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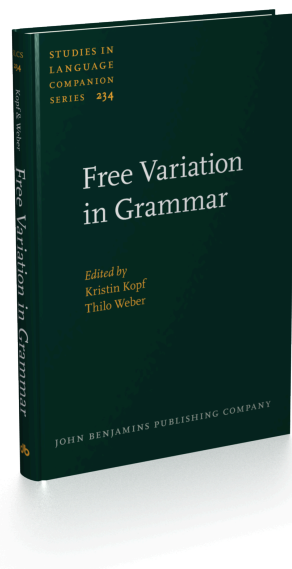
## Blocking factors and free variation

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Pages 74–98 of

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# Non-verbal plural number agreement. Between the distributive plural and singular

## Blocking factors and free variation

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Unlike Slavic languages, such as Polish and Czech, English is assumed to prefer distributive plural agreement between the plural subject and the noun in the predicate part of the sentence. The aim of this paper is to verify this claim and (since this preference is apparently not without exceptions) provide an overview of scenarios in which the tendency for the distributive plural is overruled. We start with a classification of factors blocking the use of the plural and enabling the use of distributive singular. The preference is tested by reviewing the occurrences of two constructions, *lose one's life* and *lose one's job*,<sup>1</sup> in the BNC<sup>2</sup> and COCA,<sup>3</sup> In view of the distributive singular cases in the dataset, the chapter investigates the possibility of the distributive plural and singular cases being in a free variation and proposes a new condition for them to be seen as such: they need to have a similar distribution across different genres.

**Keywords:** non-verbal number agreement, distributiveness, plural concord, free variation, genre, corpus linguistics, English

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1. They were chosen as typical examples where Polish/Czech and English differ.
  2. The British National Corpus (from Oxford University Press). Available online at <https://www.english-corpora.org/bnc/>.
  3. The Corpus of Contemporary American English (COCA). Available online at <https://www.english-corpora.org/coca/>.

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## 1. Introduction, structure and relevance of the chapter

Interestingly, English appears to differ from Slavic languages like Polish and Czech<sup>4</sup> by preferring the distributive plural in non-verbal agreement between the subject and the noun (typically an object) in the predicate part (e.g. *Six people lost their lives yesterday*).<sup>5</sup> The difference is potentially of typological importance, but before a full-scale contrastive research is embarked on, a pilot study of the actual situation in English is needed. To achieve this goal, the present chapter discusses the scenarios in which the general tendency for the distributive plural is overruled and investigates the possibility of some of the distributive plural and singular cases being in free variation.

As a first step, we review the literature on the subject, then summarise the factors blocking the distributive plural suggested by Sørensen (1985). Section 2 introduces the concept of free variation as a possible explanation for the alternative forms. Two English corpora, the BNC and COCA, are harvested for the data on the distributive plural and singular occurring in the two constructions under study. The data are analysed in Section 3, specifying the methodology and presenting the results. Section 4 outlines the results of genre and free variation investigation. The findings are assessed in Section 5.

### 1.1 Distributive plural in the literature

The concept of distributiveness in English has been mentioned by several authors. Aarts et al. (2014:126) note that “[d]istributive plural concord is common in expressions such as *The children all had such eager faces* (where, naturally, each child had only one face), but a distributive singular is often possible, e.g. *They all had such an eager expression*”. Similarly, Quirk et al. (1985:768) say that “[t]he distributive plural is used in a noun phrase to refer to a set of entities matched individually with individual entities in another set”, as in (1):

- (1) Searchers have lost their lives trying to save others; helicopters have gone down. (COHA: 2005; MAG)

What is less known, however, is the actual distribution of the distributive plural. To begin with, it may occur with nominal clause elements in various functions,

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4. Not only Slavic languages seem to be different in this regard: German, too, has less preference for the distributive plural than English. The authors of the present chapter are in the process of preparing a typological study of the problem.

5. The Polish translation of this sentence features the use of the distributive singular: *Sześć osób straciło wczoraj życie*; similarly, the version in Czech: *Včera přišlo o život šest lidí*.

typically objects and subject complements, but also adverbials (see (2)) and even the modifiers of these elements. Schibsbye (1970: 107) reports on coordinated pre- or postmodifiers implying plurality and gives the following examples: *countless words were adopted in the sixteenth and early seventeenth centuries/boys between the ages of 14 and 18*.

- (2) Drivers stayed in their vehicles as volunteers placed the groceries in the trunk or back seat. (NOW: 2020)

In our study, for purposes of manageability and clarity, we only focus on the subject–object agreement and examine the use of the distributive plural on objects. We see the subject–object non-verbal number agreement as a prototypical and quintessential relation; thus, studying it is a necessary first step before one looks into other functions listed in the paragraph above.

Sørensen (1985: 338) and many others (e.g. Quirk et al. 1985: 768; Koichi 2012: 101) claim that the tendency towards a distributive plural object is the general norm in the English language. Dušková (2006: 430) adds that, in this respect, English differs from Czech. This means that a typical English sentence with a plural subject is likely to have nouns in object position in the plural as well, i.e. there is a relation of ‘correlative distribution’ between subject and object. Still, as Sørensen (1985: 338) notes, observations and claims that the distributive plural is the norm are frequently accompanied by hedging expressions such as *probably*, *most likely*, *normally*, *usually*, etc.; cf. Zandvoort (1957: 263), Scheurweghs (1961: 11) and Schibsbye (1970: 107). This is due to the fact that the use of singular nouns in the predicate part of the clause, or the *distributive singular*, is often also acceptable (see (3) and (4)) or, in some cases, even strongly preferred (see (5)). Consequently, the chapter investigates the interplay between distributive plural and singular objects.

- (3) I can understand why people in my administration are anguished over the fact that people lost their life. (COCA: 2004; NEWS)
- (4) You’re telling them they have to put that aside or risk losing their job. (COCA: 2001; SPOK)
- (5) Centuries later, many sushi eateries have made their way across the United States and St. Louis. (COCA: 2012; BLOG)

Generally speaking, distributive plural agreement tends to be seen as the norm in modern English. According to Koichi (2012: 101), “Where more than one individual are being spoken of, pluralisation will take place of things of which they (usually) possess only one instance (head, heart, soul, name, life, etc.)”. This statement goes in line with what Zandvoort (1957: 263), Schibsbye (1970: 11), Sørensen

(1985: 338), Quirk et al. (1985: 768) and Dušková et al. (2006: 430) claim: in English, there is a strong tendency towards the distributive plural, but the use of the singular is, at least at times, also acceptable. The formulation of the exact ‘rules’ governing the principles of noun–noun number (or distributive plural) agreement does not seem to be an easy task, causing unease to writers on good English usage such as Vallins (1960: 163), who even concludes that there is no rule governing the agreement. Along similar lines, Casagrande (2013) claims that “what’s sometimes called subject–object agreement isn’t as well known – quite possibly because it’s futile to even think about”.

