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IS MULTI-NOUN COMPOUNDING A PRODUCTIVE PROCESS IN ENGLISH?

A bstract. The subject matter of this paper is English nominal compounding — the process of putting nouns together to form a new lexical item. More specifically, this paper addresses the issue that is commonly taken for granted in available accounts of compounding, i.e. the recursiveness of English endocentric nominal compounds. Corpus data indicates a great disparity between the frequencies of noun-noun compounds and multi-noun structures. Our study gives possible reasons behind the low number of occurrences of noun compounds composed of more than two words.

Corpus evidence points to the conclusion that English multi-noun compounds are typically constructed with nouns that have been previously lexicalized; such lexicalized compounds commonly function as the base for more complex noun structures; the low frequency of multi-noun compounds emerges as a result of insufficient number of lexicalized noun-noun constructs. The small number of multi-noun compounds has no effect on the overall compound productivity as the process of multi-noun compound creation in the mind of a speaker is identical with that of noun-noun compounding — compounding always consists in putting together a modifier and a head, regardless of the number of nouns within a compound. The structure of any compound is a reflection of the way it is created in the mind of a speaker.

Key words: compounding; noun; productivity; creativity; lexicalization.

1. INTRODUCTION

Nominal compounding has been of considerable interest to language researchers, with many morphologists recognizing the process as vastly contributing to the expansion of the lexicon. Commonly discussed compound-related issues include structure (Selkirk 1984; DiSciullo and Williams 1987; Fabb 1998), stress placement (Schmerling 1971; Fudge 1984; Zwicky 1986; Liberman and Sproat 1992; Spencer 2003; Giegerich 2004; Plag 2006) and

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semantic typology (Jespersen 1954; Adams 1973; Levi 1978; Warren 1978; Jackendoff 2009). However, linguistic research has so far been focusing on compounds made up of only two nouns. Therefore, this paper will be devoted to disentangling problems concerning multi-noun compounds. We will first define the term "compound" and see in what way compounds are different from syntactic phrases. Section 2 deals with the structural representation of multi-noun compounds; examples of structural ambiguity will be presented. The remaining sections are devoted to the issue of the productivity of multi-noun compounding in English. We will see why language users form nouns composed of more than two elements, if they do so at all. One of the principal goals of this study is to shed some light on the extent to which multi-noun structures are employed, i.e. with the help of language corpora we will test the commonly held assumption that speakers frequently take advantage of the capacity of compound structures for recursiveness. We will also examine to what extent multi-noun compounds consist of lexicalized elements and what it means for the question of whether multi-noun compound should be perceived as a productive or creative process. Throughout the paper our focus will be exclusively on nominal compounds of the endocentric type.

2. WHAT IS COMPOUNDING?

Compounding is widely recognized as consisting in assembling together two nouns (Szymanek 1998, 37) e.g. putting together *iron* and *box* to form the compound *iron box*. In a similar fashion, Bauer (2003) defines compounding as "the formation of a new lexeme by adjoining two or more lexemes". The constituent parts of any compound are labelled the modifier and the head (Fabb 1998). English endocentric compounds are usually right-headed (Selkirk 1984, 244). It implies that in a compound such as *mousepad*, *mouse* is the modifier and *pad* is the head. In syntactic terms, the head is the dominant element of a compound, meaning that inflectional properties of the compound are inherited from the head element. Semantically, the head of a compound determines to which class of entities the compound belongs (Katamba 1993, 56). It is to be noted, however, that a compound must be told from what is merely a syntactic phrase. A *black bird* (which refers to a bird which is black in colour) does not have the status of a compound as opposed to a *blackbird* (a specific kind of bird), the latter being an example of a compound noun.

There has not been unanimousness among morphologists over what constitutes a compound. The criteria for compounds that are generally listed by morphologists include stress, lexicalization, spelling, or inseparability (Lieber 2005, 376), none of which seems to be particularly appealing to language researchers. Some linguists, such as Bauer (1998), claim that in fact no criteria can be applied to distinguish compounds from syntactic phrases.

