

## THE DEVELOPMENT OF *-FREE* AS A SUFFIX-LIKE ELEMENT IN PRESENT-DAY ENGLISH: COMPARISON AND CONTRAST WITH *-LESS*

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Today, in present-day English, we speak of *button-free phones*, *guilt-free burgers*, *stress-free living*, *hangover-free mornings* or *risk-free investments*. Despite the apparent synonymity between *-free* and *-less*, there are pairs of formations like *child-free* and *childless* or *parent-free* and *parentless* which are characterised by a meaningful difference between the two members. The pattern ‘noun + *-free*’ is increasingly productive but the status of *-free* as an affixoid is still debatable. The aim of this research is to shed further light on the behaviour of *-free* in present-day English by comparing and contrasting this element with the suffix *-less*.

**Key words:** suffixation, compounding, synonymous formatives, English

### **I. Are the formations ending in *-free* compounds or derivatives?**

#### **The aim of the research**

In his discussion of what distinguishes true affixes from bases, Plag (2003: 73) offers a test which shows that while *-less* in words like *carless* is a suffix, its rival element *-free* in words like *error-free* is a base, so that formations whose right-hand constituent is *-free* should be considered as compounds rather than derivatives. His argument for not assigning an affix status to *-free* is that *error-free* “can be paraphrased by *free of error(s)*, which means that *free* in *error-free* and *free* in *free of error(s)* are most probably the same lexical item, and not two different ones (a suffix and a free form)” (Plag 2003: 73).

As to *-less*, Plag (2003: 73) points out that when combined with a base, as in *carless*, *-less* means ‘without’ and this meaning is clearly different from that of the free form *less*, denoting the opposite of *more*. He also adds that the phonological weakening characteristic of *-less* /ləs/ as a constituent of formations like *carless* does not occur in the free morpheme

*less* /les/. Hence, Plag (2003: 73) concludes that the semantic unrelatedness and phonological difference between *-less* and *less* serve as good evidence that in this case, there are two homographic morphemes – the suffix *-less* and the independent form *less*.

The analysis of *-free* and *-less*, proposed by Plag (2003: 73) is in line with the observations on the status of *-ful*, *-type* and *-wise*, made by Dalton-Puffer and Plag (2000: 242) in an earlier paper where the two authors, referring to Rainer (1993), emphasise that the relatedness of a constituent to a free morpheme is the most important criterion to distinguish a compound constituent from a suffix: “[i]f the constituent in question occurs *with the same meaning* as a free form, no additional suffix should be assumed”.

Taking into consideration Dalton-Puffer and Plag’s (2000) relevant tests, Bauer, Lieber and Plag (2013: 354) indicate that they treat formations with the element *-free* as compounds “on the grounds that there are no compelling arguments” for the status of *-free* as an affix or an affixoid.

Given the above-mentioned observations, it follows that while words like *carless*, *cloudless* and *meatless* are suffixal derivatives, the corresponding *-free* formations *car-free*, *cloud-free* and *meat-free* are compounds. The main argument for the compound status of the latter three formations is the fact that the constituent *-free* is used in each of them with the same meaning as the free morpheme *free* in the corresponding paraphrases, i.e. *car-free* can be paraphrased as *free from car(s)*, *cloud-free* is *free from clouds* and *meat-free* is *free from meat*. Put differently, *-free* in *car-free*, *cloud-free* and *meat-free* is the same lexical item as the one used in the phrases *free from car(s)*, *free from clouds* and *free from meat*.

At the same time, there appears to be no huge semantic difference between *carless* and *car-free*, *cloudless* and *cloud-free*, or *meatless* and *meat-free*<sup>1</sup>, respectively. The synonymy between the two formations in each pair is corroborated by the fact that they can both enter into collocation with the same noun with no significant change of meaning. Thus, *carless streets* are streets without cars and so are *car-free streets*, a *cloudless sky* is a sky free from clouds just as a *cloud-free sky* is, and a *meatless diet* contains no meat, which is also true for a *meat-free diet*. It

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<sup>1</sup> Bauer, Lieber and Plag (2013: 368) indicate that in some instances a *-less* derivative and its *-free* counterpart “seem all but identical in force” as in the pair *charismaless* ~ *charisma-free*, where the very small difference between the two forms is that *charisma-free* is slightly ironic. Yet, a form derived with *-less* may differ from its *-free* counterpart in terms of connotation. This kind of difference is discussed in detail in section IV below.

appears, therefore, that *-less* and *-free* modify the base they combine with in a broadly similar way. They both combine with nominal bases and give rise to adjectives, and they are both privative in the sense that they imply some kind of absence or lack (Bauer, Lieber, Plag 2013: 367). What is more, the set of words ending in *-free* can be further extended just like the set of words ending in *-less*, which indicates that the behaviour of *-free* is similar to that of suffixes (see Booij 2005: 114 in his discussion of the elements *-like*, *-worthy* and *-ware*).