## 1.2 The distributive plural – the general norm and blocking factors

In spite of the doubts expressed by Vallins (1960: 163), the paper by Sørensen (1985) attempts to provide rules as to when the use of the distributive plural is blocked and thereby identify the scope of the distributive plural in English. Among the various blocking factors, he lists (Sørensen 1985: 347): (i) avoidance of ambiguity; (ii) fossilisation (invariability force); (iii) singularisation; and (iv) countability-related factors (uncountable nouns offer no choice but the singular; some nouns are both countable and uncountable; some countable nouns are *singularia tantum*, dispreffering the plural). Two more factors can be added to this list, namely, (v) the wish to indicate joint possession (Rappaport 2017) and (vi) the wish to convey ideas of figurative, abstract or universal kind (Follett 1998; also Koichi 2012: 110). The six subsections below (1.2.1 to 1.2.6) elaborate on and give examples of the different blocking factors listed above. Section 1.2.7 discusses whether the presence of these factors always blocks the use of the distributive plural.

### 1.2.1 Avoidance of ambiguity

Sørensen (1985); Quirk et al. (1985) and, more recently, Rappaport (2017) note that occasionally, the use of the singular might be necessary if the use of the plural form happens to be too ambiguous. The example Rappaport provides is given in (6). If the plural form (*animals*) were used, the children might hesitate over whether they should name only one animal or many different animals. The wish to avoid ambiguity can also be understood as the intention of the writer to underline the fact that, e.g. a group of people has to deal with one concrete common problem; see (7) below:

- (6) We asked the children to name their favourite animal. (Rappaport 2017)
- (7) Whatever he’d intended to communicate, Jamal thought, he was done with it, and if humans were too dense to figure it out, that was their problem.  
(COCA: 2007; FIC)

### 1.2.2 Fossilisation/the force of invariability

*Fossilisation* occurs with invariable set phrases or idiomatic expressions such as, for instance, *at the end of one's tether*, which are used in the singular regardless of their singular and plural reference (Sørensen 1985: 342–343). The process of fossilisation and the state of being fossilised is reflected in the division of idioms into syntactically frozen idioms and syntactically flexible idioms (cf. Gibbs & Gonzales 1985; Yusifova 2013; and others). Idioms belonging to the former group cannot undergo a change with regard to the number of the noun functioning as object, e.g. *turn a deaf ear* (\*ears), *fall on deaf ears* (\*ear), while idioms of the latter group allow for some variability of the form, e.g. *strike at the root/roots of the evil*.

Enlarging on this observation, Sørensen (1985: 342) points to the fact that among the examples of set phrases which do not change their form, many expressions containing anatomical terms as objects or complements can be found; for instance, *to keep an eye on something*; *to take somebody under one's wing*; *to lift a finger*. For illustrative sentences, see (8) and (9).

- (8) In the 1950s, feminism had not yet freed women from the home and so men didn't need to lift a finger. (GloWbe: Great Britain)
- (9) Considering the inquisition and many of the popes having mistresses they don't have a leg to stand on. (GloWbe: United States)

### 1.2.3 Singularisation to achieve generalisation

*Singularisation* can be understood as the action of switching the viewpoint – from a plural to a singular perspective. Forsyth (1970: 174, quoted in Sørensen 1985: 345), defines singularisation as “the presentation of a recurrent action [...] by selecting one occasion, one complete performance, and holding this up as a sample of the recurrent phenomenon. This practice of quoting an instance may conveniently be called *singularisation* of a multiple action”. With regard to nouns, Wood (1957: 289) argues that singularisation might be used to achieve generalisation (or generic reference), as it is likely to take place when the plural noun is to represent the whole group or the whole species “so that what is said of all applies to each one” (see (10) and (11)).

- (10) They come to play checkers. If they need a haircut, they come to me. (COCA: 2012; SPOK)
- (11) Infants can suck on their bottle or pacifier to help ease the pressure. (COCA: 2006; MAG)

#### 1.2.4 Countability-related factor(s)

Sørensen (1985) mentions several instances where countability interferes with the distributive plural. Uncountable nouns, such as *information*, *sunshine* or *fertility*, invariably have a singular form, do not take an indefinite article (e.g. Clutterbuck 2000: 10) and cannot be pluralised. Apart from uncountables, there are also words which can be used in both a countable and uncountable sense, depending on the context. An example Sørensen (1985: 339) provides is the word *organisation*: it may refer to the *process of organising* something (an uncountable sense) or an *organised body* (a countable sense), and the distributive plural is then applied accordingly. He also mentions (1985: 341) the subclass of countable *singularia tantum* – nouns which behave like countables in the singular and take the indefinite article, but most usually do not undergo pluralisation. Sørensen's examples include words such as *lifetime*, *prey* and *airing*. *Disgrace* and *nuisance* are likely to behave in the same way. Sentences (12) and (13) provide examples from language corpora.

(12) Both parties are a disgrace to this country. (GloWbe: United States)

(13) People who long to be rich are a prey to temptation. (GloWbe: United States)

#### 1.2.5 The wish to indicate joint possession

It applies to cases in which two or more individuals share a singular thing (see (14) and (15)).

(14) We had planned to make a run to visit Bruce and Frances at their house – Lighthouse Animal Rescue. (COCA: 2012; BLOG)

(15) While traveling together, the two women got lost and consulted their map. (Rappaport 2017)

#### 1.2.6 The wish to convey ideas of a figurative, abstract or universal kind

This factor is very close to that of singularisation (1.2.3). According to Follet (1998: 211), the noun in the predicate part of the sentence “remains in the singular when what is plurally possessed is universal, abstract, or figurative”. Along very similar lines, Koichi (2012: 110) also recognises that the language users are more likely to use the distributive singular, if the meaning conveyed by the object is of a universal kind: “Our life = human life in general, life whosoever it may be – ‘life’ has no plural in this sense. Our lives = my life, your life, his or her life – distributive”. Another example given by Koichi (2012: 111) is the use of the rhetorical plural pronoun, the so-called *royal we* or *editorial* or *authorial we*; see (16) for an example.

(16) So long as our heart is beating, yours is too. (COCA: 2002; NEWS)

### 1.2.7 *Do blocking factors always block?*

A cursory look into the Corpus of Contemporary American English reveals that the blocking factors listed in 1.2.1–1.2.6 above seem to be of very different strengths.

A few preliminary searches in COCA show that e.g. with regard to fossilised or invariable idiomatic phrases (described in Section 1.2.2) such as *to make one's way* or *to lift a finger*, the use of the distributive plural is almost completely blocked. By way of an exploratory search, we entered the phrases *made their way* and *made their ways* into the online search engine of COCA. The raw frequency of the former is 1624, whereas for the latter, the frequency equals three; furthermore, two of these three cases are from the same source. For illustrative sentences, see (17) and (18).

