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# **BACK-FORMED COMPOUND WORDS**

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## **Abstract**

Back-formation and compounding constitute two morphological processes of word-formation that, on the one hand, can coalesce, and on the other hand, can collide. The central aim of this paper is to explain back-formation as belonging to the set of word-formation processes existing in the English language. Likewise, the paper also aims to approach compounding from three different perspectives: as being problematic towards the notion of wordhood, as the morphological process it constitutes, and as a process which is highly present within back-formation. For that purpose, the structure of the paper attempts to reproduce the order in which back-formation takes place as a morphological process, i.e. backwards. Indeed, the concept of ‘word’ is firstly presented in order to establish a problematic notion also addressed in relation to compounding later in the paper. Secondly, inflection and derivation are defined in order to locate word-formation processes and compounding within derivation. Finally, I discuss whether back-formation constitutes a word-formation process on its own or not. The conclusions drawn show how the notion of wordhood needs to be explained from a holistic perspective —i.e. from the different sub-branches of grammar— in order to get defined in a non-problematic manner. Nonetheless, examples of Compounding have brought counter-evidence to more than one of those definitions. In fact, compounding being a highly productive morphological process, it has also been proven to be a problematic notion in the literature in terms of structure, stress pattern, etc. Moreover, back-formation has been backed up with evidence as being a word-formation process on its own, instead of, as some scholars have asserted, being a mix of other word-formation processes. In addition, there is a huge amount of back-formed compound words in English; but compounding and back-formation directly differ on the fact that while compounding is the result of summing lexemes, back-formation is the result of removing affixes.

Key words: morphology, derivation, word-formation, back-formation, compounding, words.

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## 1. Introduction

The structure of words and how these structures show a relation between different words are the concern of Morphology (Haspelmath & Sims, 2002). Still, the definition of word as a linguistic unit needs certain clarification, as it ‘is not as straightforward as one might expect’ (Plag, 2002). Indeed, different scholars have reached an agreement on the fact that the notion of word must be defined in different ways in order to come up with a non-problematic definition of wordhood (Plag, 2002). As it will be explained in further detail throughout the paper, we should define the notion of ‘wordhood’ from a holistic point of view, i.e. taking it into consideration orthographically, phonologically, semantically, etc. A wrongly conceived definition of wordhood can be considered to be problematic when dealing with morphological processes such as compounding. In fact, we will find the process providing counter-evidence to the different definitions of ‘word’ that are going to be addressed in the paper. For instance, the orthographic definition of ‘word’ claims that words are bounded by a preceding blank space and followed either by a blank space or a dot at the end of them. Nevertheless, if we think about compounds and how they are considered to be one single word even though they can be written with a hyphen, they contradict the initial definition of word provided from an orthography-oriented perspective.

Being a branch of Grammar, Morphology has traditionally been subdivided into Derivational and Inflectional Morphology (Haspelmath & Sims, 2002). It is crucial to acknowledge that this distinction is conceived due to word-formation processes, which can depart from both inflection or derivation. Far from considering the relation between these two a dichotomy, some scholars such as Bybee (1985) talk about it in terms of a continuum. Thus, linguists have theorized around inflection and derivation in two different manners, entering both the dichotomy approach and the continuum approach into the discussion (Haspelmath & Sims, 2002).

While inflection has traditionally been dealing with word modifications that involve a grammatical change, derivation has been taking over word-formation processes such as back-formation (Plag, 2002). Therefore, as Plag (2002: 19) affirms, ‘the most crucial difference is that inflectional morphemes encode grammatical categories such as plural (workers), person (e.g.: works), tense (picked), or case (John’s)’, whereas

derivational morphology does not. Indeed, derivational morphology creates new words for new concepts by adding affixes (Haspelmath & Sims, 2002).

There are some specific properties that establish the diversities between Inflectional and Derivational Morphology (Haspelmath & Sims, 2002). Those properties will pointedly be explained throughout the paper in order to define and compare inflection and derivation. Different scholars have also relied on these properties when considering the relation between inflection and derivation to be either a dichotomy, or a continuum.

This paper will deal with a few of the word-formation processes that take place within derivational morphology. Word-formation processes can ‘be defined as the study of the ways in which new complex words are built on the bases of other words or morphemes’ (Plag, 2002: 17). Languages go through different word-formation processes. In the case of English, the language provides a very poor inflectional morphology. However, consisting of a long list of different word-formation processes, it is rich in terms of derivation. Within the bunch of word-formation processes we can find in the English language, the present paper aims to analyse compounding and back-formation processes more specifically. For this purpose, I will review Nagano’s (2007) revision on Marchand’s (1960) perspective towards back-formation, which claimed that back-formation was not a word-formation process on its own. Moreover, as the title of the paper suggests —’Back-formed Compound Words’—, compounding will be addressed with three different purposes: to explain why it is problematic in relation to the notion of wordhood; to revise it as the morphological process it is; and to explain the reason of its abundant presence within the process of back-formation, which, as we will find, is productivity.

Finally, I would like to highlight that the title of this paper —’Back-formed Compound Words’— wishes to represent a symbolic relation not only with the structure of back-formation but also towards the structure of the paper, as the three of them follow a backwards direction. In addition, an appendix including the definitions of various concepts relevant to the topic will be found at the end of the paper.

## 2. The Notion of Wordhood

As Plag (2002) affirms, the notion of wordhood is not a simple concept to define. Its definition requires from different subdivisions of grammar to be completed in a non-problematic, thorough manner. Therefore, if a word is analysed or defined, for example, syntactically, it will display different properties than when being analysed phonologically, morphologically, or, for example, semantically. (Harley, 2006). Nida (1952: 3) asserts that ‘no part of a language can be adequately described without reference to all other parts’, which supports the idea of the notion of wordhood having to be defined through different subdivisions of grammar —i.e. holistically—. So a clear understanding of the notion of wordhood is deeply important in order to delimit its definition in accordance with what we will determine later in this paper, i.e.: in the section of word-formation processes. Therefore, this section will address the different perspectives from which the concept of ‘word’ must be defined in order to get to a wide definition of it.

### 2.1. The Orthographic Definition

The orthographic definition of ‘word’ claims words to be part of ‘an uninterrupted string of letters which is preceded by a blank space and followed either by a blank space or an orthographic mark’ (Plag, 2002: 4). Some examples of the merely orthographic criterion will be provided and discussed in the following lines.

- (1) *Morphology is the study of the structure of words.*
- (2) *Peter’s luggage got lost in the airport.*

If we consider the previous examples, we can see how sentence (1) matches with what the orthographic definition of the notion of wordhood establishes. However, when considering sentence (2) we see how apostrophes, which are also punctuation marks, remain problematic for this definition. Indeed, not every sentence in the English language is presented the way the orthographic definition of ‘word’ describes.

