

## MORPHOLOGICAL ASPECTS OF ENGLISH ADJECTIVAL COMPOUNDS: CORPUS ANALYSIS

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**Abstract.** *The paper considers the main formal characteristics of English compound words in adjectival sentence positions, systematized and based on language corpus analysis. The analysis of the compounds along the lines of their composite form, the constituent elements of these words, their interrelationships and other features is accompanied by numerous contextualized examples. The paper provides a statistical confirmation of the fact that compound adjectives make the most prominent group of adjectival compounds (65%), as well as it makes a statement about certain important orthographic implications. Further on, the typical English adjectival compound would be the one with a noun as the first and past participle as the second element of the compound. On the basis of the research conducted here, it can be also concluded that the presence of inflectional morphemes in adjectival compounds is semantically conditioned, and that derivatives only infrequently serve as elements of compound adjectivals.*

**Key words:** *English language, Morphology, adjectival compounds, language corpus*

### 1. INTRODUCTION

This paper stands for a report on the empirical part of a research undertaken as regards compound words in adjectival sentence positions in English and Serbian. More specifically, the part presented here refers to the analysis of certain formal qualities of adjectival compounds in English based on gleaning data from a language corpus, as one of the most authentic and reliable methodological tools of obtaining scientific facts. It is a means of providing exact statistic verification of certain hypotheses, and is therefore better founded than any conjectures or assumptions that can sometimes be come across in linguistic and philological literature.

The special-purpose corpus of language data that has been collected for this research into compound words of English and Serbian is composed of integral texts of several books which belong to different fields of social sciences and humanities. The volume of

written language includes almost 2. 500 pages of text, or around 950.000 words. The time frame of the corpus texts encompasses the three central decades of the second half of the 20th century. The emphasis was put on the diversification of texts along the line of registers in order to obtain a quality set of established and new words as a basis for a relevant and reliable analysis of a complex morpho-syntactic phenomenon. However, since this research is a part of a larger-scale contrastive analysis of compounds in English and Serbian, the genre variation of corpus texts is necessarily limited due to the unavailability of Serbian translations for particular genres.

The language which served the purpose of describing and commenting on historical events, as well as the language for considering social theory contribute their share of specific adjectival compounds almost as much as the language of creative writing or fiction. The largest portion of the corpus material is composed of two novels by a prolific American writer with a praised and well-defined style of writing, our contemporary Stephen King. The other significant section is represented by works in literary criticism, psychology, sociology and history. This insistence on separating fiction and non-fiction English presents the starting point for analysing the quantity ratio of adjectivals in the language. In connection to this, it is worth saying that the number of examples of adjectival compounds from fiction books approaches one per every 350 words, whereas this number is twice smaller when it comes to analysing words from non-fiction texts. This can help deducing that adjectival compounds in language usage are more characteristic of creative, artistic expression through language than it is the case with the language of science.

Collecting data and words from this corpus which would be used as the basis of a qualitative examination, precisely 1584 examples of compound words on adjectival sentence positions in sentences have been discovered.

The results of the analytic approach to the corpus of language data will be put forth classed according to different criteria in the text to follow: according to the orthographic features of adjectival compounds of the English language in the corpus, the type of compound that is found in an adjectival sentence position, as well as the class that the elements of the compounds belong to, which, in a way, outlines the fundamental interests of this inquiry. The generalizations concerning these issues have been amply illustrated with authentic language fragments from the corpus. The marks and numbers in parentheses after the actual quotation refer to the initials of the author and the page number of the book in which the said example was detected.

The corpus consisted of the complete texts from the following works:

1. Stephen King (1981) *Cujo*, The New American Library, New York.
2. Stephen King / Peter Straub (1985) *The Talisman*, Berkley Books, New York.
3. C. Wright Mills (1971) *The Sociological Imagination*, Penguin Books, Harmondsworth.
4. Nick Heather (1978) *Radical Perspectives in Psychology*, Methuen, London.
5. Raymond Williams (1973) *Drama from Ibsen to Brecht*, Penguin Books, Harmondsworth.
6. G. M. Travelyan (1965) *English Social History*, Longmans, Green and Co., London.

## 2. ORTHOGRAPHIC FEATURES OF ENGLISH ADJECTIVAL COMPOUNDS

At the very beginning, perhaps something should be said about the basic observations concerning the orthography which accompanies the examples of adjectivals from the corpus. An account was taken of the way the compounds were spelt, i.e. of the way in which the elements were brought into lexical connection: connected writing of elements, elements written separately or the use of the orthographic symbol of *hyphen*. The results obtained after the analysis of the examples suggest a supremacy of compounds written with a hyphen. However, the supremacy now has a quantitative expression: of the 1584 cases of compounds on adjectival positions, a total of 1441 words were spelt with the help of a hyphen.

- (1) *the **saw-toothed** blades of grass...* (SKPS, 93)
- (2) *and her **still-dazzled** son had gone into Portland...* (SK, 69)
- (3) *the **mile-long** Canongate...* (GMT, 437)

It has also been confirmed that there exists a separate type of orthography when coordinated adjective compounds are written without doubling the first or the second element, where the composition chain formed with the help of hyphens is broken in front of the coordinating conjunction, which indicates that the word is not a simple compound, only to be continued immediately after the conjunction. In this elliptic way, any simple piling of words is avoided, as well as any possible repetition of the first, often modifying element in a number of compound adjectives obtained in this way:

- (4) *where something furry and **sharp-toothed and-clawed** waited.* (SK,10)

The following set of examples can vouch for the fact that the break can occur after the coordinating conjunction, particularly when a balance is to be maintained between the first two elements of the phrasal compound.