- (17) As she and Sally had made their way through the airport, Kate had spotted plenty of tall, dark-haired men who obviously saw no reason to spend a hundred dollars at a fancy salon. (COCA: 2014; FIC)
- (18) Darlene blushed at another peal of laughter, as Britt, Ryan, and Erin made their ways to their cars. (COCA: 2003; FIC)

Even if we consider the fact that some of the 1624 cases of *made their way* may exemplify the use of the singular *they* (singular *their* in particular), the prevalence of the distributive singular is really dramatic. In (18) the distributive plural seems to have been chosen to emphasise the individuality of the people spoken about – e.g. the fact that they had one car each; and the cars were parked in different spots. Still, the rarity of such cases shows this does not seem to be a common practice. Whether one could term this usage as non-standard, an exception or simply writer's creativity remains open to question and does not constitute the subject of this chapter. All in all, the presence of invariable, fossilised phrases can be seen as a very strong blocking factor.

The wish to avoid ambiguity (Section 1.2.1) and the indication of joint possession (Section 1.2.5) also appear to be relatively strong blocking factors, but for different, probably very pragmatic, reasons. Logically, if the writer (or the speaker) wants to hint at the fact that a singular object is shared by, e.g. two people, they are likely to use the distributive singular to indicate this fact. Otherwise, the desired meaning will not be conveyed. Similarly, with regard to cases in which the author aims at being especially precise to achieve their purpose and to avoid ambiguity, the use of the distributive singular seems to be a conscious rhetoric strategy, serving a specific purpose.

The situation is, again, different with regard to the blocking factor described in Section 1.2.4, namely the presence of a *noun not (strictly) countable*. As corpus



searches in COCA show, uncountable nouns such as *knowledge*,<sup>6</sup> do seem to undergo pluralisation in certain contexts; see (19) and (20). So, sometimes both the distributive plural and the distributive singular appear to be possible – depending on the exact meaning the writer or the speaker intends. Also, Sørensen (1985:340) notes that “The problem of deciding whether a noun is countable or uncountable is (...) rather a tricky one” and that dictionaries do not always reflect current usage and the latest development. All in all, the very fact that a noun is labelled uncountable need not fully block the application of the distributive plural, especially when the plural form involves a shift in meaning (*sunshines* standing for *joys*).

- (19) (...) urban working class with roots in the labour movement, are able to articulate their knowledges within a shared frame of environmental justice.  
(COCA: 2010; ACAD)

- (20) The world ain't all sunshines and rainbows. (COCA: 2006; MOV)

The picture gets even more complicated with regard to *singularisation used to achieve generalisation* (Section 1.2.3). Sørensen (1985:347) gives two example sentences: one shows singularisation at work (see (21)), while the other is a counterexample (see (22)). The first one is taken from Wood (1957); the second one from the Longman Dictionary of English Idioms (LDEI: 1979). Both seem to be perfectly acceptable. Exploratory searches in COCA confirm the existence of cases in which both forms are possible; see (23), (24), (25) and (26).

- (21) Ostriches bury their head in the sand. (Wood 1957)

- (22) Referring to the belief that OSTRICHES bury their heads in the sand when they are in danger. (LDEI: 1979:347)

- (23) Animals make their homes with the resources they find around them.  
(COCA: 2012; MAG)

- (24) Some animals make their home in it. (COCA: 2011; MAG)

- (25) These results support previous studies which found that Hispanic women have difficulties behaving assertively (...). (COCA: 2001; ACAD)

- (26) Children with autism have difficulty understanding context, connecting new information to previously stated information (...). (COCA: 2014; ACAD)

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6. Collins Dictionary Online, s.v. *knowledge*, retrieved on November 6, 2020, from <https://www.collinsdictionary.com/dictionary/english/knowledge>.

Also in the case of the *wish to convey ideas of a figurative, abstract or universal kind* factor (see Section 1.2.6), there does not appear to be any mutual exclusivity between the distributive singular and the distributive plural. Sentences like (27) and (28) seem to be, from the reader's perspective, equally acceptable. How sure can we be that the author of (27) does not wish to convey any idea of universal kind? Similarly, how sure can one be that the distributive singular used in (28) indicates the author's intention to refer to *life* in a figurative, abstract or universal sense? These questions cannot be answered with the tools and methods of corpus linguistics. Even if it were possible to ask the authors, they might be unlikely to remember the exact intention they had in mind, as both of the examples probably instantiate spontaneous production – they are taken from the *spoken* genre.

- (27) Those two men lost their lives and according to the Iraqi government so did two others from the Muslim family living nearby. (COCA: 2009; SPOK)
- (28) More than 65 people lost their life after a cruise ship sunk outside of the islands of Paros. (COCA: 2000; SPOK)

All this seems to suggest that unlike the others, these two factors, *the wish to convey ideas of a figurative, abstract or universal kind* (Section 1.2.6) and *singularisation used to achieve generalisation* (Section 1.2.3), represent the weaker type of blocking factors, as in actual usage both the distributive plural and the distributive singular are possible. Importantly, in these cases, neither the use of the distributive plural nor the use of the distributive singular will make a given sentence unacceptable. It is, therefore, quite plausible to see these two factors as *enabling* the use of the distributive singular rather than *blocking* the use of the distributive plural because the use of the distributive plural is not truly blocked. Instead, using the distributive singular is a viable option, as a result of which both choices are acceptable and attested in language corpora, as exemplified by COCA; see (21)–(28).

### 1.2.8 Classification of blocking factors according to their strength

To sum up, after surveying the blocking factors identified by Sørensen and others, we come to the conclusion that three of them, *avoidance of ambiguity* (Section 1.2.1), *fossilisation* (Section 1.2.2) and *the wish to indicate joint possession* (Section 1.2.5) may be viewed as strong blocking factors (with very few or no exceptions). The countability-related factor(s) (Section 1.2.4) could also be seen as a relatively strong blocking factor; however, since the gradient and context-dependent nature of countability makes the assessment of the blocking force somewhat tricky, we may speak of strong contingent blocking factor(s). In contrast to that, we believe the two remaining factors, *singularisation used to achieve generalisation* (Section 1.2.3); and

*the wish to convey ideas of a figurative, abstract or universal kind* (Section 1.2.6) are factors enabling the use of the distributive singular without making the distributive plural unacceptable, inasmuch as in these cases, the difference between the use of the plural and the singular gets blurred. As a result, speakers have two options with apparently little or no discernible difference between them.

Table 1 presents the factors and our division of them according to their strength as discussed above.<sup>7</sup>

**Table 1.** The distributive plural blocking factors divided according to their strength

Strong blocking factors	Strong contingent blocking factor	Weak blocking factors (enabling distributive singular)
<ul style="list-style-type: none"> <li>– Avoidance of ambiguity (Section 1.2.1)</li> <li>– Fossilisation/the force of invariability (Section 1.2.2)</li> <li>– The wish to indicate joint possession (Section 1.2.5)</li> </ul>	<ul style="list-style-type: none"> <li>– Countability-related factors: noun(s) not (strictly) countable (Section 1.2.4)</li> </ul>	<ul style="list-style-type: none"> <li>– Singularisation used to achieve generalisation (Section 1.2.3)</li> <li>– The wish to convey ideas of figurative, abstract or universal kind (Section 1.2.6)</li> </ul>
Note: the use of the distributive plural is mostly blocked; there rarely are exceptions.	Note: the use of the distributive plural is mostly blocked, but sometimes there are exceptions.	Note: the use of the distributive singular is enabled, but the use of the distributive plural is still possible.