Apostrophes are also punctuation marks, which at the same time, are the concern of orthography. Taking this into consideration, the sentence (2) does not match with the

above-mentioned orthographic definition, as we have an apostrophe for the Saxon genitive in *Peter's* and it does not make 'Peter's' two different words.

Nevertheless, when defining word-formation processes such as compounding — as we will discuss in Section 4.1.1. Problems with Compounding—, this orthographic definition results in problematic criterion. In fact, compounds are considered as constituting one single word, even though they can be presented as two morphs that are linked by a hyphen —e.g.: *word-formation*—, one single morph —e.g.: *wordformation*—, or two morphs that are not linked at all —*word formation*— (Plag, 2002).

## 2.2. The Phonological Definition

As it has been discussed by some scholars, the notion of wordhood can also be defined in prosodic terms, i.e. phonologically (Plag, 2002). Our intuitions might tell us that as the speakers make pauses in the spoken language, in this exact context, the word is defined as a linguistic unit preceded and followed by pauses (Plag, 2002). Nevertheless, it might be the case that the speakers actually make a pause within the word, e.g.: compound forms such as *apartment building* (Plag, 2002). Sometimes, those pauses may be produced in between the syllables of a word as to emphasize some sound. The above-mentioned definition based on prosodic features would not be considering these cases, and therefore, would remain incomplete when trying to establish those pause-based boundaries on words.

Moreover, stress is a phonological factor which could also count as counter-evidence to the phonological definition of 'word.' Every word has at least one main stress, and longer words have secondary stresses as well. In the case of compounds, for instance, they can be constituted even by three word-forms and only one of them would be holding the main stress. In fact, compounds constitute one single word, which contradicts the phonological approach to wordhood as it would prove that words are not bounded by stresses —i.e. the affirmation of one word holds only one main stress would not be correct—. The following example presents a compound. As mentioned, compounds are considered to constitute one single word, but what we see when we look at the written form are two orthographic words, e.g.:

### (3) *word formation*

The acute in the letter /a/ we find in example (3) represents the primary stress of the compound *word formation*. This example proves how what we consider to be two orthographic words hold only one main stress, providing evidence of its nature as a single word —fact which would not be accepted by the orthographic definition of ‘words’—.

However, it is important to remember the fact that many words such as clitics or grammatical words do not hold stress. So this criterion is not applicable to all the environments (Plag, 2002).

### **2.3. The Integrity Criterion**

According to the integrity criterion, no intervening material can be inserted within a word. Those intervening elements can only be applied at the beginning or at the end of words, e.g.: *cars* —plural morphemic -s— (Plag, 2002). Different types of elements could be found attached to these environments: plural morphemic -s, negative particles such as *in-* in *inaccurate*, ‘endings that create verbs out of adjectives (such as -ize in colonialize)’, etc. (Plag, 2002: 7).

Nonetheless, we could find different cases in which the integrity criterion is breached. Once more, one of those cases is compounding. In compounds such as *sons-in-law* ‘the plural ending is inserted inside the word and not at the end’ (Plag, 2002: 7). However, there are other cases in which this phenomenon takes place, such as new formations that are included within the speakers’ speech. Plag (2002) exemplifies this issue with the word *abso-bloody-lutely*. He states that there is no way we could adjoin *bloody* before or after *absolutely* and attain the exact meaning we get out of *abso-bloody-lutely*.

### **2.4. The Semantic Definition**

The semantic viewpoint when defining the notion of wordhood ‘states that a word expresses a unified semantic concept’ (Plag, 2002: 8). This definition can also be proven inaccurate through examples that retract it. In fact, whereas words correspond to unified



semantic concepts, unified semantic concepts might not be expressed solely by words (Plag, 2002); for instance:

(4) *The boy who brought me apples yesterday.*

Considering example (4), the sentence *The boy who brought me apples yesterday* is referencing one single entity in the world, and therefore, it expresses a unified semantic concept. However, we would never state that it is a word as any speaker would consider it to be a sentence (Plag, 2002).

## 2.5. The Syntactic Definition

Syntax provides us with two different criteria that could lend us to the specific notion of what a word is. On the one hand, one of the roles of syntax is to classify words into different syntactic categories such as verbs, nouns, adjectives, etc. We could take this phenomenon as a kind of parameter in order to conclude that anytime a linguistic item is considered to belong to any grammatical category —i.e. verbs, nouns, adjectives, etc.— it can also be considered a word (Plag, 2002).

On the other hand, it happens as well that only words or chunks of words —i.e. adjuncts— can be moved within the sentence. In structures such as Yes/No questions the auxiliary verb gets moved to a different part of the structure of the sentence. If in the declarative form of the sentence we could find *you didn't correct your paper*, in the interrogative form we would find *didn't you correct your paper?* (Plag, 2002). Therefore, if an isolated linguistic item —i.e. an item that does not belong to a chunk— gets moved throughout the sentence, we can assert that it is a word.

The definitions that have been provided in this section of the paper remain poor when considered in isolation. All of them may contribute in some manner to the definition of 'word', but all of them need further clarification as well. This leads us to think about the properties that words hold and Plag proposed in 2002. As stated later, some of the properties have specifications. Indeed, a particular property will not necessarily take place always and it will find some cases in which it just will not be able to happen. As we have seen throughout this section, compounds constitute one of the most recurrent reasons why

these properties fail to apply in some cases. The abovementioned properties of words are the following:

- words are entities having a part of speech specification
- words are syntactic atoms
- words (usually) have one main stress
- words (usually) are indivisible units (no intervening material possible)

(Plag, 2002: 9)

### **3. Inflectional and Derivational Morphology**

Bauer (1988) states that morphology is traditionally divided into two branches: inflection and derivation. He asserts that while inflection is defined as belonging to syntax, derivation is thought to deal with the lexis. However, the differentiation between these two has been highly difficult to establish for linguists. Some parameters have been set up in order to contribute to the distinction between inflection and derivation (Bybee, 1985). As it will be discussed later in this section, Greenberg (1954) determined *obligatoriness* as the most profitable differential property (as cited in Bybee, 1985). This fact was also regarded by Haspelmath & Sims (2002), who outlined a range of properties of both branches. Those properties draw the possibility for two different hypotheses on the relation between inflectional and derivational morphology: ‘The Dichotomy Approach’ and ‘The Continuum Approach.’ While the continuum approach links both subcategories at some point, the dichotomy approach establishes that they have nothing to do with each other.

For the purpose of this paper it is essential that both inflectional and derivational Morphology get clearly defined in this section. As a matter of fact, the diachronic process known as back-formation and considered in this paper is basically a process belonging to derivational morphology, so that a brief look at the notion of derivational morphology, in particular as a type of morphology different to the inflectional morphology seems adequate.

