing in the corpora, but returns many hits from a general Google search, some of which are listed in (9).

- (9) (a) You choose your tour dates pre or post the meeting.  
(b) Was a messianic view of Isaiah 53 pre or post the common era?  
(c) ...either pre or post the wedding celebrations...

And it is only slightly less easy to find prepositional examples of *anti* like (10).

- (10) Is Tom Ford really anti the Internet? (*The Daily Telegraph* 15 September 2010)

Again, these seem to be largely limited to informal registers.

### 3.5 Compounding

Another minor source of new prepositions is compounding: the joining of two or more words into a new word that is written as a single word (e.g., *on + line* → *online*) or that is written as a sequence of words (e.g., *2 take away 1 is 1*). *Online* and its antonym *offline*

belong with the prepositions by virtue of their ability to function as complement to *be* and to verbs that take directional PP complements such as *head* (e.g., *consumers head online*).

We are interested in the sense of *online* that the *OED* lists as B. *adv.* 1. *Computing.* a., ‘With processing of data carried out simultaneously with its production; while connected to a computer, or under direct computer control’, and b., ‘By means of or over a computer network, esp. the Internet’. The earliest example for a. is from 1950 and for b. is from 1972. Until 1987, when the first instance of *online* appears, cited examples are all either as *on line* or *on-line*, and there is no obvious reason to analyse them as anything but PPs. This simple loss of a space is insufficient reasons to toss the word into the adverb bin. Rather, these are two new prepositions.

Some dictionaries (e.g., *Collins English Dictionary* 1994) already recognize *take away* as a preposition, though the recognition is by no means universal. It is analogous to *plus* and *minus*, which are widely recognized as prepositions. Its use, however, is restricted to that single context, making analysis difficult. This usage seems to have arisen early in the 20th century. Examples such as (11) can be found from 1926.

(11) 11 take away 6 leaves 5 (Inskeep 1926: 143).

In another example, Beckner and Bybee (2009) argue strongly that *in spite of* is a constituent. It seems likely that it is at least a potential word. Although it seems possible to insert a supplement between *in spite* and *of* (e.g., *in spite, too, of vast European wealth*), which would argue against *in spite of* as a compound word, *in spite* has been followed immediately by *of* in 99.45% of the cases over the last half of the 20th century in OMB, as shown in figure 12.