Despite the apparent similarity between *-less* and *-free*, there are also cases where a *-less* derivative is not completely identical in meaning with the corresponding *-free* formation. For example, while *childless* describes someone who has no children due to circumstances as in *Several fertility treatments are available for childless couples*, *child-free* is, on the one hand, used to describe someone who has no children by choice as in *They are enjoying their childfree lifestyle* (macmillandictionary.com) and, on the other hand, it describes an environment, place, situation, event, etc. from which children are excluded or absent as in a *child-free pool* or a *child-free holiday*.

The aim of the present study is to further elucidate the behaviour of *-free* as a constituent of complex words, determining what features it has in common with the suffix *-less* and how the two elements differ from one another. The study is based on data extracted from the Corpus of Contemporary American English, some online dictionaries, lifestyle magazines, science books, fiction books, travel books and recipe books. The two elements in question are discussed in terms of their formal and semantic features. The analysis involves both comparison and contrast, so that both the similarities and the subtle differences between *-less* and *-free* can be consistently illuminated.

## II. Formal and semantic features of *-less*

The suffix *-less* is etymologically derived from the Old English adjective *leas* meaning ‘free (from), devoid (of)’ and, as Pencheva (2004: 187) points out, the adjective *leas* was frequently used as the second component of compound words whose first component was a noun. It is important to note here that the suffix *-less* is not semantically related to the free morpheme *less* because these two items have different origins: the adverb *less* goes back to Old English *læssa* with the meaning ‘smaller, fewer’. This observation, in fact, brings into question Plag’s (2003: 73) analysis of *-less*, presented in section I.

The Modern English suffix *-less* clearly exemplifies what Bauer (1983: 35) calls “the diachronic passage of an element from lexeme to suffix”. In the course of such a process, there emerge elements that are intermediate between lexemes and affixes. These are the so called affixoids, described by Booij (2005: 114) as “morphemes which look like parts of compounds, and do occur as lexemes, but have a specific and more restricted meaning when used as part of a compound”.

Booij (2005: 117) indicates that the rise of affixoids is “a typical case of grammaticalisation”, where semantic change has already occurred but there is no formal change yet. He also adds that postulating a category of affixoids points to the fuzzy boundary between compounding and derivation but it does not explain why this boundary is blurred (Booij 2005: 117). The concept of grammaticalisation is relevant to the discussion of the element *-free* and it will be referred to again in the following section.

In the case of *-less* there is both narrowing of meaning and phonological weakening, so we could say that with *-less* the process of grammaticalisation is complete. Thus, *-less* today is a fully-fledged, class-changing suffix that combines productively with nominal bases and forms adjectives with the meaning ‘having no ~’ or ‘without ~’ (*aimless, flawless, painless, ruthless, shapeless*); it is often described as the negative counterpart of *-ful* and many adjectives ending in *-less* have an antonym in *-ful*, as shown by the pairs *careless ~ careful, fruitless ~ fruitful, harmless ~ harmful, meaningless ~ meaningful, painless ~ painful*, etc. (Bauer, Huddleston 2002: 1711; Plag 2003: 97).

Although *-less* attaches mainly to nouns, it is also found on a small number of verbal bases as in *countless, fathomless, relentless, tireless*<sup>2</sup>, as well as *doteless, resistless, quenchless*<sup>3</sup> (Bauer, Huddleston 2002: 1711; Bauer, Lieber, Plag 2013: 359). In addition, this suffix occurs in the words *feckless, gormless* and *reckless* where it is combined with the three bound bases of native origin *feck, gorm* and *reck* (Bauer, Lieber, Plag 2013: 359).

As to the morphology of the bases that *-less* attaches to, they are either simple as in *airless, harmless, timeless, rootless*, etc., or complex as in *directionless, expressionless, leaderless, meaningless* and others. More specifically, according to Lieber (2005: 388), *-less* is capable of attaching to bases that end in *-ion, -ing, -ism, -er, -ance, -dom* or *-ess* and according to Chapin (1967) quoted in Lieber (2005: 388), *-less* avoids bases ending in *-ment*. We can add that *-less* is also found on bases ending in *-ure* and -

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<sup>2</sup> These four examples have been taken from Bauer and Huddleston (2002: 1711).