### 3.1. Inflection

As it has traditionally been asserted, ‘inflection serves to create different forms of the same lexeme’ (Booij, 2000: 360). This is the reason why it has always been considered to be just part of the grammar (Plag, 2002), meaning that the contribution of inflectional changes to words is purely grammatical, and not semantic or related to the lexicon. Let’s consider the following examples:

(5) *kicks* - to kick

(6) *drinking* - to drink (V)

(7) *students* (plural, N.) - student (sing., N)

The word-form *kicks* constitutes the third person singular of the verb *to kick*. Similarly, *drinking* is the participial form of the verb *to drink*, and *students* is the plural form of the count noun *student*. None of these examples contribute to a change in the meaning of their infinitival forms. Therefore, inflectional processes such as the ones regarded in examples (5), (6), and (7) restrict the words to never get their syntactic categories changed —i.e. *kicks* is the 3rd person singular form of the verb *to kick*; both word-forms are verbs.—

### 3.2. Derivation

If Inflectional Morphology creates new forms of the same lexemes — e.g.: *paints* from the infinitival form of the verb *paint*—, what derivation does is to derive a lexeme from another lexeme —e.g.: the adjective *derivational* from the noun *derivation*— (Booij, 2000: 360). Moreover, ‘[d]erivation differs from compounding, another type of lexeme formation, in that in compounding (at least) two lexemes are involved, and combined into a complex word, whereas the input to derivation is a single lexeme’ (Booij, 2000: 361). Plag (2002) agreed on that fact by explaining that derivation and compounding are considered to be two different processes within word-formation while inflection was not considered to belong to word-formation at all. As the following scheme displays, Plag (2002: 22) established a differentiation amongst derivation and compounding as different processes within word-formation.

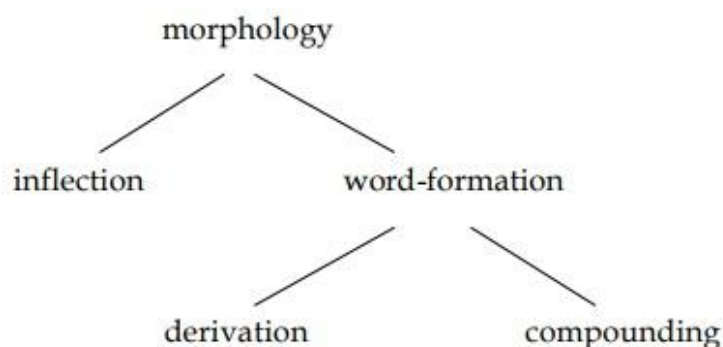


Fig. 1: *Classification of word-formation processes*

As displayed in figure 1, Morphology is divided into two main sub-branches which are, as stated, inflection and derivation. However, this distinction has been highly difficult to establish for morphologists. For that aim to get achieved, they studied some properties that contribute to establishing a clearer differentiation between inflection and derivation, and, therefore, to the definition of those concepts. The following section will deal with those properties.

### **3.2.1. Properties of Inflection and Derivation**

The following ones are the properties that Haspelmath & Sims (2002) defined as contributing to the differentiation and definition of inflection and derivation: *relevance to the syntax, obligatoriness, limitations on application, abstractness, iteration, same concept as base, meaning compositionality, position relative to base, base allomorphy, word-class change, and cumulative expression*. This section will explain some of them, and, thereafter, I will explain the discussion based on how those properties serve as evidence for two different approaches to the relationship between inflection and derivation: The Dichotomy Approach and The Continuum Approach.

#### **a) Relevance to the syntax**

(8) ‘Inflection is relevant to the syntax, derivation is not relevant to the syntax’  
(Haspelmath & Sims, 2010: 90).

When Haspelmath & Sims (2010) affirm that ‘inflection is relevant to the syntax’ it is so because of the fact that ‘the grammatical function or meaning expressed by a morphological pattern is involved in (the) syntactic agreement or syntactic government’ (Haspelmath & Sims, 2010: 90).

If we take present simple tensed verbs as an example of the above-defined, we can see how we can have for instance [the ladie-s]NP [play]V but [she]NP [play-s]V. This difference in the verb *play(s)* correspond to the subject-verb agreement required for the 3rd person singular in the present simple tense of English (Haspelmath & Sims, 2010). Nonetheless, we can talk about agreement because of the fact that the subject NP *the ladies* syntactically governs the verb *play*. Because of this matter, we need those two items to agree in several features such as number as in this example.

This phenomenon is purely inflectional as it applies according to some grammatical features of the words. Therefore, this property is not applicable to derivation, and that is why it contributes to the Dichotomy Approach.

### **b) Obligatoriness**

(9) ‘Inflectional features are obligatorily expressed on all applicable word-forms.

Derivational meanings are not obligatorily expressed’

(Haspelmath & Sims, 2010: 2-93).

What this property aims to explain is a phenomenon that takes place in different manners in inflection and derivation. While inflectional characteristics are necessary in order to differentiate the inflectional meaning of a specific word-form, e.g.: *walks* (third person, singular, present tense), derivational forms do not necessarily require of those features that make them derivational (Haspelmath & Sims, 2002).

### **c) Limitations on application**

(10) ‘Inflectional values can be applied to their base without arbitrary limitations;

derivational formations may be limited in an arbitrary way.’

(Haspelmath & Sims, 2002: 93).

When comparing inflection and derivation, we find that the gaps for application they may have are not going to be the same. Inflection, of course, will have some syntactic gaps that will be impossible to find in the case of derivation, where the breaches will be semantic-oriented (Haspelmath & Sims, 2010). This issue follows the logic of the definitions of inflection and derivation, and supports the dichotomy approach as it establishes differentiations in phenomena that would never co-occur in both inflection and derivation.

As an example of the gaps one can find in inflection, I could mention collective nouns, which [may] have only singular or only plural forms (e.g.: English *information*, *\*informations*) (Haspelmath & Sims, 2010: 93). When dealing with the applicational gaps in derivation, we find that some derivational morphemes such as ‘-ess’ are applicable in some words, e.g.: *poetess*. Nevertheless, there will be words that belong to the same grammatical category -i.e. nouns- and will not be considered grammatically acceptable forms after being applied (with) the morpheme ‘-er’, e.g. *\*professoress*. If we tried to explain both of these linguistic events, we would only find an explanation for the inflectional gaps, in which there is an incompatibility between the inflectional meaning and the base meaning (Haspelmath & Sims, 2002). However, there is no explanation for the fact of some derivational morphemes being just applicable on some nouns, but not on others (Haspelmath & Sims, 2010).

#### **d) Abstractness**

(11) ‘Inflectional values express a relatively abstract meaning; Derivational meanings are relatively concrete.’ (Haspelmath & Sims, 2010: 94).

There are also other properties that will not be that revealing for the sake of the dichotomy approach. For instance, the concept of abstractness is applicable for both, inflectional and derivational values. The fact is that while inflectional meanings are highly abstract, derivational ones are generally concrete, ‘[b]ut there are also derivational meanings that are just as abstract as inflectional meanings (e.g. the meaning ‘status’ of *-hood* in *childhood*)’ (Haspelmath & Sims, 2010: 94). Therefore, *-hood* would be considered neither derivational nor inflectional (Haspelmath & Sims, 2010).