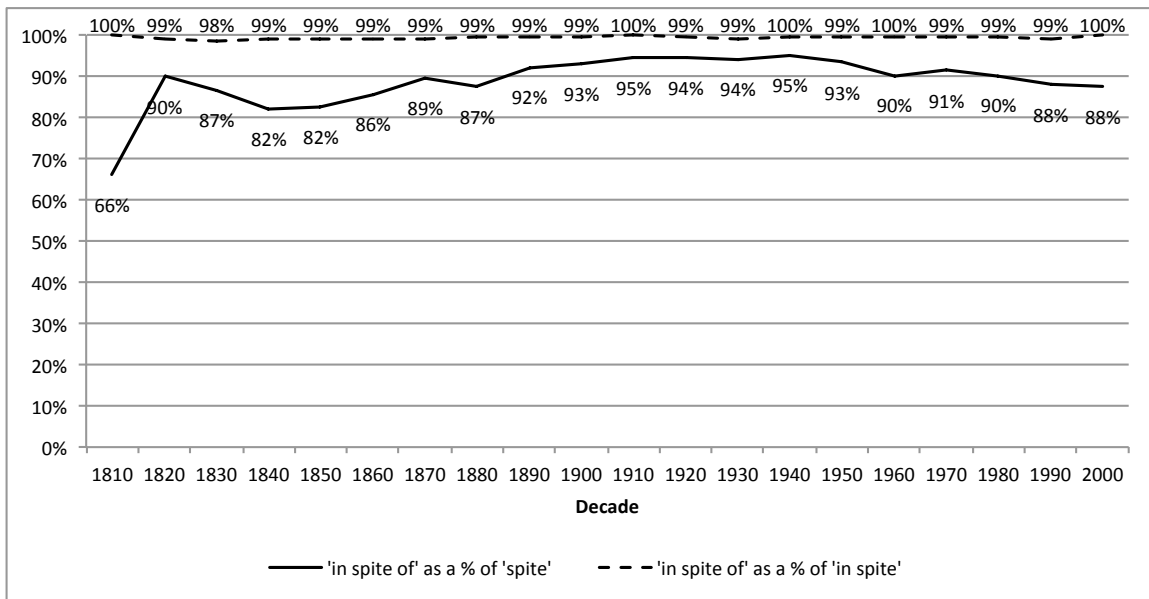


Figure 12.

*The string in spite of as a % of spite and in spite in OMB.*



Similarly, the existence of coordinations such as *in spite of this and of that*<sup>26</sup>, as in the phrase structure shown in figure 13, would suggest that the *of* phrase is a separate constituent. There is, however, only one such instance in COCA<sup>27</sup>, which has data from 1990 on, and none in COHA since the 1950s, suggesting that *in spite of* has indeed moved towards becoming a constituent if it has not already become one.

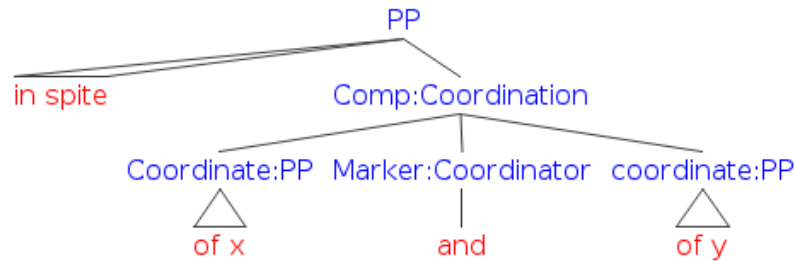


Figure 13.

*The phrase structure of coordinated of phrases in in spite of x and y.*

It is also likely, though difficult to establish, that, like the prepositions discussed above which have split from the participle rather than supplanted it, a compound preposition *in spite of* has arisen alongside the analysable sequence (for counter-arguments see *CGEL*: 620–623).

#### 4. COORDINATORS

*CGEL* claims that the following are well established coordinators: *as well as*, *plus*, *including*, *instead of*, *along with*, *let alone*, *not to say* and *rather than*. We will consider two of these along with *versus*, *cum*, and *slash*.

##### 4.1 *As well as*

The *OED* has examples for *as well as* denoting inclusion (sense V.20.d.) from c1449, but these join only NPs until PPs are linked in 1719 (12a) and AdjPs are linked in 1796 (12b). Examples with finite VPs can also be found (12c).

(12) (a) by the figure of Virtue, as well as by the word it self (*OED*)

(b) most spirited as well as excellent (*OED*)

(c) *Boiling or roasting (wrap the insects in leaves) kills any bacteria, as well as renders the proteins more digestible* (COCA)

<sup>26</sup> Note also that it is possible to break up fully conventional morphological compounds as in this example from 2002 found in the Google Books Corpus: *Any and everything can be subjected to such distancing, and thereby converted into something that takes effect as art.*

<sup>27</sup> <http://corpus.byu.edu/coca/?c=coca&q=17354743>

This ability to link various types of constituents is characteristic of coordinators and not typical among prepositions. The noisiness of the data make interpretation very difficult, but the beginning of a reanalysis of *as well as* as a compound coordinator may have been in the early 18th century.

#### 4.2 *Plus*

Although *plus* isn't a typical coordinator – it can't link a wide variety of categories – in colloquial language it links two independent clauses as in (13).

- (13) Lutz minced no words and used no jargon, plus he was funny and wise. (Johnson 2005: 177)

Again, the numbers are small and the data is noisy, but *plus* appears to have picked up this capacity very recently, as shown in table 4, which shows *plus* + PRON + V in OMB roughly doubling its frequency each decade since the 1960s.