<sup>3</sup> The adjectives *doteless, resistless* and *quenchless* have been taken from Bauer, Lieber and Plag (2013: 359).

*th* as in *pleasureless* and *warmthless*. It should also be noted that *-less* is a non-closing suffix as it allows further suffixation: it is normally followed by the native, noun-forming *-ness* as in *fearlessness*, *harmlessness*, *painlessness*, *thoughtlessness*, etc., as well as by the adverbial suffix *-ly* as in *fearlessly*, *harmlessly*, *painlessly*, *thoughtlessly*, etc.

Another essential feature of *-less* is that it combines freely with a large variety of nouns that could be arranged in different classes on the basis of different semantic and grammatical criteria: concrete countable inanimates (*leafless*, *sleeveless*, *treeless*, *windowless*), concrete uncountable inanimates (*bloodless*, *meatless*, *sugarless*, *waterless*), abstract nouns (*faithless*, *joyless*, *loveless*, *merciless*), animate nouns denoting humans (*childless*, *doctorless*, *fatherless*, *friendless*), inanimate nouns denoting body parts (*earless*, *legless*, *mouthless*, *toothless*) and others.

Last but not least, *-less* allows what Plag (2003: 84) refers to as gapping, i.e. two adjectives ending in *-less* can be coordinated by omitting the suffix in one of the words as illustrated by Plag's (2003: 84) example *child- and homeless*. Gapping with *-less* is possible to occur because as a consonant-initial suffix, *-less* does not integrate into the prosodic structure of its base (Plag 2003: 83-84).

### III. Formal and semantic features of *-free*

As already mentioned in section I above, words like *car-free*, *cloud-free*, *meat-free*, etc. are treated as compounds on the grounds that *-free* in such words is the same lexical item as the adjective *free* used in the corresponding paraphrases, i.e. *free from car(s)*, *free from clouds*, *free from meat*, etc. (Plag 2003: 73; Bauer, Lieber and Plag 2013: 354). What is more, *-free* in *car-free*, *child-free*, *cloud-free*, *meat-free*, etc. is pronounced in the same way as the independent adjective *free*, i.e. there is no phonological weakening involved. So, according to Booij's (2005: 117) observation about grammaticalisation mentioned above, it follows that in the case of *-free*, there is neither semantic nor formal change yet, which excludes *-free* from the class of affixoids. Yet, as our analysis unfolds, it will become clear that it is not untenable to treat *-free* as a suffix-like element in present-day English.

Bauer and Huddleston (2002: 1656-1657) specify that formations whose right-hand constituent is *-free* like *cholesterol-free* and *tax-free* are adjective-centred 'noun + adjective' compounds, "comparable to syntactic constructions where the adjective has a following PP as dependent, complement, or modifier": *cholesterol-free*, for example, corresponds to

the syntactic construction *free of cholesterol*, in which the adjective *free* is followed by the prepositional phrase *of cholesterol*.

The adjective *free* originates from Old English *freo* meaning ‘exempt from’, ‘not in bondage’, ‘acting of one's own will’ and also ‘noble’, ‘joyful’. In the course of time it has developed further shades of meaning, one of which is ‘lacking something, especially something unpleasant or burdensome’ as in *free of dust (dust-free)*, *free from pain (pain-free)*, *free from problems (problem-free)*, etc.

Today the set of words ending in *-free* is growing easily and rapidly, to the extent that *-free* seems to compete with the suffix *-less*. Just like *-less*, *-free* is privative in meaning, implying lack or absence, and attaches to nouns which are either morphologically simple (*ad-free*, *dust-free*, *oil-free*, *risk-free*) or morphologically complex (*cruelty-free*, *dishwasher-free*, *tension-free*, *trainer-free*). Unlike *-less*, however, it is not impossible for *-free* to combine with a noun containing an inflectional suffix as in the form *hands-free*.

Another feature that *-free* has in common with the suffix *-less* is that it also allows gapping, as shown by examples like *egg- and dairy-free* or *dairy- egg- and nut-free*. This is possible because as a consonant-initial morpheme, *-free* does not integrate into the prosodic structure of the left-hand base, just like the suffix *-less*. In addition, it turns out that *-free* has a more restricted meaning as a constituent of complex words in comparison to the adjectival lexeme *free*: *pain-free*, for instance, can be naturally explained as ‘without pain’, *risk-free* as ‘without risk’, *tension-free* as ‘without tension’, etc. This could be seen as a kind of semantic change similar to the one that occurred with *-less* and as such, it is indicative of the close resemblance that *-free* bears to an affixoid.