### **e) Iteration**

(12) ‘Inflectional values cannot be iterated; derivational meanings can sometimes be iterated.’ (Haspelmath & Sims, 2010: 98)

Iteration being highly rare to find in derivational processes, it is possible to have cases such as *post-post-modern* in English (Haspelmath & Sims, 2010) or *gorri-gorria* in Basque. This process is generally used to emphasize expressions. Nonetheless, such phenomenon cannot be found in inflection.

### **3.2.2. Dichotomy Approach VS Continuum Approach**

The relation between inflection and derivation might be either a dichotomy or a continuum according to the aforementioned properties. Properties of which application to this matter generate a discussion among morphologists, who do not agree on their efficiency in order to reach to a conclusion on whether there is a dichotomy or a continuum (Haspelmath & Sims, 2010). Dichotomy approach supporters mostly rely on the following properties: relevance to the syntax, obligatoriness, and limitations on application. ‘Proponents of the dichotomy approach have argued that these traits are indicative of a distinction between inflection and derivation in the formal architecture of the morphological system’ (Haspelmath & Sims, 2010: 99). However, those morphologists supporting the continuum approach regard the properties as a homogeneous set of criteria that lends them to different conclusions (Haspelmath & Sims, 2010). Indeed, they usually find dissimilarities among the properties; however, they realise that those are arranged following a logical order that reinforces the idea of a continuum between inflection and derivation.

#### **a) Dichotomy Approach**

As mentioned, for the explanation of the dichotomy approach, it is essential that we bring back the properties of obligatoriness, relevance to the syntax, and limitations on application. Greenberg (1954) asserts that the property of obligatoriness is the most fruitful in favor of a dichotomic perspective (as cited in Bybee, 1985). Indeed, he argues that derivational morphemes never show an obligatory nature. For instance:

(13) *duckling*

Considering the previous example, the word *duckling* —which has been generated by derivation— could easily be substituted by other word-forms that do not have an ending in *-(l)ing*, i.e. *turkey, goose, duck* (Bybee, 1985). Nevertheless, the inflectional morpheme *-ing* which is used for the continuous tenses in English -i.e. *jumping, drowning, etc.*- could never be substituted by any other word-form that would not include the *-ing* morpheme at the end of the word. Thus, the property of obligatoriness establishes a notorious gap between inflection and derivation.

Regarding the relevance criterion, the relation that is going to be established between inflection and derivation can appear ambiguous. Indeed, as asserted before, the relevance to the syntax criterion is purely inflectional (Haspelmath & Sims, 2002). However, Bybee (1985) tackles two different types of derivational morphology when trying to apply this criterion: the type of derivational morphology which changes the syntactic category of the derived word, and the type of derivational morphology which does not do so (Bybee, 1985). The acknowledgment of these two categories goes against the relevance to the syntax property, as it defines that there is no relevance to the syntax in derivation. However, within Bybee's proposal, when considering those cases of derivational morphology in which the syntactic category does not undergo a syntactic change, Bybee (1985) argues that 'we can apply the relevance criterion in much the way we have been applying it to inflectional categories' (Bybee, 1985: 82). This means that we should consider until what point the meaning of the added affix changes the meaning of the stem. So we should follow a semantic criterion, which relates to derivation, as 'large meaning changes are characteristic of derivational processes which do not change syntactic categories' (Bybee, 1985: 83). However, we should also consider those 'morphemes that make category changes add[ing] little further meaning, and thus border inflection. For instance, English gerundial nominalizations in *-ing* allow a verb to appear in a noun position in a clause, but do not change the situation the verb describes.' (Bybee, 1985: 83). E.g.:

(14) *John understands French*

(14a) *The understanding of French John has*



Therefore, the amount of meaning change is relevant in order to differentiate between inflection and derivation, which would support the dichotomy approach. However, as the differences in the amount of semantic change also happen within derivation, it is not that revelatory. Even though there is a change of category which would relate the issue to derivation, the category change does not add a significant semantic change, and, therefore, it remains derivational.

As for the property of limitations on application, its weight lies on the fact that it applies to inflection and derivation in completely different ways. Such ways remain that differentiated among each other by the features that define both inflection and derivation. Taking this property into account, there is no way one could contemplate the possibility for a continuum relationship between inflection and derivation. Indeed, as asserted in Section 3.2.1.a. Limitations on Application, there is a logical explanation for the limitations on application of inflectional features but not for those happening in derivational cases.

### **b) Continuum Approach**

Some morphologists, however, argue in favour of a continuum relationship between inflection and derivation for the following reason: ‘they tend to consider the properties as a collective whole’ (Haspelmath & Sims, 2002: 99). This collective understanding of the properties will bring different conclusions to the discussion, conclusions of which acceptance is licit in all of the cases as everything will be applicable in different linguistic environments. Indeed, as we have already seen through Section number 3.2.2.a. The Dichotomy Approach, both similarities and dissimilarities will be found among inflection and derivation. Moreover, as cited in Nida (1949: 2), stated in the introduction and seen throughout the whole paper, ‘no part of a language can be adequately described without reference to all other parts’ —e.g.: needing syntax at some point on the explanation of morphology.— Hence, a widespread view of the whole dichotomy vs continuum issue would not be that bizarre to consider. In fact, proponents of the continuum approach found that when building the continuum hypothesis, the structure that would explain it followed a logical order which is explained by the following table by Haspelmath & Sims (2002: 99):

Language	Formation	Example	cum	obl	new	unl	cm
English	3rd singular	<i>walk/walks</i>	I	I	I	I	I
English	noun plural	<i>song/songs</i>	D	I	I	I	I
Spanish	diminutive	<i>gato/gatito</i>	D	D	I	I	I
English	repetitive	<i>write/rewrite</i>	D	D	D	I	I
English	female noun	<i>poet/poetess</i>	D	D	D	D	I
English	action noun	<i>resent/resentment</i>	D	D	D	D	D

Note: cum= cumulative expression; obl = obligatory; new = new concept;  
unl = unlimited applicability; cm = compositional meaning.

Fig. 3: ‘A continuum from inflection to derivation’

The previous table gets to depict the continuum approach in a simple way. Haspelmath & Sims (2002: 99) provide different language phenomena and classify it according to five of the eleven properties of inflection and derivation, which are the following: *cumulative expression*, *obligatoriness*, *new concept*, *unlimited applicability*, and *compositional meaning*. The ‘I’s and ‘D’s presented on the table stand for ‘Inflection’ and ‘Derivation.’ The linguistic events selected for the description of a continuum relationship show, for instance, a specific phenomenon such as the diminutive *gatito* derived from the Spanish word *gato*. This example has been derived through suffixation, which is a purely derivative word-formation process. However, as for the properties that this table displays, it has a more inflectional than derivational behavior.