Table 4.

*The frequency of plus + PRON + V in OMB from the 1940s to the 2000s.*

Decade	1940	1950	1960	1970	1980	1990	2000
Corpus size × 1,000	5,138	5,379	5,162	4,931	5,273	5,540	4,755
Tokens	8	12	18	50	155	308	649
Tokens pmw	0.00	0.00	0.00	0.01	0.03	0.06	0.14

Dictionaries often identify *plus* as a preposition, but it is not typical of that category either: 'It differs from prototypical prepositions in that it does not permit fronting (*\*Plus other control refinements the cost-billing system has reduced the deficit*) and only very rarely occurs as head of a predicative complement' (CGEL: 1319).

#### 4.3 Versus, cum, and slash

The Latin participle *versus* and the preposition *cum* arrived in English in the mid 15th and late 16th centuries respectively according to the *OED*. English dictionaries almost universally categorized them as prepositions, though Merriam-Webster's online dictionary recognizes *cum* as a 'conjunction'. The *OED* calls it a preposition, but notes, 'Freq. used as a connective word forming compounds to indicate a dual nature or function'. Although neither are particularly good examples of coordinators, they do have a number of coordinating properties, in particular, the ability to link multiple constituents as evidenced in (14).

- (14) (a) The religious cum political cum economic nature of these agrarian rituals of early leaders, including the emperors (Ohnuki-Tierney 1992: 200)

(b) Phase III randomized study of cisplatin versus paclitaxel versus cisplatin and paclitaxel in patients with suboptimal stage III or IV ovarian cancer. (Muggia, Braly, et al. 2000: 106)

A similar situation holds for *slash*, which is variously categorized as a noun and preposition (The *American Heritage Dictionary* considers it an informal conjunction). It too can link multiple constituents as in (15a). Coordinating *slash* appears to be fairly new. The earliest example we can find is from 1992 (15b).

- (15) (a) Dear God slash Allah slash Buddha slash Zeus - I'm a big fan of covering all your bases. (COCA)
- (b) Meet urban planner Campbell Scott (“a realist slash dreamer”). (Short takes: 74)

## 5. SUBORDINATORS

The subordinators (‘subordinating conjunctions’ in the traditional literature; ‘complementizers’ in most generative grammar literature) make up what is probably the slowest-growing category of words; yet even within the subordinators there are signs of slow accretion. The two words that have been most clearly shifting into the subordinator category are *if*, *when*, and perhaps *how*.

What has been happening with *if* looks like the emergence of a new subordinator marking irrealis declarative content clauses. The development is not that new, but it has not been recognized by most grammarians. The existence of the new item is particularly clear from this attested 18thC example:

- (16) Imagine if they could read without indignation expressions which treated their rights with contempt; or if they could have permitted any of their generals so far to forget the respect he owes his sovereign, as to pay attention to any who did not acknowledge the national sovereignty. (OMB: 1796)

There is no way to read the *if* here as introducing a conditional adjunct. First, semantically, the addressee is not being told to imagine something provided a certain condition is met: no conditional prothesis is intended. And second, *imagine* needs a complement: to use a simpler case for expository purposes, *Imagine if you could fly* is not an alternate form of \**If you could fly, imagine*; it is an alternate way of expressing *Imagine being able to fly*.