- (5) *Rudolph raised one **water-and detergent-reddened** fist...* (SKPS,400)
- (6) *the muddy, **wood-and barrel-littered** stretch of road...* (SKPS,131)
- (7) *in a **two-or three-column** review.* (CWM,126)

The overwhelming preponderance of writing ACs by means of hyphens (90,97%) implies that we could freely deduce that adjectival compounds are spelt with hyphens in the English language (as opposed to some other languages, such as Serbian), except for the exceptions in the volume of less than 10%. The exceptions include 136 examples of connected writing, which has been illustrated by a series of fragments given here. Aside from the commonest English compounds, this orthographic manner is found with several unorthodox examples:

- (8) *the teacher had been as **easygoing** as Joe had expected.* (SK, 121)
- (9) *the way a **thoroughbred** horse might tremble...* (SK, 323)
- (10) *or of **freebooting** clans...* (GMT, 155)

Compound adjectivals in prenominal attributive functions are spelt as separate words in minimal numbers and only 7 such cases were identified in the corpus. This can only consolidate the fact that the basic way of spelling ACs in the English language is by means of a hyphen, where this type of spelling could be deemed as an aberration from the norm.

- (11) *It was a gray, paint-peeling, **roof sagging** shambles...* (SK, 33)  
 (12) *This conception of the sociologist, **well housed** in research institutes...* (CWM, 75)  
 (13) *touch the **almost empty** bottle...* (SKPS, 257)

When we take into consideration the example numbered as (13), which is the only non-participial adjectival spelt with no hyphen, a question may be posed whether this is a matter of exception from the rule or not. However, it has to be borne in mind that in this structure the adverbial element *almost* quite clearly functions as a modifier of the adjective *empty*, and not the noun *bottle*. On the other hand, similar compounds with the first adverbial element and adjective as the second are invariably spelt with a hyphen:

- (14) *those two moments of **near-perfect** communication.* (SK, 104)

In our corpus, there have been established certain doublets which in a way point to the relevance of certain criteria and orthographic rules. It has been found that the spelling of some compounds does not have to be rule-governed when different functions of the word are involved. It is even possible to postulate that the predicative function somehow implies that the word is compressed to the extent that is presented in the example (16), which indicates a higher level of integration of elements:

- (15) *Structural antagonisms, **large-scale** revolts, revolutions...* (CWM, 52)  
 (16) *This apparatus has now become **largescale**, and many signs point...* (CWM, 66)

That this is not a solitary example can be supported by another couple of examples from the corpus in the fragments (17) and (18), respectively. It is symptomatic that both of these pairs are by the same authors, which somehow vouches that this is a kind of regularity:

- (17) *a **life-like** mask...* (RW,251)  
 (18) *was really **lifelike** and free from any tiresome moralizing...* (RW,109)

Thus, based on everything said so far, it can be underlined that it has been indubitably confirmed that when it comes to the spelling of adjectivals, it is closely related with prenominal modifying function, since the percentage of these two categories in the corpus is quite similar and reaches around 90% of the total.<sup>1</sup>

### 3. FORMAL CHARACTERISTICS OF ADJECTIVAL COMPOUNDS

The first parameter according to which we will be viewing adjectival compounds is the type of compound words they belong to. In this respect, all the compounds could be grouped into four major sets, compound adjectives, compound nouns, adjectival phrase compounds and all other compounds in adjectival sentential positions and modifying functions.

#### 3.1 Adjective compounds

As it had been assumed in the preliminary stages of this research, compound adjectives made the largest group of the total number of compound word forms that could be

<sup>1</sup> See the corresponding part of the doctoral dissertation „Adjectival Compounds in English and Serbian“ defended at the English Department of Nis University in 2004.

found in adjectival positions in English. The dominance of this word class can be expressed in quantitative terms in the following manner: almost two thirds of all such adjectivals would be compound adjectives, or more precisely put 1029 words. The percentage of 64.96% of adjective compounds proper is perhaps larger than expected. The variety of present combinations of elements and their semantic and functional relations can be even on the basis of the few examples given below:

- (19) *a beer belly, **slab-muscled** arms and legs...* (SK,25)  
 (20) *and **impromptu-looking** wooden huts...* (SKPS,98)  
 (21) *we may take a general, **culture-free** theory of human nature...* (NH,76)

The morphemes *half-*, *self-* *well-*, are among the most prominent first elements of adjectival compounds in English, whereas *-like* occurs as probably the most frequent second element.

### 3.2 Noun compounds

Compound nouns present the second most important contingent of words when it comes to adjectivals of compound structure. In the corpus, exactly 413 items were detected in several different classes. The part that this group takes of the whole is 26,07%, but perhaps more significant is the fact that these lexical items together with adjective compounds make as much as 91,03% of the total number of adjectival compounds registered. Some of the authentic examples of attributively used compound nouns are:

- (22) *value patterns with the internalized **need-disposition** structure...* (CWM, 39)  
 (23) *it had the mouldy **yellow-newspaper** smell...* (SKPS, 655)  
 (24) *who had been **whole-time** servants...* (GMT, 361)

It can be stated here that a number of nominal elements of the compound nouns retain their grammatical category markers. It is not the case with most of the noun elements in the corpus elsewhere, nor is it characteristic of nouns to carry inflectional morphemes in prenominal modification. However, in a limited number of cases, but present anyhow, there occurred the regular plural suffix for nouns in English, namely the ending *-s*. Since the second element of the compounds is the head, the inflectional marker is on this element, even though both elements can be with flexion, as can be seen in (26).