Regarding the word class membership of the bases that *-free* combines with, they are typically nouns but there are some formations like *itch-free* and *worry-free* whose left-hand component is ambiguous between a noun and a verb. Another peculiar formation is *nuclear-free*, in which *-free* is combined with the adjectival base *nuclear*. The complex adjective *nuclear-free* means ‘free of nuclear weapons and/or nuclear power stations’ and is used in phrases like a *nuclear-free agreement*, a *nuclear-free country*, a *nuclear-free world* or a *nuclear-free zone*. The form *nuclear-free*, therefore, appears to be based on a kind of metonymy where the left-hand adjectival component *nuclear* functions as a substitute for the whole phrase *nuclear weapon* or *nuclear power station*. It is worth noting here that *nuclear-weapon-free* is also a legitimate formation but it is far less economical in terms of quantity than *nuclear-free*.

In addition, *-free* does not seem to close the word to the attachment of another element, more specifically the suffix *-ness*, as evidenced by derivative nouns like *conflict-freeness*<sup>4</sup>, e.g. “Intuitively, *conflict-freeness* means that a set of arguments is coherent, in the sense that no argument attacks another in the same set”, *fault-freeness*<sup>5</sup>, e.g. “Guaranteeing *fault-freeness* is important to ensure system safety, and to avoid costs for removing them”, *risk-freeness*<sup>6</sup>, e.g. “Once such leaders see the centrality of *risk-freeness* in generating customer loyalty, they make it their religion” and others. Such derivatives illustrate another similarity between *-free* and *-less*, namely their ability to function as non-closing morphemes.

Regarding the types of nouns that *-free* combines with, it transpires that these can be concrete countable inanimates (*blister-free*, *car-free*, *shoe-free*, *wrinkle-free*), concrete uncountable inanimates (*caffeine-free*, *dust-free*, *ice-free*, *smoke-free*), abstract nouns (*cruelty-free*, *envy-free*, *guilt-free*, *maintenance-free*), animate nouns denoting humans (*child-free*, *driver-free*, *nurse-free*, *parent-free*, *trainer-free*) and some others. The *-free* formations whose left-hand component is a human noun (*child-free*, *nurse-free*, *parent-free*) are not very numerous and, as we shall see in the following section, in some instances the form with *-free* differs significantly in meaning from the corresponding *-less* derivative. It should also be noted that *-free* is not normally found in combination with nouns denoting body parts (*?ear-free*, *?leg-free*, *?mouth-free*) and family members (*?brother-free*, *?mother-free*, *?sister-free*). Section IV below provides an explanation of why this is the case, examining the subtle semantic difference between *-free* and *-less*.

#### IV. The contrast between *-free* and *-less*.

The discussion presented so far has made it clear that there is considerable similarity between *-free* and *-less*, despite the fact that unlike *-less*, the element *-free* does not yet have the status of a fully-fledged suffix. Due to this similarity, in some cases, a *-less* derivative can be used interchangeably with its *-free* counterpart: for instance, there is no

<sup>4</sup> The example *conflict-freeness* has been taken from *Computational Models of Argument: Proceedings of COMMA 2016*, edited by P. Baroni, T. F. Gordon and T. Scheffler.

<sup>5</sup> The example *fault-freeness* has been taken from *Introduction to Formal Hardware Verification* by Thomas Kropf, 1999.

<sup>6</sup> The example *risk-freeness* has been taken from *Capturing Loyalty: How to Measure, Generate, and Profit from Highly Satisfied Customers* by John A. Larson and Bennett E. McClellan, 2017.

significant semantic difference between *meatless recipes* and *meat-free recipes*. It has also been shown that *-free* and *-less* are not always identical in meaning. The contrast between the two can be seen not only in the pair *childless* and *child-free*, briefly discussed in section I above, but also in pairs such as *careless* and *carefree*, *guiltless* and *guilt-free*, *parentless* and *parent-free* or *workless* and *work-free*.