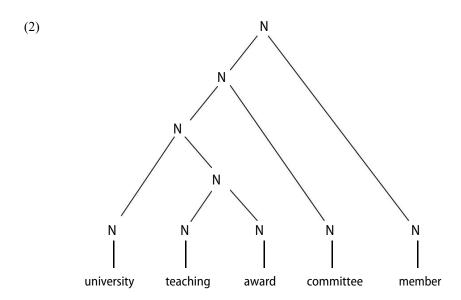
More unorthodox approaches to compounding have been proposed. According to Marchand (1967), for example, compounding should not be considered a separate word formation process. Instead, he argues that compounding belongs to the category of word formation he labels "expansion". In the view of Lieber and Štekauer (2009) the reason why defining the term "compound" poses a problem is two-fold: firstly, compounds in some languages are stems and roots, rather than independent words; secondly, it is very often impossible to differentiate between a compound and a phrase.

3. WHAT ARE MULTI-NOUN COMPOUNDS?

The overwhelming majority of existing noun structures in English are compounds made up of two elements e.g. *peanut butter*. However, it is not impossible to imagine noun constructs with three elements. Examples of such compounds are presented in (1).

(1) company credit card maple kitchen table emergency phone number income tax increase air pollution control

The implication of the data shown in (1) is that nominal compounding cannot be defined as putting just two (and not more) nouns together. This becomes even more evident if we take into account the fact that it is possible to assemble a compound constructed with four or more elements. Consider the compound *university teaching award committee member*, which is analyzed below by means of a tree representation (Plag 2003, 170):



(2) shows that it is possible to divide any multi noun compound into smaller binary compounds acting as its constituents. In the above example the central element *teaching award* is composed of *teaching* and *award*. The element *university teaching award* is made of *university* and *teaching award*. The next bigger constituent is composed of *university teaching award* and *committee*. Lastly, the final compound is made up of [university teaching award committee] and [member].

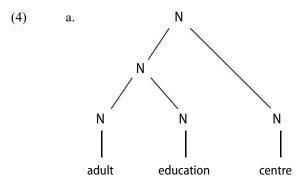
As far as endocentric noun-noun compounds are concerned, there does not seem to be any limit imposed as to the maximal number of elements making for the compound. There is nothing that prevents a user of language from adding new nouns to an already existing compound. This feature is referred to as "recursiveness" in morphological literature. Plag (2003) points out, however, that even though there is no limit to how many nouns a compound can consist of, "the longer compound becomes, the more difficult it is for the speakers and listeners to process, i.e. produce and understand correctly. Extremely long compounds are therefore disfavoured not for structural but for processing reasons". It is thus assumed that the longer a compound gets, the more mental effort it requires for the speaker to produce a compound and for the addressee to decipher its meaning, which is why speakers are not expected to often produce compounds made up of many constituents. Consider the following example (Jackendoff 2009, 111):

a. an inflectional morphology instruction manual software programming course
 b. a course in programming the software that accompanies manuals that teach inflectional morphology

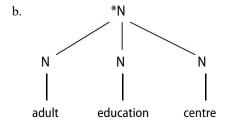
While (3a) is a well-formed multi-noun compound, any speaker would rather convey the same message by means of a syntactic paraphrase (3b), as it is much easier to process. Likewise, instead of saying *university teaching award committee member*, one would probably use a phrase similar to "a member of the committee established to choose university teachers suitable for receiving an award".

3.1 FLAT STRUCTURE VS. PHRASE STRUCTURE

Any compound, regardless of the number of constituents of which it is composed, is analyzed as a binary structure, that is, it is split into two units which function as the modifier and the head. For example, in the compound *computer language* the word *computer* acts as the modifier and *language* serves as its head. The same applies, with no exception, to multi-noun constructs. Consider the structure for *adult education centre*:



The same compound cannot be represented as having the following structure:



The reason why (3b) is malformed is that this structure makes it impossible to tell which of the nouns forming a compound serves as the modifier and which functions as the head. Most importantly, the structure in (3b) would necessitate introducing a third component existing alongside the modifier and the head, which does not at present conform to the morphological canon.