- (25) *courtesy of the **special-effects** people.* (SK, 26)  
 (26) *the city's automobile junkyards or **used-parts** outfits.* (SK,62)  
 (27) *Atari **video-games** setup...* (SK,168)

When we analyse these text fragments more closely, the conclusion that can be reached is that pluralizing nominal elements in compounds is semantically conditioned. Let us consider the example in (25). If the noun *people* had a premodifying compound in *special-effect*, the meaning which would be attained could be interpreted as »people who themselves have special effects on others«, and not the interpretation we would expect, for instance »people who deal with special effects in films«. The same can be claimed for other example, with different interpretation and rationale. Thus, the irregularity in the occurrence of grammatical morphemes on noun elements of compounds has a well-founded motivation.

Further on, around ten of the compound nouns from the corpus bear the marking for the category of case. It is mainly singular nouns that obtain the case suffix, but also it is

not unlikely to encounter an adjectival compound of coordinated plural nouns with the mark for genitive case, as in the example (30). The said example is also one of the few where not only the last element of the compound gets the inflection, but also the first one.

- (28) *up the **market-town's** main thoroughfare...* (SKPS,224)  
 (29) *version of a **deliveryboy's** bicycle-cart...* (SKPS,542)  
 (30) *the hunched, **courters'-and-rabbits'** wood...* (RW,241)

In the following sentence fragments, as it can be seen, the marked noun is the first element of the compound, be it of a singular or plural number.

- (31) *up to some **gull's-eye** view...* (SKPS,16)  
 (32) *and the **men's-room** door jerked open...* (SKPS,159)  
 (33) *it is very much a **boy's-eye** view...* (RW,245)

Declining nominal parts of compounds is not typical of the English language. When the quantity of the marked nouns is taken into account, we obtain the result that somewhat over 3% of all cases of compound nouns belong here. It is perhaps worth saying that all of the cases refer to the language of creative writing.

### 3.3 Phrasal compounds in adjectival positions

The next group that could be distinguished on formal grounds is the one which would encompass a series of words of rather complex lexical structure, most often termed phrase or phrasal compounds, which is largely suggestive of their internal organization. These compounds lag considerably behind the first two groups of adjectivals in terms of their number. Only 108 examples of compounds which have more than two elements can be treated as phrasal compounds in adjective functions. Expressed in percentage, this means that they form only 6.81% of the total corpus, largely in the genre of creative writing. The most prominent section of adjectival phrase compounds are examples of coordinated nouns or adjectives illustrated by the fragment in (36).

- (34) *the boom in **do-it-yourself** therapy...* (NH, 102)  
 (35) *the **take-it-or-leave-it** confession of disturbance...* (RW, 315)  
 (36) *This **ridge-and-furrow** draining...* (GMT,380)

Three examples of adjectival compounds in the corpus had a conjunction or subordinator as the first element. These are primarily subordinators which serve to introduce dependent clauses, coordinate independent clauses or present a part of the adverbial modification of adjective heads.

- (37) *in the same indulgent **but-isn't-he-cute** voice.* (SKPS, 212)  
 (38) *her **as-yet-incomplete** set of Depression glassware...* (SK, 181)  
 (39) *To act in this **as-if-I-were-a-human-engineer** manner...* (CWM, 129)

Also, three examples contained the negative particle »not«, used to negate adjectives or verbs, as in the next group of fragments.

- (40) *Tears of relief began to roll down her **not-yet-dry** cheeks..* (SK,172)  
 (41) *two or three **not-so-nice** houses...* (SK, 144)  
 (42) *a final, **not-to-be-refused** offer...* (SKPS, 629)

### 3.4 Other compounds in adjectival sentence positions

The last subsection within the whole of adjectival compounds is concerned with all those compounds that formally do not belong to any of the previous classes. Such lexico-functional constructs in the corpus were identified in 34 cases, or 2.16%. Those are predominantly verb compounds, either lexicalized phrasal verbs or any other phrase structure used in attributive prenominal function. 10 cases of adverbs or reduced adverbial phrases can be counted among the latter.

- (43) *a hell of a lot spryer than that **long-ago** yellow dog.* (SK,110)  
 (44) *was a small and **tumble-down** building...* (GMT,440)  
 (45) *and dirty **button-down** shirt...* (SKPS,621)

The summary overview of adjectival compounds according to the type of compounds in the corpus is presented on the table 3.1.

Table 3.1 Number and percentage of compound types in the total of adjectival compounds in the corpus.

	Type of compound	No.	%
1.	COMPOUND ADJECTIVES	1029	64,96
2.	COMPOUND NOUNS	413	26,07
3.	ADJECTIVAL PHRASE COMPOUNDS	108	6,81
4.	OTHER ADJECTIVAL COMPOUNDS	34	2,16
	Total:	1584	100

In terms of categorially marked forms, the first element of adjectival compounds was in the comparative form in 8 examples, either for adjectives or adverbs. We can say that when the first part of the compounds is independently marked for category, it is a case of compound word with no firm internal structure. Otherwise, it would not be possible to alter the form only of the first element. Two of these words in the corpus were instances of adverbial comparison of the irregularly compared adverb *well*:

- (46) *Many of the **better-to-do** gentry...* (GMT,308)  
 (47) *to win recognition by his criticism of an older and **better-known** man.* (CWM,126)

whereas the other examples are with elements of the regular comparison paradigm for adjectives:

- (48) *any detailed studies of **smaller-scale** areas...* (CWM,77)  
 (49) *to turn the troubles of **lower-class** people.* (CWM,96)  
 (50) ***Longer-term** trends are usually needed...* (CWM,168)

In yet some other cases from the corpus, the comparative forms of adjectives would make first elements of tripartite compound nouns, where link has been established with yet another compound, namely *middle-class*. In two different texts, there occurred examples for which we could say that they have a complementary relationship in terms of meaning.