#### 4. Word-formation processes

Word-formation processes deal with the formation of words. That formation of words can be composed by the attachment of morphemes to form more complex words (Plag, 2002). Some of those new formations will be ‘composed by putting together smaller elements to form larger words with more complex meanings’ (Plag, 2002: 12). Those smaller elements are, as asserted, morphemes —the particle *un-* in the derived word *unhappy*— (Plag, 2002). However, some other complex words will be formed by joining two —or more— word-forms together. *E.g.: apartment building* (Plag, 2002). These processes are known as *compounds*, concept with which we will deal in the following section. Compounding constitutes a word-formation process that takes place within derivation as compounds are straightforwardly related to meaning and lexicon and not to the syntax.

There are also other words which ‘cannot be decomposed into smaller meaningful units’ (Plag, 2002: 13). Those forms —e.g.: *chair*, *great*, *promise*, *etc.*— are monomorphemic, i.e. composed only by one morpheme. When comparing the examples of *neighbor* and *inventor*, we find a big difference between the structure of both word-forms. Indeed, the word *neighbor* is considered to be constituted by just one morpheme, as when quitting the particle *-or* which could be quitted from *inventor* as to have two morphemes, the remaining form *neighb-* does not mean anything as neither does the *-or* in *neighbor*. By contrast, the word *inventor* can be divided into the morphemes *invent-* and *-or*, as both hold a specific meaning when considered in isolation (Plag, 2002). The suffix *-or*, indeed, means *that who does something*. This phenomenon leads us to the theorization of bound and free morphemes, as —just like in the previous example, i.e. *neighbor*, *neighb-* & *-or*— ‘some morphemes can occur only if attached to some other morpheme(s)’ (Plag, 2002: 13). Those, indeed, are known as *bound* morphemes as they require from the presence of another morpheme in order to constitute a specific meaning. Moreover, some bound morphemes ‘must be attached before the central meaningful element of the word, the so called root, stem or base, whereas other bound morphemes, such as *-ity*, *-ness*, or *-less*, must follow the root’ (Plag, 2002: 13). This is so because some of those morphemes will be affixes while some others will be suffixes. Nonetheless, *free* morphemes are those which can take place on their own, such as the morpheme *invent-* in *inventor* (Plag, 2002).

However, some word-formation processes will happen by the deletion of a morpheme instead of the attachment of it. This phenomenon is known as back-formation process(es), which will be explained in further detail in the Section number 5 of this paper. It is important to highlight the fact that there is also room for compounding within back-formation processes, e.g.: *auto-destruct* from *auto-destruction*. This conception will be the central theme of debate in Section number 5.1. Back-formed Compound Words.

#### **4.1. Compounding**

‘A compound is a word which consists of two or more words’ (Fabb, 1998: 66). According to Bauer (2003), a compound is ‘the formation of a new lexeme by adjoining two or more lexemes’ (Bauer, 2003: 40). Nonetheless, Plag (2002) defined it as ‘a word

(i.e. one word) which consists of two words' (Plag, 2002: 5). So as we can see, many of the morphologists that have dealt with compounding agree on its definition. However, that does not mean that the definition of this concept is not problematic, as we will be analysing in Section 4.1.1. Problems with Compounding. Indeed, 'compounding is a field of study where intricate problems abound, numerous issues remain unresolved and convincing solutions are generally not easy to find' (Plag, 2002: 169).

Following the line of the definition of compounding, the words we find in a compound will still hold a meaning which is very much alike the meaning they held as isolated words, but not completely the same (Fabb, 1998). 'As Downing (1977) puts it, not every man who takes out the garbage is a garbage man' (as cited in Fabb, 1998: 66). This example displays the semantic load that compounds hold. In fact, 'compounds exhibit what is called a modifier-head structure. The term head is generally used to refer to the most important unit in complex linguistic structures' (Plag, 2002: 173). When analysing compounds, the head is the one getting modified by the other element in the compound. This has a semantic perspective which explains that 'the set of entities possibly denoted by the compound (...) is a subset of the entities denoted by the head' (Plag, 2002: 173), e.g.: *beer bottle* is a bottle. Therefore, the head is the element that determines both the semantic and grammatical characteristics of the whole word.

When considering the importance of the head in compounds, it is essential that the *Right-Hand Head Rule* gets defined. It explains that in English compounds, the head of a compound is always the right-hand member of the word (Plag, 2002). According to this theory, compounds will have different properties:

- The syntactic category of the head of the compound will establish the syntactic category of the compound, e.g.:

(15) *beer bottle*

head: bottle.

syntactic category the head: count noun.

syntactic category of the compound: count noun.

(Plag, 2002: 173).

- When the head holds the feminine gender, the compound will be feminine, e.g.:

(16) *head waitress*

(Plag, 2002: 173).

- 'If the compound is pluralized the plural marking occurs on the head, not on the non-head', e.g.:

(17) *park commissioners* is the plural of *park commissioner*

(Plag, 2002: 173-174).

As above-mentioned, the notion of headedness is, indeed, highly important. In fact, compounds get classified into different types according to whether they have a head or not. After, those compounds having a head will be considered in accordance to the word class of the head or according to whether the head appears at the right or the left side of the compound.

- **Endocentric compounds** 'have their semantic head inside the compound' (Plag, 2002: 186). The head is on the right lexeme —following the Right-Hand Head Rule— and the lexeme(s) on the left only provide additional information about the head. Therefore, the syntactic category of the compound will match with the syntactic category of the head. According to this phenomenon, there are different subtypes of endocentric compounds:

- Noun head:

- N - N: *bookshelf*
- V - N: *crybaby*
- Participle N - N: *reading class*
- Adj - N: *blackbird*
- Prep - N: *underwater*

- Adjective head:

- N - Adj: *waterproof*
- Adj - Adj: *blue-eyed*
- Prep - Adj: *overwhelming*

- Verb head:
  - Prep - V: *foresee*
  
- Preposition head:
  - V - Prep —phrasal verb—: *make out*
  
- **Exocentric compounds** have their semantic head out of the word. Indeed, ‘exocentric’ means ‘out-centered.’ Nonetheless, as the following examples display, the meaning of the compound will be related to the meanings of the parts of it. E.g.:
  - (18) *redhead*: a person with red hair.
  - (19) *bigfoot*: a fictional character belonging to some cultural collective imagery that has, indeed, big foot.
  
- **Copulative compounds:** compounds in which both lexemes are semantically equal. ‘They could be said to have two semantic heads, none of them being subordinate to the other’ (Plag, 2002: 187). E.g.:
  - (20) [N, N] N: *singer-songwriter*
  - (21) [Adj Adj] Adj: *Irish-American*
  
- **Neo-classical compounds** are compounds in which two —or more— lexemes of Latin or Greek origin are combined to form new combinations that are not attested in the original languages’ (Plag, 2002: 198). Apart from some exceptions, neoclassical affixes are usually bound.
  - (22) *photograph* (Plag, 2002: 198).
  - (23) *biochemistry* (Plag, 2002: 198).