3.2 COMPOUNDING AS AN INTERFACE BETWEEN MORPHOLOGY AND SYNTAX

The high productivity of nominal compounding in English has led some authors (e.g. Kuiper 1999) to claim that it should be considered a syntactic phenomenon, not a morphological one. What this implies is that compounding is much more similar to the formation of sentences, rather than new words. Advocates of such theory propose that noun-noun compounds are the result of a syntactic rule that states that not only adjectives, but also nouns can modify the noun in a noun phrase. This is illustrated in (4) (Plag 2003, 159).

- (5) a. NP \rightarrow article {adjective, noun} noun
 - b. the long marathon
 - c. the Boston marathon

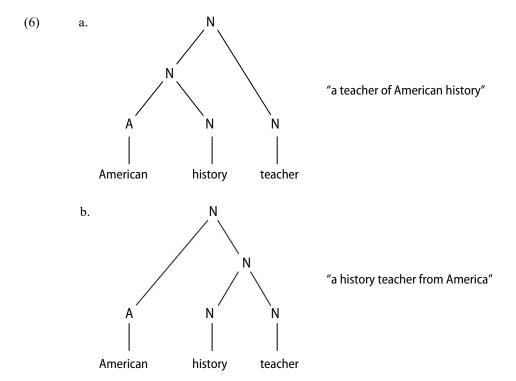
The above rule could potentially put into question the very existence of a separate category of compounds. It does, however, have a major deficiency – it does not take into consideration the stress patterns. We know from Chapter 1 that adjective-noun constructs show the right-hand stress, as in *black bird*. Noun-noun combination are, on the other hand, typically stressed on the first constituent, which makes them more similar to words (that is, compounds), not to phrases.

Recursiveness is another quality pointing to the syntactic status of English nominal compounds. Recursiveness is a typical syntactic quality, being one of the sentence-structure rules. The weak point of this argument is that recursiveness is also shown by some prefixes. This has made some linguists (e.g. Plag, 2003, p. 161) believe that there does not exist a significant structural difference between syntax and morphology, as the lack of recursiveness in suffixation is the result of the selectional characteristics of affixes.

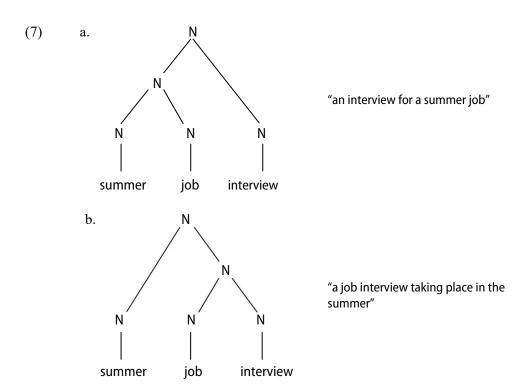
The agreement among morphologists as to what extent compounding is a syntactic process is yet to be reached, although the relevant evidence suggests that compounds should be viewed in a traditional, morphological way.

3.3. MULTI-NOUN COMPOUND AMBIGUITY

We have established in Section 3.1 that multi-noun compounds are interpreted by means of dividing the compound into two smaller subconstituents. This, in certain cases, can lead to ambiguity. Probably the most frequently quoted example of an ambiguous compound noun is *American history teacher*, which, depending on how it is split into smaller parts, can mean either "a history teacher who is American", or "a teacher of American history" (Fabb 1998, 72):



In the above example, *history teacher* is preceded by an adjective. But it is not uncommon to come across an ambiguous compound composed with exclusively nouns. Consider the following construct:



While very often it is the context that helps to decide on the correct interpretation, one may wonder which interpretation is more likely to take precedence when out of context. Given that multi-noun compounds are split pairwise, it is not unreasonable to surmise that it is the more lexicalized compound which functions as a sub-constituent within a larger compound. A good method of finding out which of the two possible sub-compounds is lexicalized to a greater extent is to conduct a corpus study. The compound with the higher frequency is expected to be more lexicalized, and thus, serve as the sub-element (data retrieved from the Corpus of Contemporary American English).