- (51) *had entrenched herself in her **upper-middle-class** suburban life...* (SK,257)  
 (52) ***Lower-middle-class** idea merchant!* (RW, 300)

Far less frequent are superlative forms in the first compound element as graded common adjective compounds with the adverb *well-* or adjective *bad-*. The following illustrative examples follow this suit:

- (53) *Pirandello's **best-known** and most challenging play.* (RW,173)  
 (54) *are the **best-tasting** cereals in America...* (SK,27)  
 (55) *Better to make what Vic called a **worst-case** analysis...* (SK,240)

Compounds can be found as elements of other adjectival compound words, either on the first or second position. In the research corpus, however, more compounds were detected in the initial position, some 10 examples. Judging by word class, these were predominantly nouns, although there are other classes, as can be viewed from the illustration (58), which is a compound preposition proper:

- (56) *in one of the **toothpaste-spotted** mirrors...* (SK,189)  
 (57) *Another root floated down, **cobweb-light**, and tried to snatch...* (SKPS,138)  
 (58) *whistling, **out-of-breath** voice...* (SKPS,295)

As can be seen from the given, it is characteristic of compounds as first elements to be spelt integrally, only two examples of compound first elements were spelt with a hyphen. The second element had a compound form mainly in lexicalized phrasal verbs, the parts of which were generally linked with a hyphen. Adverbial modification is not uncommon with such constructs:

- (59) *The change was [...] **long-drawn-out** through centuries...* (GMT,16)  
 (60) *a few **well-brought-up** young people...* (GMT,261)

### 3.5 Elements of adjectival compounds according to word class

This part of the analysis is supposed to take into consideration the structure of the adjectival compounds from the corpus as for the class to which the words employed in the lexicalization process belonged. The most explicit way to present the results would be by a table which makes a difference between classes of words and the part they take in representing the first element of the compound. This should give us a better insight into the nature of compounding when compounds in attributive functions are taken.

Table 3.2 Number and percentage of word classes as first compound elements of adjectival compounds in the corpus.

Word class	First element	
	No.	%
NOUN	621	42,07
ADJECTIVE	415	28,12
ADVERB	178	12,05
PAST PARTICIPLE	98	6,64
NUMERAL	95	6,44
VERB	25	1,69
PARTICLE/PREPOSITION	23	1,56
PRESENT PARTICIPLE	19	1,29
PRONOUN	2	0,14
TOTAL:	1476	100



The class to which the elements of compounds belong, naturally, is not the sole criterion for comparing words along the lines of their structure. Also, the total number here mentioned is understandably reduced for the number of adjectival phrase compounds in the corpus, the first elements of which were not taken as relevant.

### 3.5.1 Past participle

Formally looking, **past participle** is the single most present element of compound adjectivals, counting as both the first or the second element, which indirectly may serve as an indicator of the clausal source of most adjectival compounds.

As for the initial position in compound words, past participle is second to some other formal elements. In the research corpus, 98 words, or around 6.6% of compound adjectives found, were those that expressed a lexicalization of phrasal construction of different sorts. In certain cases, it is a combination of subject and its complement, formulated by a past participle. Those are clausal matrices of the type »N copula ADJ«, as in the example *scorched-earth landscape* or *landscape in which the earth is scorched*. Of the total above-mentioned number, 14 belonged to these words, which could be illustrated with the following fragments:

- (61) *There was a long Quonset hut with a rust-splotched **corrugated-tin** roof..* (SK,25)
- (62) *the **framed-stage** theatre...* (RW,399)
- (63) *Etheridge had been sitting in **advanced-math** class...* (SKPS, 697)

Yet in certain other instances the combining involves elements from verbs and adverbial particles. This is by far the most dominant group of participle-based adjectival compounds. In other words, 70% of adjectival compounds with past participle as first is a lexicalization of a phrasal verb, with a particle or preposition.

- (64) *according to **agreed-upon** rules...* (CWM, 130)
- (65) *by the hard, mask ridden, uproariously **laughed-at** world...* (RW,246)
- (66) *The **soaped-over** windows actually seemed...* (SKPS,662)

It should be particularly stressed here that only two verbs were prefixed with a negative or reversative prefix *un-*. Those were the forms *unlooked-for* (RW, 24) and *uncared-for* (GMT, 192), which could point to a more complex process of reaching at the level of obtaining a compound adjectival.

The third group could be made out of the compounds that have a past participle as the modifying element of the basic structure. The second element is a verb with *-ing* ending, which may function as the predicator of the original pre-lexicalized structure. Without exception these are compounds based on *-looking* and *-sounding*. Thus, *deformed-looking beasts* are actually *beasts which/that look deformed*. The only somewhat different adjectival was the one with a proper adjective in the second element, as in: *...led up to a **propped-open** screen door.* (SKPS, 154) The examples are the following:

- (67) *in hot regular **agitated-sounding** spurts.* (SKPS, 324)
- (68) *long, **peeled-looking** sides of beef...* (SKPS, 94)
- (69) *Donna uttered a short, **cracked-sounding** shuckle.* (SK, 185)

Past participle is far more frequent as the second element of a compound in language generally, so this was reflected in the corpus, as well. Of the number of examples where it is possible to speak of the second element, 478 had this form in the second part of the

compound, which is exactly 32.38% of the whole. The following are among the more interesting words from the corpus:

- (70) *She lay **hot-eyed** and straight in bed...* (SK,86)  
 (71) *the thin formality or even emptiness of these **fact-cluttered** studies...* (CWM,81)  
 (72) *His face wore the dismayed, **slack-jawed** expression...* (SK, 229)

### 3.5.2 Present participle/gerund

Another quite frequent formal element in a compound word is present participle, with its strongly active verbal component and meaning. Being a non-finite form, it is suitable for combining with other word classes, mostly with nouns, then adjectives and adverbs.