## 2. Free variation

The occurrence of both plural and singular objects with the two constructions in clauses with plural subjects and the uncertainty expressed by authors about the rules governing number preference in objects following plural subjects naturally raise the question of free variation between the distributive plural and singular in English. Free variation is very simply defined as “variation in which [...] forms can be used without any contrast or change of meaning” (Brown & Miller 2013: 170). As might be expected, the problem is to determine the limits of contrast or meaning change beyond which we can speak of free variation.

Given the existence of weak blocking factors which make the use of both the distributive plural and singular in a particular sentence possible, apparently without a significant difference in contrast and meaning, serious consideration of free variation is clearly warranted. With regard to sentences such as (21) – (28), it is

7. Nevertheless, it needs to be stressed that the list may not be complete and that there may be other blocking or enabling factors which were missed by the authors we refer to.

not possible to say which sentence in each sentence pair is, at first sight, more *acceptable*, *correct* or simply *better*. This makes the problem of deciding whether one should use the distributive plural or the distributive singular somewhat tricky. The fuzzy borders between the domains of the distributive plural and the distributive singular lead to conclusions such as Casagrade's (2013) "So what's the correct choice? There isn't one".

Casagrade makes a point of the importance of subjectivity and personal preference. Also, Sørensen (1985: 349) writes about "vacillation between 'change gear' and 'change gears'" and observes the usage sanctioning the distributive plural in some cases, the distributive singular in others, and cases in which both options appear to be equally good. It is those cases that seem equally acceptable with both the distributive plural and the distributive singular; see, e.g. (21) and (22) above, which argue for potential free variation in non-verbal number agreement.

A focused attempt to "factor out" *free variation*, also referred to as *free choice* in grammar, was made by Cappelle (2009: 19), who defines free choice as "the availability in a given discourse situation of two (or more) options none of which a calculation based on an exhaustive set of factors singles out as clearly the most appropriate in that situation". In his research on positional variability of verbal particles in English (see (29) and (30)), as a possible case of free variation, Cappelle (2009) mentions a few distinctions which might play a role in deciding whether a given case represents free variation or involves functional alternatives.

(29) Don't just throw away that wrapper. (Cappelle 2009: 83)

(30) Don't just throw that wrapper away. (Cappelle 2009: 83)

Among these distinctions there are, e.g. (i) the establishedness (entrenchment) vs newness (novelty) of a given phrase and (ii) literalness (transparency, compositionality) vs idiomaticity (opacity, non-compositionality) of a combination. In his analysis, he refers to Lohse et al. (2004) and Gries (2003), who both claim that idiomatic phrases split less easily than non-idiomatic ones. This finding bears similarity to what we see when we look at invariable idioms/fossilised phrases in which the number of their components does not change easily (see discussion in 1.2.2). Cappelle's conclusion is that free choice is "not an illusion in some cases", however awkward that may be for variational linguistics. He recognises both the possibility that two options simply cannot be factored out (true free choice) and the fact that a 'wrong' choice is sometimes made by a speaker, although the factors predict otherwise. He accounts for these possibilities by pointing out that determining factors are "seldom hundred per cent compelling" and typically operate as statistical tendencies. Also, the seemingly free choice may sometimes be the outcome of the "opposing influences of different factors" (Cappelle 2009: 19).

One of the aims of the present study is to examine whether at least some of the cases in which both the distributive plural and the distributive singular are acceptable might be seen as instantiations of free variation in grammar. The natural candidates for this are situations subject to the operation of what we term *weak blocking factors* or *distributive singular-enabling factors* (see Table 1). In these cases, the use of the distributive singular is enabled, but the use of the distributive plural is also possible, i.e. (21) and (22), or (23) and (24) very likely display free variation. On the other hand, we are disinclined to see (17) and (18) as instantiations of free variation, as the former exemplifies the generally accepted, substantially more frequent way of using the construction in question (the form *made their way* occurs 1624 times in COCA, whereas *made their ways* has a raw frequency of three). It is crucial that any case of potential free variation is acceptable by the language users and attestable in reliable language sources, such as corpora of the English language, containing authentic texts.

In order to put our discussion of free variation in the context of non-verbal plural number agreement on a firm basis, we have collected sufficient data to help us understand the picture more clearly. Data collection and analysis are described in the following sections.

### 3. The distributive plural and singular displayed by selected expressions in English corpora

To determine the actual incidence of the distributive plural and singular in the two constructions under examination, two corpora of the English language – the BNC and COCA – were consulted. The distributive plural form was expected to be much more frequent than the distributive singular. The question was how much more frequent it is, whether there are differences with regard to the regional variety of English represented by the two corpora and whether genre was a factor, too.

The two expressions, *lose one's life* and *lose one's job*, chosen for analysis as typical examples clearly revealing the different tendencies in using the distributive plural and singular in English compared to other languages, are structurally similar, but presumably differ in idiomaticity. The first one was chosen for being a recognised idiom both in dictionaries of idioms (e.g. Cowie, Mackin & McCaig 1983) and general dictionaries, such as the Cambridge Dictionary Online,<sup>8</sup> which defines it as 'to die suddenly because of an accident or violent event'. Example (31) is taken from a corpus:

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8. Cambridge Online Dictionary, s.v. *lose your life*, retrieved on November 13, 2020 from <https://dictionary.cambridge.org/dictionary/english/lose-your-life>.

(31) He might lose his life and save his soul. (COCA: 1996; SPOK)

The status of the construction *lose one's job* (32) in general dictionaries, on the other hand, is not so clear. It does not have a separate entry in the Cambridge Dictionary Online, so it is considered non-idiomatic, though, e.g. Merriam-Webster<sup>9</sup> lists it as fixed. It can be best regarded as a strong collocation.

(32) So even if they lose their jobs, they still will be covered. (COCA: 1991; SPOK)

The two constructions were selected precisely because it is claimed that they show different degrees of fixedness or fossilisation (a strong blocking factor), which could have a bearing on how much the use of the distributive plural will be blocked. The indication of joint possession (Section 1.2.5), another strong blocking factor, seems to be relatively well controlled for – *life* and *job* being rarely literally shared by a large number of individuals. On the other hand, both *life* and *job* may be interpreted as having a figurative, abstract or universal meaning (Section 1.2.6), which could favour a change in the perspective leading to singularisation to achieve generalisation (Section 1.2.3). Accordingly, we may expect these two distributive singular-enabling factors to be at work, and the two phrases, being predisposed to be used with both the distributive singular and plural, to be good candidates for the study of potential free variation.