#### 4.1.1. Problems with compounding

##### a) Problems related to structure

The definition of ‘compounding’ we have already worked with in the previous section asserts that ‘compounds are words formed by two —or more— words.’ However,

compounds are usually defined from the perspective of being constituted by only two — with no regards to the ‘or more’ part— lexemes. Plag (2002) emphasized on this issue explaining that some compounds can be formed by three, four, or even five or more lexemes, e.g.:

(24) *university teaching award committee member* (Plag, 2002: 170).

As example number (24) displays, we can, indeed, find compounds constituted by more than two lexemes. The following tree structure depicts it:

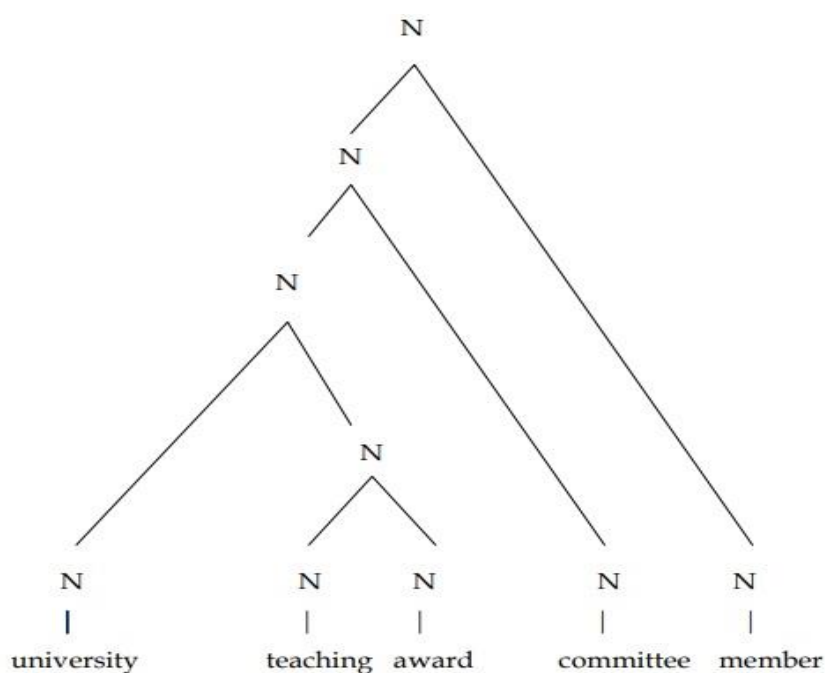


Fig. 3: *Tree structure of a five-member compound.*

As shown in figure 3, longer compounds can be divided into binary compounds. Chunks are created amongst the words that constitute this five-member compound. The next step would be to link one chunk to the other in a way in which the final output of the structure of the compound is binary. Therefore, the notion of arranging the internal structure of compounds in sequences of two elements can explain why there is a tendency to think about compounds as words formed by only two words. As Plag (2002: 182) asserts, ‘larger compounds follow the same structure and semantic patterns as two-member compounds.’)

## **b) Problems related to The Notion of Wordhood**

As stated in Section 2, The Notion of Wordhood, the term ‘word’ is problematic in the sense that it needs to be explained from a holistic point of view —i.e. from the different sub-branches of grammar— in order to get fully defined (Plag, 2002). In this sense, ‘compounding’, which as already stated has also been claimed to be controversial by some scholars such as Plag, becomes an issue since the concept of ‘word’ needs to be addressed for compounding to be defined: ‘A compound is a word which consists of two or more words’ (Fabb, 1998: 66). Indeed, the second problem with compounding that Plag (2002) presents is directly related to the notion of wordhood, as he proposes the question of whether the elements that constitute compounds are words or not.

Therefore, as I already mentioned throughout the different definitions of ‘word’ in Section 2, compounds hold some features that specifically contradict what those definitions established. In the following paragraphs I will review all of those contradictions.

In terms of orthography, Plag (2002) stated that the definition claims that words are bounded by either blank spaces —at the beginning and end of words— or by punctuation marks —at the end of words—. However, examples that function as counter-evidence to this definition are not difficult to find, not only within compounding. E.g.:

(25) *John’s*

(26) *back-formation*

Examples number (25) and (26) show how words can also hold orthographic signs within them. The orthographic definition did not regard these kind of cases in which for instance, a hyphenated compound, also constitutes one single word.

The prosodic approach to wordhood results problematic for compounding in several ways. As related to the notion of wordhood, the phonological definition is problematic also in relation to the orthographic one. The orthographic definition does not regard hyphenated compounds as constituting one word. However, those compounds stick to the stress rules of words, only holding one main stress. Moreover, as we have seen in Section number 4.1. Compounding, the stress pattern that compounds follow is



also important when classifying compounds. In fact, when considering nominal compounds, their stress pattern is different from the stress pattern of phrases (Plag, 2002). Indeed, phrases get the stress on the last word of them while compounds get stressed on their left element. In other words, phrases follow the *nuclear stress rule* while compounds follow *the compound stress rule* (Plag, 2002). However, there will be some examples that serve as counter-evidence to the application of the *compound stress rule*. In fact, as Plag (2002) asserts, some scholars such as Liberman and Sproat, Bauer, and Olson found those exceptions to the rule —as illustrated in the following example—:

(27) *scholar-áctivist* (Plag, 2002: 177).

(27a) *Noam Chomsky is a scholar-áctivist*

There are some other cases in which compounds will have late stress, not following what the *compound stress rule* states:

- When the first element of the compound names the material or the ingredient out of which a thing is made —exceptions: expressions involving ‘*cake*’/’*juice*’/’*water*’ such as ‘*orange juice*—:

(28) *plastic ‘bag*

(29) *rice ‘pudding*

- Whenever the first element of the compound is a proper name and the second one means ‘road’ —exceptions: expressions with ‘street’ such as ‘Oxford Street’—

(30) *Candem ‘Town*

- When the first element of the compound names a place or a time — exceptions: ‘*Christmas Card*, ‘*Birthday card*—.

(31) *Town ‘Hall*

(32) *city ‘centre*

Then, we could ask ourselves: ‘what kind of element can be used to form compounds[?]’ (Plag, 2002: 172). Plag (2002) brings what we saw on *neoclassical compounds* back in order to use it as evidence of compounds being able to get constituted

not only by words, but also by roots. In fact, in neoclassical compounds, where at least one of the roots of the compound is bound, those ‘bound elements like *astro-*, *bio-*, *photo-*, *etc.* behave like words (and not like affixes), except [for the fact] that they are bound’ (Plag, 2002: 172). So taking this into consideration, Plag (2002: 172) affirms that ‘they are best classified as bound roots.’ Furthermore, examples such as *over-the-fence gossip* (Plag, 2002: 172) prove that syntactic phrases can also appear as part of a compound. And examples of compounds with a plural mark in the first element —e.g.: *systems analyst*— display how also grammatical words can constitute compounds. We could then redefine that initial definition in which compounds were words formed by two —or more— words, and affirm that ‘a compound is a word that consists of two elements, the first of which is either a root, a word or a phrase, the second of which is either a root or a word’ (Plag, 2002: 173).