The contribution of present participle as the first element to compounds is rather modest in comparison to the cases when it is used as the second element to form a compound word. The number of only 19 cases of all from the corpus, which makes only one tenth of the use of present participle in the second element speaks enough in favour of this remark. At times, it can be problematic to establish whether we have an instance of present participle or gerund, the verbal noun, in the first position. As already known, these two non-finite verb forms in the English language have identical forms. Only by function can it be determined what the actual form is. For the same reason, it is probably better to speak in terms of the so-called *-ing* form, as can be found in literature,<sup>2</sup> not making an essential distinction. Concerning the fact that the functional characteristics of the elements in a compound are somehow suspended and cannot be effective unless the basic, "unfurled" structure is viewed, it is necessary to examine each case separately. In a prevailing percentage of 90%, the present participle compounded with nominal elements, and only in one case with an adjective. The rest refers to adverbial particles. Here are some of the words in the context in which they appeared:

- (73) *That **ripping-bedsheet** sound grew louder...* (SKPS, 590)  
 (74) ***Lying-in** hospitals were founded...* (GMT, 345)  
 (75) *the **contrasting-type** approach often requires...* (CWM, 237)

As a part of noun compounds in adjectival use the present participle is relatively frequent, even in the commonest of nouns, such as *washing-machine*, *living-room* or *shopping-center*.

In some 5 examples, the present participle is the opening of a phrasal compound, having a propensity of combining easily with full infinitives:

- (76) *Joe Camber's **rusting-around-the-edges** station wagon...* (SK, 195)  
 (77) *Her **beginning-to-dream** mind saw...* (SK, 166)  
 (78) *a day during the **learning-to-drive** experience...* (SK, 218)

The research corpus contained a total of 193 examples of words which had a present participle form as the second free morpheme, which is obviously over 10% of the total number, a comparatively small portion. This qualification acquires its full sense when taken in account together with the importance given to present participle-based words in descriptions of compound.<sup>3</sup> This formal element combines in compounds with many

<sup>2</sup> R. Quirk, et al. (1972) *A Contemporary Grammar of English*, Longman group, London.

<sup>3</sup> V. Adams (1976) *An Introduction to Modern English Word-Formation*, Longman group, London.

different word classes, but mostly with nouns. There are certain words which have been in use for a long time in English and which we regard as something quite common:

- (79) *a **hard-working** farmer.* (GMT,242)
- (80) *requires a very **deep-going** historical analysis.* (CWM,172)
- (81) *many minute, careful, and **time-consuming** investigations.* (CWM, 76)

but also there are some other examples which are very characteristic, such as:

- (82) *itself contains **stigma-arousing** properties...* (NH,88)
- (83) *the other **moostrooping** clans...* (GMT,155)
- (84) *were now lined with dusty, **heat-drooping** maples...* (SK,145)

### 3.5.3 Adjective

As a repository of lexical combinatory elements in the formation of compounds, the class of adjectives plays a significant part, as mirrored by the data obtained from the analysis of a specific language corpus. They are the second single largest group of words when the first adjectival compound position is considered. As illustration we could view the next few segments from the corpus:

- (85) *He was a thin man with a **scrawny-strong** physique...* (SK, 80)
- (86) *the features are not clinical but **phenomenological-existential**.* (NH,95)
- (87) *by those **liberal-minded**, open-hearted aristocrats...* (GMT, 405)
- (88) *climbed a tall, **rickety-looking** tower...* (SKPS,225)

There occurred a compact group of derivatives on the basis of proper nouns, the number of which is 13 compounds, predominantly consisting of well-established lexical items, such as the example selected here. It is a noticeable feature of these combinations that they most often contain second participial elements and other adjectives derived from proper nouns:

- (89) *the English were still a **French-hating**...* (GMT,95)
- (90) *a stock-company of **English-trained** artists...* (RW,126)
- (91) *the **Scottish-American** trade...* (GMT, 456)

Several adjectival words with the linking vowel *-o-* were registered, more precisely put 12 of them, which suggests that this model of formation within adjectival compounds is not prominent enough in the English language (as compared to Serbian), or that perhaps this is the right proportion of its impact in forming compounds. Also, it can be stated that this way of putting together elements in compound words is specific of the language of science, as can be perceived from the sources of the ensuing examples. They stem from all the domains, except for the creative writing.

- (92) *it cannot be read as a **politico-historical** play.* (RW,27)
- (93) *The **ecclesiastico-political** controversies...* (GMT,265)
- (94) *quite spongy »indices« of »**socio-economic** status« have served.* (CWM,64)

An important issue with morpho-semantic implications that may rise here is confronting the example (93) with the one numbered as (95), both of which have their source in sociological texts. Is there any objective motivation for the author to use two different forms of the same formative element *socio-* in the first case and *social-* in the second?

- (95) *conceptions that usually relate to **social-historical** structures.* (CWM,77)

Apparently, the answer is yes, and the reasons for this phenomenon may be classed as semantic ones. When two categories are considered at the same level as in (95), thus both the elements of equal status and the structure as coordinated, it is easy to conceive the formal or morphological identity of the elements. In the other example, however, one category is regarded in the framework of another, in our example the second element within the first.