### 3.1 Methodology

The extraction of data is described by the following list of consecutive steps:

- The interactive online search engine at <https://www.english-corpora.org> is used for both the BNC and COCA.
- Two queries for *lose one's life* are: (1) [lose] \_app\* life and (2) [lose] \_app\* lives. The [lose] part comprises all inflected forms of the verb *to lose*. The symbol \_app\* refers to all possible possessive pronouns.
- The query for *lose one's job* is [lose] \_app\* [job].
- Both singular and plural subject cases are collected.
- The BNC dataset consists of 632 hits, the COCA dataset is sixteen times larger – 10,144 hits.
- Manual qualitative assessment is applied with *their* before singular object, e.g. *lost their life* or *losing their life*, to distinguish between cases of authentic plural subjects having singular objects and cases in which *their* was used to refer to pronouns such as *anybody*, *somebody*, *everybody*.

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9. Merriam-Webster, s.v. *lose one's job*, retrieved on November 13, 2020 from <https://www.merriam-webster.com/dictionary/lose%20one%27s%20job>.

- Care was taken to remove the cases containing the noun phrase *life savings* and not just *life* (5 instances in the BNC; 37 instances in COCA), such as *lost their life savings* or *lost her life savings*, from the datasets.
- For the variants containing the possessive pronoun *your*, manual assessment of data was conducted. Most of the cases turned out to unambiguously refer to the second-person singular. Sentence (33) provides an example. Still, in some of the cases, both the singular and the plural object might be possible, depending on the interpretation.

(33) (...) but it's better to lose the engine than lose your life... and the lives of those with you in the car. (COCA, 2012)

- The data analysis is conducted with the use of R,<sup>10</sup> with its integrated development environment RStudio,<sup>11</sup> Due to the meticulous visual exploration and manual qualitative assessment of the data (described above), it is expected that the precision is very high.

## 3.2 Results

### 3.2.1 Results: The BNC

Table 2 presents the summary of the results for the two constructions in question divided into raw frequency of cases with (i) singular subject and singular object; (ii) plural subject and plural object; (iii) plural subject and singular object. In the dataset, there are no cases in which a singular subject would take a plural object. As we can see, the phrase *lose one's job* is, in general, more frequent than *lose one's life*.

**Table 2.** Summary of the BNC results

Group	<i>lose one's life</i>	<i>lose one's job</i>	Total
Plural subject; (distributive) plural object	94	241	335
Plural subject; (distributive) singular object	0	19	19
Singular subject; singular object	62	216	278
Singular subject; plural object	0	0	0
<b>Total</b>	<b>156</b>	<b>476</b>	<b>632</b>

10. R Core Team (2013). R: A language and environment for statistical computing. R Foundation for Statistical Computing, Vienna, Austria. URL <http://www.R-project.org/>.

11. RStudio Team. 2020. RStudio: Integrated Development for R. RStudio, PBC, Boston, MA URL <http://www.rstudio.com/>.

Table 3 contains results for the subset of data which are the focus of the present study. All in all, there are 260 cases of the *lose one's job* phrase with a plural subject. The majority, 92.7% (241), contain a plural object, while 7.3% (19) contain a singular object. For the phrase *lose one's life*, there are no cases in which there would be no correlative distribution – 100% of the distributive plural cases (94) have a plural object.

**Table 3.** Summary of the results for the BNC plural subject cases

Group	<i>lose one's life</i>	<i>lose one's job</i>
Plural subject; (distributive) singular object	0	19 (7.3%)
Plural subject; (distributive) plural object	94 (100.0%)	241 (92.7%)

3.2.2 Results: COCA

In the COCA data, there are 10,143 instances of the two constructions (2,326 of the *lose one's life* construction and 7817 of the *lose one's job* construction). Table 4 presents the summary of results obtained from the corpus for each of the constructions.

**Table 4.** Summary of the COCA results

Group	<i>Lose one's life</i>	<i>Lose one's job</i>	Total
Plural subject; (distributive) plural object	1394	2868	4262
Plural subject; (distributive) singular object	47	284	331
Singular subject; singular object	882	4651	5533
Singular subject; plural object*	3	14	17
Total	2326	7817	10143

\* An example sentence from this category is *I just hope that nobody lost their lives from this tornado* (COCA: 2013; SPOK).

The table shows that COCA contains 4,593 cases with distributive (singular or plural) objects, which is 45.3%, i.e. almost half of the total of 10,143 instances of the two constructions in the corpus. Leaving singular subject cases out of the discussion (they are added to give an idea of the overall distribution of these two constructions), we can see that 4,593 distributive object cases comprise 4,262 distributive plural object cases (92.8%) and 331 distributive singular object cases (7.2%). Also, the relative proportions of the two constructions with distributive objects in COCA differ: the *lose one's life* construction represented by 1,394 sen-



tences forms only one third (32.7%) of the total, compared to the *lose one's job* construction (2,868; 67.3%).

More importantly, there is a clear difference between the two constructions in the incidence of the distributive singular objects: the *lose one's life* construction with the total of 1,441 plural subject sentences occurred with the distributive singular object in only 47 cases (3.3%). By contrast, the 3,152 *lose one's job* construction sentences with plural subjects exhibited 284 cases of distributive singular objects (9.0%), i.e. 2.7 times more than the *lose one's life* construction. Table 5 contains a summary of results for the cases with a plural subject.

The COCA results appear to be, in general, similar to the BNC results; however, given the fact that COCA is a larger a corpus, we find more instances of the constructions we search for. Still, in the BNC we had no cases of the *lose one's life* construction with a plural subject and a singular object, so the correlative distribution was absolute for this phrase. Here, in the COCA dataset, we do see there is a certain (relatively small) percentage of cases in which there is a singular object for a plural subject.

**Table 5.** Summary of the results for the COCA plural subject cases

Type	<i>lose one's life</i>	<i>lose one's job</i>
Plural subject; (distributive) singular object	47 (3.3%)	284 (9.0%)
Plural subject; (distributive) plural object	1394 (96.7%)	2868 (91%)

### 3.3 Comparison of the datasets: Implications for the two varieties of English and free variation

The results shown in 3.2.1 and 3.2.2 give us some first impressions of how frequent the use of the distributive singular is, compared to the general norm in the two corpora and, consequently, in the two varieties of English with regard to the two constructions selected for the study.

In the BNC data for the *lose one's life* type, we see a 100% correlative distribution when it comes to the number of the subject and the object – there are no cases instantiating the distributive singular. The situation is somewhat different for the *lose one's job* type: although there is a visible tendency for the subject to take an object of the same number, in 7.3% of the cases with a plural subject, there is a singular object. Interestingly, these findings are at odds with the assumption that *lose one's life* is a more fixed (fossilised) construction than *lose one's job* and, therefore, less amenable to a formal change. If we see the distributive plural as a context-dependent feature, then there is much less (COCA) or no (BNC) singular form

occurrence detected for *lose one's life*, which is not consistent with the claim made in dictionaries that its degree of idiomaticity is higher.