 $^{^{1}}$ In our study we adopt Lipka's (1992) approach that lexemes become lexicalized through frequent use.

Table 1: The frequency of compounds summer job and job interview

COMPOUND	Number of occurrences (COCA)		
summer job	269		
job interview	371		

The figures show that even though both compounds are reasonably frequent, *job interview* is lexicalized to a greater extent. Hence, the on-the-fly interpretation of the construct *summer job interview* is more likely to be "a job interview taking place in the summer", as analyzed in (6b). However, the way a multi-noun compound is split into smaller units does not usually result in ambiguity. Consider the compound *undersea cable system* which, despite having two possible representations, retains the same meaning regardless of how it is divided into subconstituents.

Multi-noun compound ambiguity can also stem from a number of different semantic relations that are possible between the modifier and the head. *Apple juice seat* (Downing 1977, 818) is probably the most commonly cited example of a three-noun compound with various possible meanings ranging from "a seat for drinking apple juice in a restaurant" to "a seat smelling like apple juice" (Štekauer 2005, 129). *Apple juice seat* is not structurally ambiguous, but its interpretation depends on the semantic relation employed between the head *seat* and the modifier *apple juice*.

4. How frequent are multi-noun compounds?

In the preceding section we have learned that, supposedly due to performance and processing reasons, one is not likely to name an object or express a concept using a very long nominal compound. Let us now see whether this claim is confirmed by the corpus data. The table below shows how many instances of distinct compounds formed of two, three, four, five and six elements can be found in the BNC. For better performance, we have included only the compounds formed of common nouns. The data is extracted from the website "Phrases in English – BNC N-grams". (http://phrasesinenglish.org)

Table 2: Frequency of BNC compounds of varying complexity.

NUMBER OF ELEMENTS IN A COMPOUND	TOTAL NUMBER OF COMPOUNDS		
two nouns	≈ 132,000		
three nouns	≈ 10,250		
four nouns	≈ 500		
five nouns	19		
six nouns	5		
seven nouns	1		

The most striking observation that can be made upon looking at the data in Table 2 is that the number of compounds falls dramatically with the increase of constituents in a compound. Noun structures made of three elements are still relatively frequent but the same cannot be said about more complex compounds. Therefore, the low productivity of multi-noun compounds seems to find confirmation in the corpus data.

We have been stressing throughout this paper that any English nominal compound, regardless of the number of its elements, is split into two smaller units; that is, it is analyzed and perceived as if it was a compound composed of two nouns. It comes as no surprise then that compounds with a higher degree of lexicalization tend to combine more easily into more complex structures. To better illustrate how likely lexicalized noun-noun compounds are to serve as subconstituents within longer constructs, we have checked how many multi-noun compounds containing very frequent noun-noun compounds can be found in the BNC. To achieve this, we searched the corpus for strings of nouns containing the relevant noun-noun compounds. We then used our best judgement to verify the compound status of every string found. The results are presented in Table 3.

Table 3: Number of multi-noun BNC compounds containing frequent two-noun compounds as subconstituents

Compound	NUMBER OF COMPOUND TOKENS	Number of Multi-Noun Structures With the Compound
balance sheet	815	70
grammar school	567	167
health care	1599	164
home office	1390	149
income tax	1266	110
interest rates	2590	59
labour market	1040	101
post office	1317	150
stock exchange	1016	99
town centre	611	124

Strongly lexicalized noun-noun compounds are commonly found in multinoun constructs. *Health care* stands out as a compound that easily combines into longer noun structures being found in as many as 164 multi-noun formations.

For comparison, let us see how often less frequent noun-noun structures combine into longer compounds. The results of this search are presented in the following table.

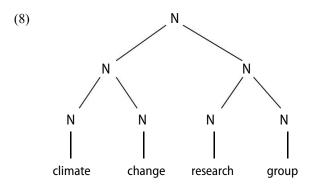
Table 4: Number of multi-noun BNC compounds containing low-frequency two-noun compounds as subconstituents.