Proper non-derived adjectives as second elements of compound words with adjective function are less present than in the first position, which is understandable since they serve as modifiers in attributive noun compounds. In comparison to past participle, they are less used, only in 20% of adjectival compounds. The fragments to exemplify would be:

- (96) *a drawing of the hotel on **eggshell-thin** paper...* (SKPS,76)  
 (97) *but stung the eyes like **August-mad** sweat instead...* (SK,12)  
 (98) *But the two **clay-cold** bodies...* (RW,78)

Among these words, we shall also focus our attention on the ones that have derivatives from proper nouns in the second element, of which some make classic examples for instancing compound adjectives on a general scale. A common morphological feature is the composition of two adjectives of the same rank, as is seen in the example (99), always by means of a linking vowel infix, one should think.

- (99) *the **Graeco-Roman** ways of life...* (GMT,140)  
 (100) *The first great **Anglo-Indian** statesman...* (GMT,216)  
 (101) *The **Franco-Prussian** war...* (GMT,357)

Another noteworthy observation is the fact that less than a quarter of this word group, apparently words which have an adjective as the second compound element, have another adjective as a co-occurring element in the compound, in which we should count the just mentioned compounds. In a much larger percentage, the second adjective element is bound to nouns or adverbs. When we say this, we actually have in mind the following cases, among the rest:

- (102) *The **rich-proud** cost of outworn buried age...* (GMT,99)  
 (103) *a convention of **late-Victorian** poetry...* (RW,129)  
 (104) *The odor of **long-dead** flowers overlaid the land...* (SKPS,550)

The adjectives that are the second part of the compound adjectives of the corpus are dominantly simplex adjectives, since one third belong to the ones obtained through derivation. For the most part, these are qualifiers which characterize a noun in terms of certain traits such as: *thin*, *long*, *wide*, *deep*, *free*, and *open*, whereas among the complex ones, the most frequent derivational suffixes were: *-al*, *-an*, *-ent*, and *-ous*.

### 3.5.4 Noun

It is not unusual for nouns to occupy the central position more often in comparison to other word classes when the first element of adjectival compounds is considered. Being individually the largest group of words when all other classes are taken, nouns appeared to be the class with the strongest formative and combinatory potential, which was mani-

fested in the research corpus, as well. To a large extent, certain features of entities are determined on the basis of nominal parameters, so that we can say that nouns have a very important role in the semantic and morphological structure of compounds. Thus, examples such as *needle-sharp* (SKPS, 672) or *bowl-shaped* (SKPS, 673) owe a considerable part of their expressive power to the noun which helps orientate the entire compound, in the sense that only with the noun can we have a precise and more specific meaning with which to characterize an entity from the extra linguistic reality. On the other hand, the various syntactic and functional relations among words in higher rank organizational units of language structure which are to be lexicalized enable the nominal elements to appear on primary positions in compounds, even though in the basic, unlexicalized structures they can be used differently. All this has been made possible by the astute nominal inflection of the English language, since the results of a similar analysis in Serbian would be, quite likely, completely opposite. All the 621 words from the corpus, which makes more than 40% of the total number of examples, had nouns in primary compound positions. Some of these are quoted here:

(105) *in a socially adapted, **law-abiding** fashion...* (NH, 47)

(106) *our **storm-beaten** ships...* (GMT, 500)

(107) *even the **gold-embroidered** coat tails...* (RW, 329)

Nouns which are engaged in the process of word composition vary in terms of type and characteristics, which makes reaching any more important generalizations very difficult. Among these, there are countable and uncountable, mass and abstract, common and proper nouns, the position of which is in the original relative clause or as subject, or within a prepositional phrase. When it comes to proper names, the following examples were found:

(108) *a **Wolf-decimated** loaf of bread...* (SKPS, 370)

(109) *in the back of a **Wolf-driven** Cadillac...* (SKPS, 691)

where *Wolf* is a personal name, but acronyms can also be used to label certain well-known institutions:

(110) ***CIA-supported** rebels training for takeovers of ... countries...* (SKPS, 582)

(111) *Men in **FBI-agent** black suits...* (SKPS, 591)

Nouns as the second element of the compound, thus in the majority of the cases the compound head element, determine the status of the compound as noun compound in the classification according to word class. Obviously, these cases appear first of all with the attributive function of compound nouns, since the portion of adjectival noun compounds in predicative function is minimal. Our research corpus contained over 400 examples with the noun as the second element in the compound word.

(112) *Anyone with **first-hand** knowledge of the workings...* (NH,73)

(113) *its **patent-leather** shoes...* (RW,80)

(114) *the waz the **sheared-copper** smell of his blood...* (SK,126)

Another valid inference that can be drawn here on the basis of the analysis is that derived nouns rarely make a second compound element. Otherwise, the derivational morphemes that do appear in such derivatives are agentive nominal suffixes, a fact that can

be seen in the examples of these synthetic compounds: *troublemaker*, *sleepwalker's* and *critical-naturalist*.

### 3.5.5 Verb

Verbs can largely be seen as first elements of compound adjectival words, because they do not tend to appear so often as second elements in their finite forms. When we analyse verbs here, we consider only those verb forms which have not been encompassed by the two previous overviews regarding participle forms, that is uninflected verb forms. In the corpus, these cases were reserved for lexicalizations of phrasal verbs with adverbial particles or prepositions, but there are some other types, as well. Of the total number of words in the corpus, 25 have a verb in its finite form as the first element.