The COCA results seem very similar with regard to *lose one's job* (9.0% of plural subjects have a singular object). A more marked difference between the two datasets, however, is *lose one's life*. In COCA, 3.2% of the cases containing a plural subject have a singular object. This number is not large, but compared to 'no such instances' in the BNC, it does call for an explanation.

These results are hardly enough to warrant a sweeping generalisation with regard to regional variation; we can only tentatively guess that in American English, the distributive plural tendency is slightly weaker than in British English.

The number of plural subject/singular object sentences in the two corpora is 350, i.e. 7.1% of the total of 4,947 plural subject sentences containing *lose one's life/job* in both corpora. The question is, how many of the singular objects in these 350 sentences can be freely replaced by distributive plural objects? The precise answer would require an extensive survey of the questionnaire type involving native English speakers. However, in terms of (weak) blocking factors, there is a certain proportion of cases which are likely to instantiate free variation. Below, there are three cases taken from the distributive singular dataset of COCA (see (34–36)). In all of them, the distributive singular could be replaced with the distributive plural without a very significant change in meaning or without risking unacceptability; see (37–39).

- (34) How many people that trusted you lost their life today because you were doing your job? (COCA: 2002; TV)
- (35) Sad for those who lost their life. (COCA: 2004; NEWS)
- (36) They made it very clear beforehand that we will lose our job if we did violate this rule. (COCA: 2012; SPOK)
- (37) How many people that trusted you lost their lives today because you were doing your job?
- (38) Sad for those who lost their lives.
- (39) They made it very clear beforehand that we will lose our jobs if we did violate this rule.

By the same token, such a replacement would be highly unlikely in cases like (40), compared to (41), because of the presence of *it* at the end of the main clause, denoting the assumed number of the noun standing in the focus. One could change the number of *life* in (40) to plural, but only if the singular number *it* was changed to plural *them* simultaneously, which is more than one needs to do in sentences (37–39).

- (40) We are to lose our life so that we may find it, give our life so we might save it.  
(COCA: 2012; BLOG)

\*<sup>(1)</sup> We are to lose our lives so that we may find it (...) <sup>12</sup>

It is quite possible, though, that even the questionnaire survey might not offer a definitive answer and resolve the issue, with some respondents going along with the general trend (and insisting on the distributive plural), some observing the blocking factors (and using the singular, claiming there is free variation) and some simply making an error as predicted by Cappelle (2009: 19).

#### 4. Genre and free variation

Another variable to be explored is the *genre* of the texts containing the instances of the distributive singular to find out whether their occurrence is genre-bound. These cases are compared with the control group of randomly selected distributive plural cases. The assumption behind this comparison is that if the cases in which the singular is used, are to be seen as potential free variation, the genre-related distribution should also be similar to the distribution of the control group – randomly selected instances containing the more frequent form of the distributive plural. A scenario in which the genre-related distribution is completely different speaks against the possibility that the two variants can be seen as true alternatives. To the best of our knowledge, there are no other studies concerning the potential influence of the factor genre on free variation; thus, we see our work as proposing a new condition for two alternatives to be seen as such: they need to have a similar distribution across different genres. Genre analysis was made only on the COCA data because of the uneven genre representation in the corpora.<sup>13</sup>

In COCA, the texts come in eight genres, *TV and Movies subtitles* (TV/MOV), *spoken* (SPOK), *fiction* (FIC), *popular magazines* (MAG), *newspapers* (NEWS), *academic journals* (ACAD), *blog* (BLOG) and *web pages* (WEB). The genres are almost equally represented (12.5% each on average), which makes the comparison of subject–object distribution across genres meaningful.

12. The asterisk is used here to indicate that the example contains an incorrect sentence.

13. No comparison for the BNC dataset is offered, as (i) the different structure of the corpus and uneven proportions of the genres included and (ii) the relatively low number of the distributive singular instances detected (19 instances for *lose one's job*, no instances for *lose one's life*) are likely to make the analysis very hard in terms of manageability and skew the results.

Given that there are only 47 distributive singular instances of the *lose one's life* construction in COCA, the random control sample of the same size would be too small. Therefore, it was decided to use a control sample three times as large, and the same goes for the *lose one's job* instances.

The present section offers a close-up look at the COCA dataset, namely:

- i. all 47 instances of the *lose one's life* construction with a plural subject and a singular object (=distributive singular) and a control group of 150 random cases with a plural subject and a plural object (=distributive plural), for details on the dataset see Section 4.2;
- ii. all 284 instances of the *lose one's job* construction with a plural subject and a singular object (distributive singular) and 850 random cases containing a plural subject and a plural object (distributive plural).

Figure 1 presents the comparison between the distributive singular and the distributive plural cases for the *lose one's life* construction; Figure 2 does the same with regard to the *lose one's job* construction.

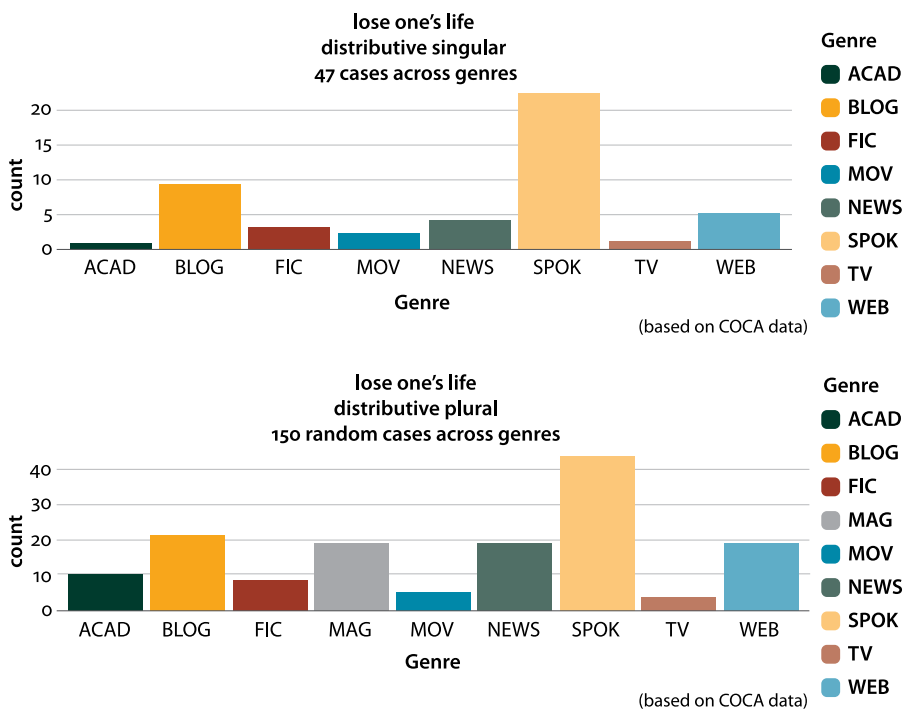
The random cases for both control groups were selected using the sample function of the COCA interactive interface. The queries entered for each of the phrases were [lose] \_app\* lives and [lose] \_app\* jobs. The instances were manually assessed to assure that each case really represents the distributive plural.