Compound	Number of multi-noun Structures with The compound
bedroom floor	1
conversion rate	1
debt recovery	6
exit door	3

family budget	0
glass ceiling	0
knee surgery	0
morning tea	0
population loss	0
wood fire	0

All of the compounds listed in Table 4 occur 20 times in the BNC. Weakly lexicalized nun-noun formations rarely give rise to longer compound structures with only *debt recovery* and *exit door* serving as a subcompound for more than one multi-noun structure. It is interesting to note that *debt recovery* typically functions as a modifer (e.g. *debt recovery procedures*) while exit door serves as the head in the examples found (e.g. *emergency exit door*).

The figures shown in the tables above leave no doubt that lexicalized compounds are much more likely to function as the basis for longer noun structures. It can be thus surmised that it is the lack of highly lexicalized nominal compounds that is responsible for the impaired productivity of multi-noun constructs. To frequently form a compound made up of four or more elements, one must have a wide range of lexicalized noun-noun compounds at one's disposal. For multi-noun compounds to be productive, the English language would have to be richer in strongly lexicalized, perhaps even institutionalized, noun-noun items. Indeed, multi-noun compounds that are found in corpora usually consist of lexicalized subconstituents. Consider the structure *climate change research group*, which is formed of two high-frequency compound nouns:



The above structure is made of *climate change*, which occurs 206 in BNC, and *research group* which boasts the occurrence figure of 164. The [NN][NN] structure is common among 4-noun compounds as it does not require using a 3-element subcompound.

4.1 MULTI-NOUN COMPOUNDING: PRODUCTIVE OR CREATIVE?

One of the most basic observations about morphological rules that can be made is that some of them are very often used to form new words, whereas others are much less common. To put it differently, it is easy to notice that some of the word-formation processes are more productive than others. Productivity is defined as the property of an affix or a word-formation process to be employed in order to coin new lexical items (Plag 2003, 55). In other words, the productivity of an affix tells us whether it is possible to form many new lexical items by means of using that affix. This characteristic is not exhibited to the same extent by all affixes, and some affixes and processes lack this property altogether. For instance, a suffix such as -th, attested to form nouns from adjectives, can only combine with a very small set of words, and cannot be added to any other words not belonging to this set. Thus, it is considered unproductive. On the other hand, it is possible to name a number of nominal suffixes that can easily attach to a wide range of words. The example of such suffix is -ness, which can easily combine with almost every adjective to form a noun (e.g. greyness). Word formation processes also show different degrees of productivity, with some processes being exceptionally productive. Conversion may serve as an example here. Conversion is defined as "the derivation of a new word without any overt marking" (Plag 2003, 134). That is, conversion takes place when a pair of words is exactly identical in terms of phonetic realization. The most common type of conversion (and the most productive, at the same time) is the deriving of verbs form the corresponding nouns as in (9) below:

(9) hammer → to hammer blanket → to blanket

Most new words are coined by productive word formation processes. However, new lexical entries can also be formed using unproductive rules. This is commonly referred to in linguistic literature as creativity. The commonest approach to the productivity-creativity distinction is that the use of productive processes is unconscious in nature (Schultink 1961), whereas "creative neologisms are always intentional formations that follow an unproductive pattern" (Haspel-

math 2002: 100). We have learned from the previous section that only noun formation composed of two and to a lesser extent of three nouns can be labelled as productive on the basis of frequency. With that in mind, let us take a closer look at five-, six-, and seven-noun formations found in the BNC; they are listed in (7), (8), and (9), respectively.

(10)family health services authority average Trades Union Congress general secretary Common Object Request Broker Architecture specification Capital House Unit Trust Managers draft planning policy guidance note Information Technology Security Evaluation Criteria LIFESPAN RDBI data transfer program rear seat car passenger casualties university phds papers percent rank Zenith Data Systems Cup Final Bookmakers Afternoon Greyhound Service meeting community education centre management committees Community Resource Centre Training Project Golf Foundation Merit Award Scheme British Gas Executive Share Option Scheme Group Personnel Information Services Department Jockey Club Race Train Stakes Common Object Request Broker Architecture mechanism Maker Repairer Garage Proprietor Selling Agent transaction processing application programming interface