(115) *and when the **wake-up** call came on Thursday...* (SK,179)

(116) *woman with her **stick-out** hair...* (SKPS,636)

(117) *pulled back into the **breakdown** lane...* (SKPS,145)

The biggest number of other verb structures which can be reduced to the level of compound words belongs to verbs in combinations with complements and modifiers,

(118) *poem about a **make-believe** Chink whorehouse...* (SKPS, 700)

(119) *the »**know-nothing**« ideology of the politically quiescent.* (CWM, 162)

(120) *of his father's **rolltop** desk...* (SKPS, 50)

There is a particular verb-based compound adjectival that deserves our special attention. The combination of the modal verb *would* and lexical *be* is an infrequent example of verb phrase lexicalization in order to obtain compound adjectivals. This form is characteristic of attributive function and as such was identified in the language corpus.

(121) *Fay Wray's **would-be** rescuers...* (SK, 177)

### 3.5.6 Adverb

Along the lines of their functional nature of adjective and verb attributes, adverbs are possible to appear only as first elements of adjectival compounds. Our corpus appears to have acknowledged this issue, since there were 178 adverbs registered in the corpus, composing compound words with adjectives and participles. Even though the adverb form of first compound elements in many of the examples is identical with the adjective one, these two should not be mixed. This proves that it is necessary to have an insight into the whole process of generating a compound word, so as to be able to penetrate into the exact structure of the compounds. Every attempt of classifying the element *perfect* from the words such as *perfect-fitting* into adjectives would most likely be wrong.

Judging by the type of adverbs that partake in the formation of compounds with adjectival use, the dominant are adverbs of manner, making approximately 75% of all examples. Time adverbs trail, then there are directional adverbs and finally intensifiers, such as *so* or *too*.

A particular segment of the group of adjectivals which have adverbs as the first compound member is the one composed by means of *well-* or *ill-*. Concerning the fact that it is a semantically well-rounded whole with important implications as to the meaning of compounds, perhaps it deserves a separate survey. Twenty-one compound adjectivals have been composed with adjectives, several of which we offer here for illustration purposes:

- (122) *that was a **deadly-false** bit of reasoning...* (SK, 216)  
 (123) *and felt the **now-familiar** impotent hate* (SKPS, 252)  
 (124) *blood on his **once-spotless** white silk shirt...* (SKPS, 720)

Furthermore, 23 combinations with present participle were registered:

- (125) *the **far-spreading** code...* (GMT, 264)  
 (126) *reviewers and **right-thinking** men of the day...* (RW, 17)  
 (127) ***Eastward-bearing** traffic on the road...* (SKPS, 126)

Most of the compounds had an adverb first element, and past participle as second. Such formations numbered 111 in the corpus. Almost half of them are cases of participles qualified by *well-* or *ill-*.

- (128) *the **fully-furnished** family play...* (RW, 79)  
 (129) *Some **highly-paid** engineers...* (GMT, 478)  
 (130) *in addition it was **double-barred** across the inside...* (SKPS, 581)

Of the 5 words which were adjectival in nature, but are intrinsically lexicalizations of other, non-adjective syntagms, more frequent are the ones the first element of which is the adverb *after*.

- (131) *when the Tap's **after-work** crowd started to come in...* (SKPS, 180)  
 (132) *the difficult **after-school** age...* (GMT, 192)

Among more prominent examples in this section, we can single out the group with *all-* and *ever-*, as adverbs represented with 17 out of the total number of examples. Other observations would include the one that this kind of composition is typical of the style of writing in the scientific discourse.

- (133) *the key of the **all-important** trunk...* (GMT, 223)  
 (134) *developed into an **all-embracing** vision of a future society.*(NH, 15)  
 (135) *the **ever-recurring** problem...* (GMT, 449)  
 (136) *the **ever-present** problems of technical education...* (GMT, 192)

### 3.5.7 Particles / prepositions

Even though adverbial particles are in essence adverbs, here they have been considered separately, together with prepositions. When it comes to adverbial particles or prepositions in the corpus,<sup>4</sup> we could contend that their presence in adjectival compounds is rather limited. This is particularly true of those situations when particles appear as the first element in compounds having been preposed in the process of lexicalizing phrasal verb structure with adverbial extension. Therefore, it is no surprise that of the 23 examples which the corpus contained, 18 had one of the two simple participial forms on the surface of the compound as the second element. It is much commoner to have a past participle, as shown by the 83% such cases of corpus instances, and much less present participle.

<sup>4</sup> Adverbial particles and prepositions in English share the same formal identity, so that only by means of function and usage in particular contexts can we decide which form is in question. Of all such words: *about*, *across*, *along*, *around*, *away*, *back*, *by*, *in*, *off*, *on*, *out*, *over*, *past*, *through*, *under*, *up*, only *away* and *back* can be treated solely as particles.

- (137) *confusion of **overturned** furniture.* (SKPS, 484)  
 (138) *swung into one of the **outbound** lanes...* (SKPS, 258)  
 (139) *a pair of yellow, **up-slanted** eyes...* (SKPS, 491)

All of the other 5 cases that had no participial forms in the second element, were compounded by means of nouns, the reason which makes it understandable to say that we could speak of lexicalization of prepositional phrases, such as in the next few sentence fragments:

- (140) *what should have been their **at-home** season...* (SK, 32)  
 (141) *for whom life is especially **uphill** struggle.* (NH, 79)  
 (142) *on the **inland** side of the beach road...* (SKPS, 690)

It is well-known that it is sometimes difficult to draw a distinction line between certain prefixes and prepositions or adverbial particles as *over-* or *under-*. In this we could rely on the meaning of the elements themselves. Prefixes as bound morphemes have mainly meanings which imply a level of intensity, whereas free formative elements have more of spatial implications. This can be confirmed by the examples quoted here, regardless of the fact that the first example is a word with powerful nominal connotations:

- (143) *an **underground** room...* (SKPS, 316)  
 (144) *imitated him in a slow-moving, **underwater** fashion.* (SKPS, 567)

Particles, however, were four times more present as the second part of compound adjectivals. Since these are particles, it is quite conceivable that the starting pre-adjectivization structure must have been »verb + particle«, so that the first element is a finite or non-finite verb form. It should be noted that the particle with the greatest formative potential appears to be *up* with the occurrence of 30% in compounds on adjectival positions.