As we can see in Figure 1,<sup>14</sup> the distributive singular dataset and the distributive plural control group have very similar distributions across genres. For both the former and the latter, the majority of instances are found in the *spoken* genre. Furthermore, the genres of *blog* and *web* also seem to be good sources of the *lose one's life* phrase with a plural subject and both singular and plural object. No case of *lose one's life* with plural subject and singular object has been attested in the *magazine* genre. Furthermore, some differences between the datasets can be seen with regard to the frequency of each variant in the genres of *academic texts* and *news*. These genres seem to have a certain preference for the distributive plural; however, the usage of distributive singular is attested in each of them.

All in all, the distribution across genres in the bottom chart of Figure 1 seems to be somewhat more balanced than in the case of the top chart, which could be a result of the fact that the control dataset is more than three times larger than the distributive singular dataset.

The situation appears to be similar in the case of the *lose one's job* phrase; see Figure 2. Here, too, the distribution of cases in the two datasets seems rather similar. For both forms, the highest number of cases can be found in the *spoken* genre. Still, in the distributive plural dataset, the *spoken* genre is followed by the

14. The graphics are created in the ggplot2 package.

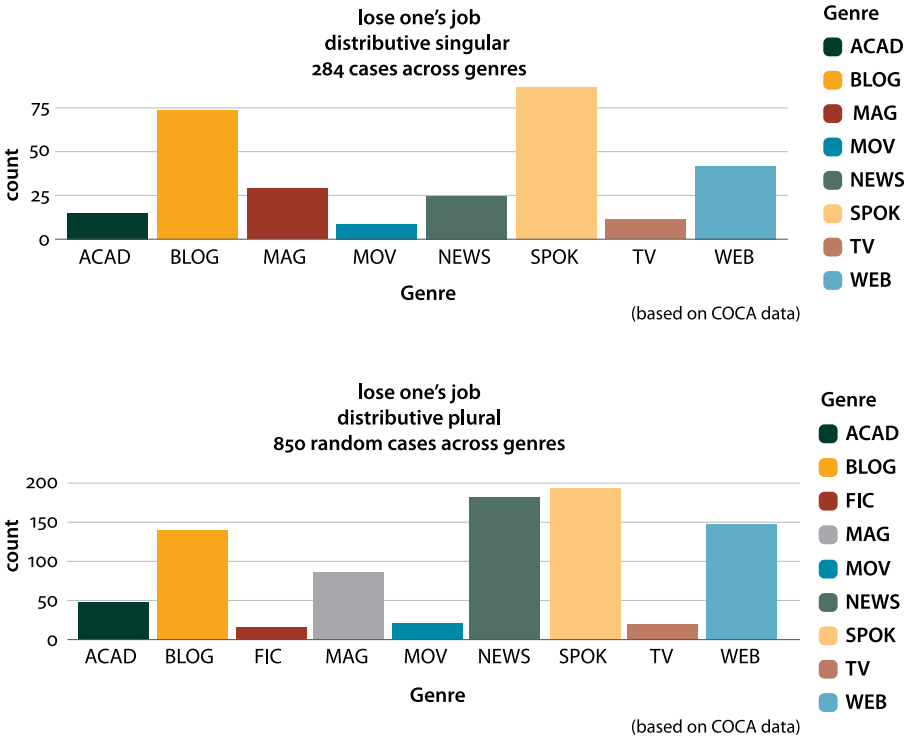


**Figure 1.** *Lose one's life* – the distributive singular and the distributive plural across genres

*news* genre, which is not the case in the distributive singular dataset. In the case of *blog*, *web*, *academic journals*, *TV* and *Movies subtitles*, the overall distribution seems similar.

To summarise, for both phrases, the general tendencies observed in the four datasets tend to be rather similar. For both phrases, the genres with the highest rate of occurrence of both variants (the distributive singular and the distributive plural) are *spoken*, *blog* and *web*, except for the control group of *lose one's job*, where it is the genre of *news* (followed by *spoken*, *blog* and *web*). Interestingly, the three genres probably contain textual material of rather informal and personal kind, and some of it may be seen as representing spontaneous production. The high frequency of *lose one's job* in the *news* genre might probably be explained by the fact that unemployment seems to be a regular topic on the news. It is also possible that, because of this, the distributive plural form has been conventionalised in the news genre (which could explain the relatively low frequency of the distributive singular variant).

The section shows that the distributive singular cases do not differ from their distributive plural counterparts in terms of the genre in which they occur (see Figure 1 and Figure 2). This fact can be seen as an argument in favour of



**Figure 2.** *Lose one's job* – the distributive singular and the distributive plural across genres

the hypothesis that in certain scenarios, such as in the presence of distributive singular-enabling factors (see Table 1), the distributive singular and the distributive plural can be seen as true equivalents. If the genre-related distribution was, for both variants, completely different, we would interpret it as a not-yet-detected constraint on the use of the distributive number form.

## 5. Conclusions

The corpus data confirms the presence of numerical concord between the plural subject and the object in the two studied expressions. We believe that we can reasonably expect them to reflect the general tendency as to the proportion of the distributive plural and singular in other such English constructions, which warrants a comparison with languages held to display preference for the distributive singular. The incidence of distributive singular object cases in *lose one's life* and *lose one's job* (with a plural subject) vary from 0–3% for the former to 7%–9% for the latter phrase (the BNC vs COCA). The differences between the British and the American datasets could result from regional variation; however, they might also be due to the differences between the corpora. As the genre analysis shows, the two phrases exhibit a certain tendency to appear in informal genres, such as *blog*, *spoken* and *web* (not found in the BNC).

The possibility of free variation, i.e. free choice in distributive number, seems to be due to the ‘weak’ factors among those blocking the use of the distributive plural. At least two of the scenarios described (Section 1.2) can be considered ‘good candidates’ for allowing free variation, namely, singularisation serving to express generalisation and the wish to convey ideas of a figurative, abstract or universal kind (they are referred to as *distributive singular-enabling factors*). In contrast, the remaining factors are not conducive to free variation since the use of the distributive singular is, in these cases, crucial to conveying the desired meaning or for being grammatically and pragmatically acceptable. The expressions under study show some degree of idiomaticity, and so the fossilisation factor cannot be completely ruled out, although they can be used in the two ‘good candidate for free variation’ scenarios.

The study assumes that, with potential free variation, both distributive plural and singular object variants should be acceptable to language users and attested in reliable language sources, such as corpora of English. Indeed, for both constructions, the singular–plural variant seems to be an option in the COCA, albeit relatively infrequent and marginal. The BNC contains fewer instances of the distributive singular, and in the case of *lose one's life*, no instances at all.