The Integrity Criterion defined in Section 2 establishes that no intervening material can be inserted in-between the words. However, some compounds prove this statement to be wrong, e.g.:

(33) *abso-bloody-lutely* (Plag, 2002: 8).

In fact, if we tried to move the added particle *-bloody-* to other positions, the meaning of the compound would not be the same, and, therefore, it would be constituting not only a different word-form but also a different word-sense.

There is another word-formation process known as back-formation that differs from compounding in the sense that while compounding links two or more lexemes in order to form a new word, back-formation forms new words by the deletion of affixes. This process will be introduced in the following section.

## 4.2. Back-formation

Back-formation consists of ‘words [that] are analogically derived by deleting a suffix (or supposed suffix)’ (Plag, 2002: 48). This definition depicts the way back-formation has traditionally been defined in the literature. However, as we will see, there

has been a huge debate in terms of how to define back-formation —whether as a word-formation process or as a combination of zero-derivation and clipping— (Nagano, 2007).

The rest of word formation processes together with compounding are derived by adding particles. Therefore, back-formation would be the only word-formation process that involves resting particles instead of summing them. As the following example displays, this process is normally used to form verbs, and, therefore, back-formed words undergo a change in their grammatical category:

(34) *hustle* (V) from *hustler* (N)

Additionally, we can find two types of back-formation in English. Back-formed forms of simple words —one-root words— and back-formed compound words. Example number (35) illustrates a back-formed simple word while example number (36) illustrates a back-formed compound (Nagano, 2007):

(35) *beg* (V) from *beggar* (N)

(36) *televise* from *television*

After having defined the concept of back-formation, I can now introduce the previously mentioned discussion surrounding the topic. Nagano (2007) revised Marchand's (1960) analysis on back-formation, which establishes that the concept is not a word-formation process on its own, but a combination of *zero-derivation* and *clipping*. However, Nagano (2007) argued against this assumption in his revision, asserting that back-formation is, indeed, another word-formation process. He addressed different hypotheses by different scholars, and, one of his main arguments in favour of back-formation being a word-formation process was that back-formation applies the word-formation rules even if it follows them in an atypical way, i.e. backwards. Nonetheless, this attempt to demonstrate how back-formation applies word-formation rules was also proven to be unsuccessful.

It is true that Marchand (1960) claimed back-formation to be constituted by a combination of zero-derivation and clipping. Nonetheless, not only several scholars but also Marchand himself regarded this analysis in a critical way. In fact, Marchand (1969)

revised the 1960 version of his study and changed his conception surrounding the topic, regarding back-formation as a kind of conversion. Nagano (2007) has a less critical view towards this second analysis.

Moreover, Nagano (2007) is also critical towards what he calls the mainstream analyses on back-formation, which, as asserted at the very beginning of this section, define back-formation as a process in which words are derived by deleting a (supposed) affix. What this revision wants to show is that ‘back-formation does not necessarily delete an affix (e.g.: *liaison* > *liaise*), and that it is actually not semantically parallel not to affixation (e.g.: *film* > *filmize*) plus clipping, but to conversion (e.g.: *referee* > *referee*)’ (Nagano, 2007: 33). Indeed, while back-formation changes meaning and, sometimes, syntactic category, clipping does never change the meaning or the syntactic category of the word. In fact, the only effect relevant to meaning is a change in style level, i.e. *prof* is less formal than *professor*. Therefore, as it will be shown, back-formation shares more similarities with conversion than with clipping. It is easy to state that back-formation is the reversed process of affixation as both of the processes show some opposite features. To the contrary, Nagano (2007) wants to argue that his analysis ‘is free from this traditional assumption (Nagano, 2007: 33). In fact, the only hypothesis provided in his 2007 analysis he claims to be non-problematic is the one that does not hold a traditional view towards back-formation by not regarding it as necessarily deleting affixes. However, it will also remain problematic, providing non-applicability to all the hypotheses that try to establish a link between back-formation and other word-formation processes.

Aronoff (1976) asserted that back-formation goes through the ‘backwards application of a word-formation rule’ (as cited in Nagano, 2007: 41). Nagano (2007) uses the typical examples of *edit* > *editor* and *babysit* > *babysitter* and applies the reverse of the following word-formation rule to their formation process:

**Rule of agentive #er**

$[X]_V \rightarrow [[X]_V \#er]_N$

Base condition:  $[X]_V$  has an external argument

Semantics (roughly):  $X\#er = \text{one who } Xs$

Fig 4: Application of the word-formation rule of the agentive #er

The *edit* part is analysed as a verb and the *-or* part as an agentive affix. By applying the reverse of the word-formation rule in the previous figure we obtain the back-formed word *edit* (Nagano, 2007).

**Rule of agentive #er**

$[\text{edit}]_V \rightarrow [[\text{edit}]_V \# \text{er}]_N$

Base condition:  $[\text{edit}]_V$  has an external argument

Semantics (roughly):  $\text{edit}\#\text{er} = \text{one who edits}$

Fig 5: Application of the word-formation rule of the agentive #er with an example

However, the hypothesis of back-formation being constituted by the backwards application of a word-formation rule is not applicable in all the cases of back-formed words. It is not the case that the hypothesis fails in some cases because of issues on the word-formation rules. The problem lays on the fact that not all the back-formed words have been formed by word-formation rules. Therefore, we could conclude that the fact of back-formation being a reversed application of word-formation rules is correct, but, that some of those reversed word-formation processes have not been derived according to word-formation rules. Therefore, the word-formation rule hypothesis is not valid (Nagano, 2007).

Summing up, Nagano (2007) showed how all the attempts made in order to relate back-formation to other word-formation processes result in problematic criteria. This may lead us to think that, indeed, back-formation does not have to be related to any other word-formation process, that it can be considered to be one on its own.