- (145) *a good **jumping-off** point for an escape...* (SKPS, 371)  
 (146) *use the politically **washed-out** notion of »cultural lag«...* (CWM, 102)  
 (147) *evidence of poverty: of a starved, **showing-off** imagination...*(RW, 165)

This pattern is short of only 3.65% from a hundred percent presence in the domain of particle-based adjectivals. The insignificant percentage of exceptions concerns three adjective/adverb forms in the first element: *far-off* mountain, *close-up* scenes and *white-out* sky. Also, a certain small number of other elements could be treated as prepositions, since the structure and meaning of compounds suggest a lexical transformation of the so-called »prepositional phrasal verbs«, with an obligatory object of the action expressed by the verb.

- (148) *with widely **believed-in** moral symbols...* (CWM, 45)  
 (149) *«compounded» sets of facts and relations as well as merely **guessed-at** factors and observations...* (CWM, 43)

Determiners of the quantifying type serve for the purpose of negative quantification of countable and uncountable, such as the English *no*, which appeared in the corpus in three cases within compounds which originated through lexicalization of nominal phrases.

- (150) *playing the **no-name** game...* (SK,123)  
 (151) *It explained Richard's iron, **no-compromise** insistence on reality...*(SKPS, 489)



Seemingly, the quantifier has the role close to that of any of the negative prefixes as *a-*, *dis-*, *in-*, *un-*, particularly visible in (151). The question which would not be easy to answer here is what motivation lies behind the formation of such adjectivals, when there are prefixed forms at disposal in language production with almost identical meaning of »Not willing or seeking to compromise«, as the adjective *uncompromising*.

As it can be assumed, the greatest number of compounds in language, be that English or Serbian for that matter, are products of the process of compounding formally independent morphemes. Furthermore, it can be said that compounds present semantically composite structures, since they stand for combining two sets of sememes upon different principles.

### 3.5.8 Pronouns

Only two of all first elements can be counted as pronouns in the basic structure of compounds, in the words of the corpus *all-embracing* (NH,15) and *all-pervading* (RW,131).

Table 3. Number and percentage of each word class item as a second compound element in adjectival compounds.

Second element word class	No.	%
PAST PARTICIPLE	478	32,38
NOUN	413	27,98
ADJECTIVE	309	20,93
PRESENT PARTICIPLE	193	13,07
PARTICLE/PREPOSITION	83	5,62
Total:	1476	100

## 4. CONCLUSION

Analyzing the phenomenon of adjective compounds, which is positioned somewhere within the overlapping section of morphology and syntax, was meant to provide an insight into the structural features of compound words that are used as modifiers. This paper stands as a confirmation of certain presupposed matters about using compound words in adjectival positions, as well as a presentation and interpretation of their formal characteristics. Having taken into consideration the orthography, the conclusion reached is that hyphen plays a decisive part in determining compound words in prenominal modifier functions, since ninety percent of the adjectival compounds are spelt with the symbol. As pointed out in the paper, this functional slot would be most often occupied by compound adjectives proper to the extent of two thirds of all cases, whereas one fourth of the instances had noun compounds functioning as nominal modifiers. Further on, most of the first elements of the compounds from the research corpus belonged to the class of nouns, while past participle was the dominant second element of the corpus examples. Thus, it can lead us to the inference that a typical English adjectival compound could be viewed as a compound word consisting of a noun and past participle, like *weather-beaten*. Finally, when it comes to preserving categorial markers with compound elements, it can be said that it is largely semantically conditioned when nouns are second elements, and that only 3% of nouns in adjectival compounds possess any inflection endings. More gener-

ally speaking, compounding involves non-derived words as elements much more often than not. The facts discovered here could have practical significance for learning English as a foreign language and for general descriptions of English, as well.

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## MORFOLOŠKI ASPEKTI ENGLEŠKIH ADJEKTIVALNIH SLOŽENICA: ANALIZA JEZIČKOG KORPUSA

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*Rad je u osnovi pregled formalnih odlika koje karakterišu različite tipove složenica na funkcionalno adjektivnim pozicijama. Pregled je sistematizovan i baziran na istraživanju uzoraka primera iz jezičkog korpusa posebno formiranog za ovo proučavanje. Analiza po formi, elementima koji ulaze u sastav složenica, njihov međusobni odnos i drugo, upotpunjena je obiljem primera koji ilustruju konkretni jezički kontekst u kojem se mogu naći adjektivne složenice u engleskom jeziku. U radu su iznete statističke potvrde o tome da su složeni pridevi one složenice koje u engleskom jeziku najčešće obavljaju tu funkciju (65%), da su adjektivne složenice u ogromnoj većini pisane criticom, da je tipična složenica na adjektivnim pozicijama ona koja ima imenicu u prvom i particip prošli kao drugi element složenice. Pored toga, na osnovama rezultata analize nameće se zaključak da je prisustvo flektivnih morfema u složenicama semantički uslovljeno, kao i da je prisustvo izvedenica kao elemenat složenih reči veoma ograničeno.*

Ključne reči: engleski jezik, morfologija, adjektivne složenice, jezički korpus.