Based on the findings, some of the distributive singular cases of *lose one's life* and *lose one's job* can be reasonably interpreted as instances of free variation on account of (i) quantitative corpus evidence of sentences with objects in both plural and singular; (ii) the existence of weak blocking factors that allow both distributive forms; and (iii) a similar distribution of the distributive singulars and plurals in different genres, suggesting a general pattern without genre-specific or other constraints than those following from blocking factors. The data, however, does not answer the question of how much free variation there is in non-



verbal number agreement. This would require careful, individual assessment of sentences with a particular construction or a particular group of constructions, taking into account all the blocking factors (free variation is dubious in, e.g. fossilised/invariable idioms). Finally, by analogy, some of the distributive plural cases may actually represent free variation as much as the distributive singular cases.

Also, the phenomenon of free variation itself raises questions such as ‘How big a role does subjectivity play?’ or ‘Are our assumptions and calculations of the most probable choices and most suitable versions always reliable?’. According to Cappelle (2009), the answer to this latter question might actually be *no*. Free variation seems to follow its own path – it can manifest itself even if we clearly see (or calculate), given all the constraints and assumptions, that one particular form should most likely be chosen over another form. The “expected” form is sometimes “not the form that is actually chosen by the speaker” (Cappelle 2009: 19). Furthermore, he claims that “[even an] exhaustive list of determinants may never be able to completely rule out a speaker’s freedom of choice” (2009: 20).





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## References

- Aarts, Bas, Chalker, Sylvia & Weiner, Edmund S.C. 2014. *The Oxford Dictionary of English Grammar*. 2nd fully rev. and updated ed. Oxford: Oxford University Press.
-  Brown, Keith & Miller, Jim. 2013. *The Cambridge Dictionary of Linguistics*. Cambridge: Cambridge University Press.
-  Cappelle, Bert. 2009. Can we factor out free choice? In *Describing and Modeling Variation in Grammar* [Trends in Linguistics. Studies and Monographs 204], Andreas Dufter, Jürg Fleischer, Guido Seiler (eds), 183–201. Berlin, New York: Mouton de Gruyter.
- Casagrande, June. 2013. *A Word, Please: Sometimes subjects disagree with their objects*. <https://www.latimes.com/socal/daily-pilot/opinion/tn-dpt-0112-casagrande-20130111-story.html> (20 July 2020).
- Clutterbuck, Peter. 2000. *Excel Essential Skills: Student Grammar and Vocabulary Handbook. Years 7–8*. Sydney: Pascal Press.




- Cowie, Anthony P., Mackin, Ronald & McCaig, Isabel R. 1983. *Oxford Dictionary of Current Idiomatic English. Vol. 2: Phrase, Clause & Sentence Idioms*. Oxford: Oxford University Press.
- Dušková, Libuše et al. 2006. *Mluvnice současné angličtiny na pozadí češtiny* [Grammar of Contemporary English against the Background of Czech]. 2nd ed. Praha: Academia.
- Follett, Wilson. 1998. *Modern American Usage: A Guide. Revised by Erik Wensberg*. New York: Hill and Wang.
- Forsyth, James. 1970. *A grammar of aspect: usage and meaning in the Russian verb* [Studies in the Modern Russian Language. Extra Volume]. Cambridge: Cambridge University Press.
-  Gibbs, Raymond W. & Gonzales, Gayle P. 1985. Syntactic frozenness in processing and remembering idioms. *Cognition* 20(3): 243–259.
- Gries, Stefan T. 2003. *Multifactorial Analysis in Corpus Linguistics: A Study of Particle Placement*. London, New York: Continuum.
- Koichi, Jin. 2012. *Vademecum of English Grammar for Cross-Culture Communication With Occasional Reference to German, Danish, and Icelandic*. e-Bookland.
-  Lohse, Barbara, Hawkins, John A. & Wasow, Thomas. 2004. Domain minimization in English verb-particle constructions. *Language* 80(2): 238–261.
- Quirk, Randolph, Greenbaum, Sidney, Leech, Geoffrey & Svartvik, Jan. 1985. *A Comprehensive Grammar of the English Language*. London: Longman.
- Rappaport, Jennifer. 2017. *Singular or Plural? Sometimes, It Depends*. <https://style.mla.org/singular-or-plural/> (28 October 2020).
- Scheurweghs, Gustave. 1961. *Present-Day English Syntax. A Survey of Sentence Patterns*. 2nd ed. London: Longmans Green & Co.
- Schibsbye, Knud. 1970. *A Modern English Grammar*. 2. ed. London: Oxford University Press.
-  Sørensen, Knud. 1985. The distributive plural and its limits. *English Studies* 66(4): 338–350.
- Vallins, George Henry. 1960. *Good English. How to write it*. 10th ed. London: Pan Books.
- Wood, Frederick T. 1957. Singular or Plural? A Question of Concord. *Moderna Språk* 51.
-  Yusifova, Gunel I. 2013. Syntactic Features of English Idioms. *International Journal of English Linguistics* 3(3): 133–138.
- Zandvoort, Reinard W. 1957. *A Handbook of English Grammar*. London: Longmans, Green and Co.

## Language corpora & dictionaries

- Cambridge Online Dictionary, s. v. *lose your life*. <https://dictionary.cambridge.org/dictionary/english/lose-your-life> (13 November 2020).
- Cambridge Online Dictionary, s. v. *spontaneity*. <https://dictionary.cambridge.org/dictionary/english/spontaneity> (26 November 2020).
- Cowie, Anthony P., Mackin, Ronald & McCaig, Isabel R. 1985. *Oxford Dictionary of Current Idiomatic English. Vol. 2: Phrase, Clause & Sentence Idioms*. Oxford: Oxford University Press.
- Davies, Mark. 2004–. *British National Corpus*. <https://www.english-corpora.org/bnc/> (6 March 2023).

- Davies, Mark. 2008–. *The Corpus of Contemporary American English (COCA): One billion words, 1990–2019*. <https://www.english-corpora.org/coca/> (6 March 2023).
- Davies, Mark. 2013. *Corpus of Global Web-Based English: 1.9 billion words from speakers in 20 countries (GloWbE)*. <https://www.english-corpora.org/glowbe/> (6 March 2023).
- Davies, Mark. 2013. *Corpus of News on the Web (NOW): 3+ billion words from 20 countries, updated every day*. <http://corpus.byu.edu/now/> (6 March 2023).
- Merriam-Webster, s. v. *lose one's job*. <https://www.merriam-webster.com/dictionary/lose%20one%27s%20job> (13 November 2020).

## Software

- R Core Team. 2013. *R: A language and environment for statistical computing*. R Foundation for Statistical Computing. <http://www.R-project.org/> (6 March 2023).
- RStudio Team. 2020. *RStudio: Integrated Development for R*. <http://www.rstudio.com/> (6 March 2023).
-  Wickham, Hadley. 2016. *ggplot2: Elegant Graphics for Data Analysis*. 2nd ed. Cham: Springer. <https://ggplot2.tidyverse.org> (6 March 2023).