- (11) City Council Life Insurance Welfare Scheme
 South Coast Air Quality Management District
 DNA restriction fragment length polymorphism analysis
 sodium dodecyl sulphate polyacrylamide gel electrophoresis
 tissue type plasminogen activator antigen concentrations
- (12) Project Video English language teaching video programme

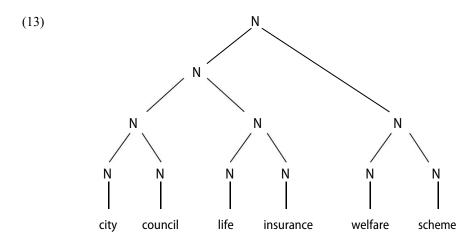
According to Adams (2001), compound structures are formed for two reasons: they are employed either to name a novel concept or to reduce a longer expression to just a few words. Multi-noun compounding is typically used for the former purpose as most multi-noun compounds found in English happen to be proper names. This seems to hold true for multi-noun BNC compounds; a substantial majority of the constructs listed in (10), (11), and (12) are either proper names, such as *City Council Life Insurance Welfare Scheme* or proper name-noun(s) combinations, e.g. *Trades Union Congress general secretary*. Instances of condensing

a longer expression to a short paraphrase can also be found in the BNC, e.g. rear seat car passenger casualties. The logical conclusion that can be drawn, therefore, is that multi-noun compounds are the result of a creative process. Compounding offers an efficient way of condensing long meanings into just a few words, so it comes as no surprise that language users take advantage of that when in need of being succinct. If linguistic creativity is indeed to be understood as forming new words using an unproductive rule, it makes a lot of sense to refer to multi-noun compounding as a creative process given the scarcity of multi-noun formations.

Some linguists (e.g. Crystal 1998) postulate that linguistic creativity must involve breaking the rules of language. A commonly quoted example of a lexical item coined by means of rule violation is the word *greenth* formed by adding the unproductive suffix *-th* to *green*. According to this definition, multi-noun compounding cannot be viewed as creative as it does not violate the English grammar in any way.

The most lax definition of creativity assumes that every new word (regardless of whether the process by which the word is coined is productive or not) can be tagged as creative on the sole grounds that coinage of a new word is never a fully unconscious process. By this definition, not only multi-noun compounds but also compounds consisting of only two nouns deserve to be labelled as creative as even putting just two nouns together to coin a new word necessitates some degree of mental effort.

Very long multi-noun compounds exhibit a strong tendency to consist of lexicalized elements. Consider the construct *City Council Life Insurance Welfare Scheme*:



We infer from the above representation that City Council Life Insurance Welfare Scheme is composed of city council and welfare scheme which together function as the modifier and the head welfare scheme. In this way, a six-noun compound is "worked down" to just two elements. We contend that the same mechanism applies to other constructions listed in (11); however, due to their extreme technicality, there is no tangible corpus evidence that they are composed of lexicalized subcompounds.

Indeed, even when a compound is made up as many as 9 constituents, it still structurally consists of the modifier and the head. Consider the following compound, found in the Corpus of Contemporary American English:

(14) Jackson Health System Unit Practice Council Functionality Measurement Tool

The above compound, despite having 9 nouns, is still formed and analyzed binarily with Jackson Health System Unit Practice Council (itself combined from prelexicalized Jackson Health System and Unit Practice Council) functioning as the modifier and Functionality Measurement Tool serving as the head of the compound. Thus, even though the compound in question contains 9 nouns, in the mind a speaker it consists of just two elements, which happen to be the modifier and the head. The formation of multi-noun compounds is identical with the formation of "standard" noun-noun compounds in that both processes consist in putting together two mental lexicon entries. Multi-noun compounds are never formed "from scratch" by putting three or more nouns together.