According to Gorska (1984) and Slotkin (1990), both quoted in Lieber (2005: 415), forms with *-less* frequently have a negative connotation, whereas forms with *-free* have a positive connotation. Lieber (2005: 415) points out that Gorska (1984) derives the negative connotation of *-less* from “a connection with a metaphor of bodily possession (one generally does not want to be *legless* or *headless*)”, and the positive connotation of *-free* – from “a connection to a metaphor of possession over which an actor has control”. Thus, although both *sugarless* and *sugar-free* mean that sugar is not available, with *sugarless* the absence of sugar is rendered as something negative or at the best neutral, whereas with *sugar-free* the absence of sugar is presented as a positive or desirable quality (Lieber 2005: 415; Bauer, Lieber, Plag 2013: 368).

The metaphor-based description of *-free*'s connotation, proposed by Gorska (1984), can help us explain why *-free* generally avoids combining with nouns denoting body parts (*?ear-free*, *?eye-free*, *?leg-free*, *?mouth-free*) and family members (*?brother-free*, *?father-free*, *?mother-free*). Both body parts and family members are traditionally regarded as inalienably possessed entities in the sense that the possession of such entities cannot be transferred to someone else, e.g. my eyes will always be my eyes and my brother will always be my brother (Payne 1997: 105). This kind of possession, therefore, is one that an actor has no control of, and hence it is in contradiction to the positive connotation of *-free*, derived from a metaphor of possession over which an actor has control. Yet, as it becomes clear further below, formations like *?mother-free* are perhaps not impossible to occur, but they would differ significantly from the corresponding *-less* derivatives in terms of use and meaning. Forms like *?leg-free* are quite unusual but it is not unreasonable to assume that the attested adjective *hands-free* may give rise to the creation of analogical formations like *?legs-free*, for example, which would probably be used to denote that something could be performed or operated without using the relevant body parts.

The generally negative connotation of *-less* and the generally positive connotation of *-free* in present-day English are particularly transparent in the pair *careless* ~ *carefree*. The adjective *careless* with the modern



meaning ‘not paying enough attention, inattentive’, derives from the Old English *carleas*, whose original sense ‘free from anxiety, unconcerned’ was extinct by the mid-17th century and is now expressed by the form *carefree*. In other words, *careless* started out as an adjective with a positive connotation but in the course of time its original meaning was transferred to *carefree* and *careless* developed the more negative sense that we know today.

As to the above-mentioned *childless* and *child-free*, they both denote the absence of children but while *childless* implies that the actor has no control over the situation, *child-free* indicates that the absence of children is a result of the actor’s personal choice. Therefore, a *childless couple* is not the same as a *child-free couple*, although both collocations are semantically correct. In addition to the meaning ‘having no children by choice’, *child-free* is also used to describe places, events or situations from which children are absent as in a *child-free evening*, a *child-free hotel*, a *child-free pool*, a *child-free vacation*, *child-free party hours*, etc. In such phrases, *-free*’s connotation of control is again evident and the replacement of *child-free* with *childless* will lead to semantically abnormal constructions.

Similar to *child-free* when used in the sense ‘without the attendance of children’, the form *parent-free* also collocates with nouns like *adventure*, *holiday*, *space*, *travel*, *trip*, etc. and describes a place, situation or experience from which parents are excluded, e.g. a *parent-free holiday*, a *parent-free trip*, a *parent-free summer*, etc. By contrast, a child without parents is *parentless*, not *parent-free*. In addition, given the use and meaning of the adjective *parent-free*, in which *-free* is combined with a noun denoting a family member, one may create forms like *?brother-free*, *?father-free* or *?mother-free* and use them in a similar way. For example, it is not so difficult to conceive of a children’s party from which mothers are excluded and describe it as a *mother-free* party. A child who has no living or known mother, however, is *motherless*, not *mother-free*.

The subtle difference between *-less* and *-free* is also well observable in the pair *guiltless* ~ *guilt-free*, where the left-hand component of the two formations, *guilt*, has a negative connotation. It is clear that both *guiltless* and *guilt-free* indicate the absence of guilt, but while *guiltless* is synonymous with *innocent* and collocates naturally with nouns denoting or involving people (a *guiltless country*, a *guiltless man*, a *guiltless nation*, *guiltless parents*, *guiltless prisoners*), *guilt-free* is used to describe things or activities that one can do or enjoy without feeling a sense of guilt that they are doing something bad (a *guilt-free celebration of food*, a *guilt-free*

*chocolate cake, a guilt-free download, guilt-free snacks, guilt-free treats, guilt-free trips*). In other words, *guilt-free* does not enter into collocation with person-referring or collective nouns.