#### 4.2.1. Back-formed compound words

When dealing with back-formed compounds it is essential that we bare the notion of productivity in mind. Productivity is the ability of an affix to form new words. However, as Plag (2002: 55) asserts, ‘not all affixes possess this property to the same

degree, some affixes do not possess it at all.' For instance, the suffix *-th* only occurs in a few words in English, and, therefore, it is considered to be unproductive (Plag, 2002):

(38) *strength*

(39) *growth*

The following set of examples, however, constitute some suffixes that are considered to be highly productive in the English language:

(40) *-er*: *baker, runner, thinker, producer, etc.*

(41) *-wise*: *timewise, moneywise, jobwise, etc.*

(42) *-ful*: *wishful, armful, fruitful, etc.*

As mentioned, the concept of productivity holds a great weight when talking about back-formed compounds. In fact, 'English allows several types of combinations of different word-classes (N: noun, A: adjective, V: verb) [in order to form compounds], but not all such combinations are possible.' (Haspelmath & Sims, 2002: 137). Indeed, the productivity of each one of these sub-types of compounds is different, and, specifically, the combinations of V + N and N + V are unproductive in English (Haspelmath & Sims, 2002). This is the reason why we find so many back-formed verbal compounds as *babysit* from *babysitter* instead of having such forms constituted by non-backformed compounding processes. Therefore, back-formation being more productive than the V + N and the N + V patterns of compounding, we will find many back-formed compounds in the English language. (Haspelmath & Sims, 2002). E.g.:

(43) *bartend* (V) from *bartender* (N)

(44) *caretake* (V) from *caretaker* (N)

## 5. Conclusion

The present paper has aimed to introduce different notions within derivational morphology with regards to back-formation and compounding. Taking into consideration that both of those morphological processes were going to fill a central position in the paper, it seemed appropriate to introduce 'The Notion of Wordhood' first, as both

processes constitute word-formation. Therefore, I first defined ‘The Notion of Wordhood’ in order to establish a relationship between words and compounds. In fact, the term *word* needs to be defined from different sub-categories of grammar such as orthography or semantics among others, in order to be defined in a non-problematic manner. However, even if addressing the term ‘word’ holistically, compounding has appeared to provide counter-evidence to some of those definitions. For instance, the orthographic definition of ‘word’ states that words are bounded by blank spaces and sometimes a punctuation mark at the end of words. Nonetheless, we can find hyphenated compounds, which are considered to constitute one single word.

Overall, this paper has addressed different notions that still nowadays, remain problematic. In many cases, different scholars support different approaches and arguments in relation to same specific topics. Indeed, when defining inflectional and derivational morphology, different approaches that may even contradict one another are accepted. We saw how the relationship between inflection and derivation can be regarded either as a dichotomy, or as a continuum. In fact, the argumentation used in favor of both approaches is based on the same properties —relevance to the syntax, obligatoriness, limitations on application, etc.— .

When dealing with compounding, the term has been defined taking into consideration its different properties and types. The problematic notions it holds have also been addressed. In this case, I found problems related to the structure of compounds and, as mentioned, to the notion of wordhood.

Finally, back-formation was addressed as a type of word-formation process. Being the only word-formation process that forms words by deleting affixes instead of by adding them, it is the less common word-formation process in English. This was the reason why a discussion was generated on whether back-formation was a type of word-formation on its own, or whether it was a mix between other processes. I brought back this discussion by addressing Nagano’s (2007) revision on Marchand’s (1960) paper, where, as asserted, the scholar discussed whether it was correct to consider back-formation a type of word-formation process or just a combination of other processes. I commented on one of the hypotheses that Nagano (2007) addresses on his revision: the application of word-formation rules (WFR) on back-formed words. The analysis has shown that, indeed, back-

formed words can get formed by the backwards application of WFRs, but that in some cases, back-formed words are created without the application of any WFR. Therefore, the hypothesis of WFR could not support the fact of back-formation having to be generated by a mixture of other word-formation processes. The other hypotheses Marchand (1960) proposed were not supportive with that fact neither, so what I can conclude is that back-formation is a word-formation process on its own, as all the attempts made in order to relate it to other word-formation processes have resulted in problematic criteria. Furthermore, the fact of back-formed compounds being really common to find in the English language was argued by claiming that back-formed compounds generally form verbal compounds and that this process was much more productive than the process of forming compounds through the following combinations that the process of conversion tackle: V + N —i.e. deverbals nouns— and N + V —i.e. denominal verbs—.

It is also highly important to mention that the structure of this paper has aimed to follow a backward direction in order to establish a symbolic structural relation towards the central concerns of the paper: compounding and back-formation. Indeed, whereas the title of the paper is *Back-formed Compound Words*, the first issue being addressed in the paper has been the notion of wordhood, following with compounding and finishing with back-formation and the abundant presence of compounding on it.



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## Appendix

**Morpheme:** the smallest, indivisible element of semantic content or grammatical function that words are made up of. They are realised by morphs.

E.g.: dis-pleas-ure. electr-ic. walk-ed, tree-s.

**Lexeme:** a linguistic unit realised by word-forms.

E.g.: work → WORK

word-form    lexeme

**Word-form:** it is made up of one or more morphs

**Morph:** ‘a phonological string (of phonemes) that cannot be broken down into smaller constituents that have a lexicogrammatical function’ (Simon Fraser University, 2019).

- **Example:** books
  - Lexeme: BOOK
  - Word-form: books
  - Morphemes: {book} {plural}
  - Morphs: book.s.

**Base:** the morpheme(s) to which an affix is attached. All roots and stems are bases.

**Root:** is the basic unit of analysis that remains when you remove all affixes, e.g.: *teach.er.s*

**Stem:** is the term we use in inflectional cases, it is the form to which you attach inflectional affixes, e.g.: *teacher.s*

**Affix:** An affix is a bound morphemes which have one or more identifiable semantic or grammatical functions/meanings and which occur in more than one word in the language.

**Prefix:** an affix pronounced before base, e.g.: *un-appllicable*

**Suffix:** an affix pronounced after base, e.g.: *inflectionl-al*

**Infix:** an affix pronounced in the middle of the root, e.g.: *teach.er.s*

**Clitic:** a cross between an affix and a word. Clitics are phonologically so short they can't be pronounced alone, they need to join to other words. Like words, their position is determined partly by syntactic rules. They are sometimes short forms of larger words, e.g.: *I'm, he's, you've, etc.*

A **zero-morph** is a morpheme that is not physically represented,

E.g.: *I shut* {shut} {past} *the factory down* —'past' is marked  $\emptyset$ —

**Zero-derivation or Conversion** occurs when you change the word-class of the word without changing the form. The same word-form realises two different lexemes.

E.g.: *He will jump the fence* → *jump* (V)

*What a jump!* → *jump* (N)

There are different types of conversion depending on the word-class of the words being converted and the word-class of the words converted:

**N → V (denominal verb):** *to garage, to rain, to hammer a nail.*

**V → N (deverbal noun):** *a call, a spy, a command, a guess.*

**Adj → N (adjectival noun):** *the greens, the poor, a roast, a daily.*

**Adj → V (adjectival verb):** *to dirty, to empty, to better.*

**Clipping:** it is shortening a word by deleting phonological material —not morphemes—

**Foreclipping:** *(air)plane, (cara)van*

**Backclipping:** *prof(essor), pub(lic house)*

**Both:** *(in)flu(enza)*

In **syntactic government**, one word requires another word or phrase to have a particular inflectional value' (Haspelmath & Sims, 2002: 90).

**Syntactic Agreement** is a syntactic relation within a sentence. In this relation, the inflectional value of a word or phrase must be the same as the inflectional value of another word or phrase of the sentence (Haspelmath & Sims, 2002).

E.g.: [the boy]np [walk-s]v

the verb walk(s) agrees with the subject NP in number.