4.2 Why are there so few multi-noun compounds?

In the previous sections we have seen that multi-noun constructs are usually composed of lexicalized subcompounds. Indeed, one is not likely to encounter structures such as *cloud paper idea*, as neither *cloud paper* nor *paper idea* exist in English as lexical entries. Because of this, the reason why compounds made of only two nouns greatly outnumber multi-noun structures, as we already hinted at, seems to be purely mathematical. Our analysis of the corpus data has shown that in the English lexicon there is not a sufficient number of two- or three-word nouns; thus, it is expected that the overwhelming majority of nominal compounds in English are two-noun constructs. The structure of any compound reflects the process through which the compound is formed in the mind of a language user. Therefore, the

statement that very long compounds are "disfavoured not for structural but for processing reasons" does not seem to be entirely accurate. Forming a multi-noun compound does not require more mental effort than coining a compound made up of only two nouns. The fact that speakers of English do not coin multi-noun compounds on a frequent basis seems to be then mainly the result of the shortage of lexicalized noun-noun formations in the English lexicon. What is labelled "recursiveness" in morphological literature is a very simple operation happening in a speaker's brain upon forming a (multi-noun) compound. Multi-noun compounding, however, scores higher on a creativity scale due to the fact that multi-noun constructs are almost always a result of a conscious process. It is not always the case with two-noun compounds that are more likely to be coined "on the spur of a moment".

5. CONCLUSION

The present study had two objectives: to see to what extent English noun structures composed of more than two nouns are constituted by lexicalized elements and to test how frequent they are. The data collected from the BNC revealed that lexicalized noun-noun structured very often function as the base for expanded noun constructs. Likewise, corpus data has been instrumental in concluding that, because of the scarcity of compounds formed of more than four nouns, multi-noun compounding is a process that is creatively employed for brevity.

Due to the fact that English multi-noun compounds are not formed on a frequent basis, it has not received much attention from language researchers; compound recursiveness is ignored altogether in a number of available accounts of compounding. In our view, the phenomenon of multi-noun compounding can offer new insight into certain issues such as the problem of whether or not compounding should be treated as a morphological or a syntactic process. In particular, it is worth employing a larger language corpus to objectively judge where multi-noun compounding should be placed on the productivity-creativity continuum, which will be the focus of our future research.

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CZY ZŁOŻENIA SĄ PROCESEM PRODUKTYWNYM W JĘZYKU ANGIELSKIM?

Streszczenie

Złożenia w języku angielskim stanowią częsty przedmiot analizy morfologicznej. Dotychczasowe badania językoznawcze koncentrowały się głównie na złożeniach zawierających tylko dwa elementy; przedmiotem tego artykułu są angielskie złożenia wieloczłonowe. Dane korpusowe wskazują na dużą rozbieżność między liczbą złożeń dwuczłonowych i wieloczłonowych. Wynika z nich, że o ile wysoka produktywność złożeń dwuczłonowych nie podlega dyskusji, złożenia wieloczłonowe występują znacznie rzadziej. Głównym celem artykułu jest wskazanie przyczyn niskiej częstotliwości złożeń wieloczłonowych, szczególnie tych zbudowanych z więcej niż trzech rzeczowników. Badając korpus języka angielskiego pod kątem złożeń można wnioskować, że złożenia wieloczłonowe składają się w dużej mierze ze zleksykalizowanych elementów, oraz że zarezerwowane są przede wszystkim dla tych rejestrów językowych, które wymagają formułowania zwięzłych komunikatów. Zleksykalizowane złożenia dwuczłonowe często stanowią bazę dla konstrukcji zbudowanych z większej ilości rzeczowników. Rzadkość występowania złożeń wieloczłonowych jest więc rezultatem niskiej liczby wysoce zleksykalizowanych złożeń dwuczłonowych, które mogłyby stanowić podstawe dla dłuższych złożeń. Niska czestotliwość złożeń wieloczłonowych nie ma znaczenia dla ogólnej produktywności złożeń w języku angielskim, jako że proces ich powstawania jest identyczny jak w przypadku złożeń dwuczłonowych.

Artykuł koncentruje się na złożeniach endocentrycznych, jako że stanowią one najbardziej liczną i produktywną podgrupę złożeń.

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Słowa kluczowe: złożenie; rzeczownik; produktywność; kreatywność; leksykalizacja.