As to the pair *workless* ~ *work-free*, the negative connotation of *workless* can be seen in phrases like *workless communities, workless families, workless households, workless migrants, workless people*, etc., where the implication is that work would have been highly appreciated. By contrast, the form *work-free* suggests that the absence of work is something desirable and/or voluntary, as illustrated by phrases like a *work-free childhood, work-free days, a work-free leisure class, work-free time, work-free Saturdays, a work-free society*, etc.

The evident semantic contrast between *-less* and *-free* implies that these two morphemes are not always in competition in present-day English. Instead, they can co-exist as distinct elements involved in the formation of new lexemes, since each of the two has developed a specific connotation, and hence a specialised use (see Díaz-Negrillo 2017: 157 on the co-existence of *-dom, -hood* and *-ship* in present-day English).

## V. Conclusion

The discussion presented above shows that *-free* has a lot of features in common with the suffix *-less* in terms of meaning, the type of base that *-free* and *-less* combine with and their behaviour as constituents of complex words: they both allow gapping (*child- and homeless; egg- and dairy-free*) and have the ability to function as non-closing morphemes (*helplessness, risk-freeness*). Also, the set of words ending in *-free* can be easily extended just like the set of words ending in *-less*, i.e. both elements exhibit high productivity. Thus, it has transpired that the behaviour of *-free* is very similar to that of suffixes and it is not unreasonable to regard *-free* as a suffix-like element.

Another important observation is that *-free* and *-less* are not completely synonymous: they both have a specialised use, so that they are not always interchangeable as constituents of complex words. The contrast between the two makes it possible for them to co-exist productively as distinct morphemes involved in the formation of new lexemes.

Last but not least, the availability of an element like *-free* in present-day English serves as yet another piece of evidence that the boundary between compounding and affixal derivation is rather fuzzy.

REFERENCES

- Bauer 1983:** Bauer, L. *English Word-formation*. Cambridge: Cambridge University Press, 1983.
- Bauer, Huddleston 2002:** Bauer, L., Huddleston, R. Lexical Word Formation. // Huddleston, R., Pullum, G. K. (eds.). *The Cambridge Grammar of the English Language*. Cambridge: Cambridge University Press, 2002, 1621 – 1721.
- Bauer, Lieber, Plag 2013:** Bauer, L., Lieber, R., Plag, I. *The Oxford Reference Guide to English Morphology*. Oxford: Oxford University Press, 2013.
- Booij 2005:** Booij, G. E. Compounding and derivation: Evidence for Construction Morphology. // Dressler, W. U., Kastovsky, D., Pfeiffer, O. E., Rainer, F. (eds.). *Morphology and its Demarcations*. Amsterdam/Philadelphia: John Benjamins, 2005, 109 – 132.
- Dalton-Puffer, Plag 2000:** Dalton-Puffer, C., Plag, I. *Categorywise, some compound type morphemes seem to be rather suffix-like: On the status of -ful, -type, and -wise in Present Day English*. // *Folia Linguistica*, 2000, 34(3-4), 225 – 244.
- Díaz-Negrillo 2017:** Díaz-Negrillo, A. On the identification of competition in English derivational morphemes. The case of *-dom*, *-hood* and *-ship*. // Santana-Lario, J., Valera, S. (eds.). *Competing patterns in English affixation*. Bern: Peter Lang, 2017, 119 – 161.
- Lieber 2005:** Lieber, R. English Word-formation Processes. Observations, Issues, and Thoughts on Future Research. // Štekauer, P., Lieber, R. (eds.). *Handbook of Word-formation*. Dordrecht: Springer, 2005, 375 – 427.
- Payne 1997:** Payne, T. E. *Describing Morphosyntax: A Guide for Field Linguists*. Cambridge: Cambridge University Press, 1997.
- Plag 2003:** Plag, I. *Word-formation in English*. Cambridge: Cambridge University Press, 2003.
- Пенчева 2004:** Пенчева, М. *Английските думи*. [Pencheva, M. *Angliyskite dumi*.] София: УИ „Св. Климент Охридски“, 2004.

## **ONLINE DICTIONARIES AND SOURCES**

Collins English Dictionary [www.collinsdictionary.com/dictionary/English](http://www.collinsdictionary.com/dictionary/English)  
Corpus of Contemporary American English [www.english-corpora.org/coca](http://www.english-corpora.org/coca)  
Longman Dictionary of Contemporary English Online  
<https://www.ldoceonline.com>  
Macmillan Dictionary <https://www.macmillandictionary.com>  
Merriam-Webster [www.merriam-webster.com](http://www.merriam-webster.com)  
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The Urban Dictionary [www.urbandictionary.com](http://www.urbandictionary.com)  
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