We believe that all of the following 17thC to 19thC examples from OMB corpus should probably be analysed in the same sort of way:

- (17) (a) and I think it would be better if Men generally rested in such an Idea of *God*, without being too Curious in Notions about a Being, which all acknowledge incomprehensible whereby many, who have not strength and clearness of Thought, to distinguish between what they can, and what they cannot know, run themselves into or Superstition or Atheism, making *God* like themselves, or (because they comprehend any thing else) none all. (OMB: 1693)
- (b) It would be strange if the Earth should not move, when such evident Appearances require such a Motion. (OMB: 1734)

(c) But it would be surprising if any two ancient coins were now found struck with the [s]ame die. (OMB: 1816)

The irrealis *if*-clause construction has been studied in detail by Pullum (1987), and more recently by Rocchi (2011), who provides additional syntactic arguments. In brief (we do not have space to illustrate these points here), irrealis *if* does not prepose the way conditional adjuncts readily do; it does not define a non-affirmative polarity context the way conditional *if* does; it cannot be paraphrased with *unless*; it cannot be modified by *only*, *but only*, or *even*; it introduces clauses that can be used as polite requests (*I'd prefer it if you left, please*) where conditional *if* does not (*\*If you left, I'd prefer it, please*); it cannot take subclausal constituents as its complement the way conditional *if* does; it does not define its complement as an island for extraction (note *I enclose a contract which I'd be grateful if you'd sign \_\_ and return \_\_ to me*); it introduces a clause that can be the focus of a pseudocleft (*What would be great is if she came too*) where conditionals cannot; and so on. Irrealis *if* clauses show a strong preference for being extraposed, and they do not occur as subjects; but we believe it is clear enough that the item that introduces them is not the conditional preposition *if* but a new item belonging to the subordinator category.

As Rocchi notes (section 2.3), it seems that *when* and *how* have also been undergoing a similar development. Rocchi illustrates with two examples with *hate*, which is unusual in allowing unextraposed *when*-complements and *how*-complements:

(18) (a) I hate when people say that learning Latin teaches you to be logical.

(b) I hate how classicists think they know more about grammar than linguists.

We believe that all of the following attested examples are probably instances of the new subordinator *when*:

(19) (a) When with her, I always regretted when any one else spoke however excellent, for to me there was a charm in her words (COHA: 1829)

(b) People hate when the doorbell rings in the middle of the night. (COHA: 1960)

(c) I love when this happens. (COHA: 1970)

(d) I love when Natalie Wood is in the tub and has her breakdown. (COHA: 2000)

(e) I like when they play the record in the morning when the flag goes up. (OMB: 1974)

Similar examples with *how* are common enough with the same class of matrix verbs (*like*, *love*, *hate*, etc.). There are Facebook pages headed *I hate how spiders just sit there on the walls and act like they pay rent!* and *I hate how you get mad at me for something but when you do it it's ok.*

## 6. CONCLUSION

The evidence, taken together, shows that the ‘closed’ categories examined here continue to add members from time to time, more or less in proportion to their size. Moreover, movement is not always accretive: words like *said* flirt with determinative membership only to pull away again. Note also the number of words in table 1 marked as archaic or obsolete. Some fuzziness in the category boundaries, along with complaints by prescriptive grammarians about new usages, may act as camouflage for words as they adopt new characteristics, making their forays into new territory difficult to notice and describe. This difficulty is, perhaps, compounded by the general morphological and semantic unity between the established words and their new branches. Nevertheless, free and readily available tools such as OMB, COHA and COCA, allow almost anyone with the right mindset and interest to quickly amass suggestive evidence of category change.

We have discussed a few dozen such changes and miscategorizations that have been largely ignored. We hope to see these included in future reference books. Further attention to the novel or overlooked words that fit syntactically in these categories will no doubt lead to more such discoveries.

## ABBREVIATIONS

*CGEL* = Huddleston, Rodney & Geoffrey K. Pullum et al. 2002. *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press.

*COCA* = Davies, Mark. 2008–. The Corpus of Contemporary American English: 450 million words, 1990–2012. <http://corpus.byu.edu/coca/>

*COHA* = Davies, Mark 2010–. The Corpus of Historical American English: 400 million words, 1810–2009. <http://corpus.byu.edu/coha/>

*OED* = *Oxford English dictionary* online. <http://dictionary.oed.com/>

*OMB* = Davies, Mark 2011–. Google Books (One Million Books) Corpus (89 billion words, 1500–2009). <http://googlebooks.byu.edu/>

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