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Morphological Productivity of Derivation, Compounding and Conversion processes in English: A quantitative Corpus-Based Study

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Abstract

Morphological productivity is explained as the capability of a specific word formation process in producing the highest distinct word forms. Moreover, it refers to the availability of that process in the language and to make new words continuously. So, comparing the three processes [derivation, compounding, and conversion] established upon a dictionary-based corpus is seen as need for the linguistic domain analysis in general and morphological field in particular. Thus, this paper aims at investigating about the

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productivity of three English word formation processes theoretically and practically. In addition to that, it compares the three processes in terms of their morphological productivity degree. Consequently, the findings and the concluding points are announced in the conclusion section.

Keywords: Morphological Productivity, Compounding, Derivation, Conversion, Corpus-based

الإنتاجية الصرفية لعمليات الاشتقاق، التركيب، والتحويل في اللغة الانجليزية: دراسة كمية قائمة على المدونات اللغوية

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الملخص

الانتاجية الصرفية هي قدرة عملية معينة لتكوين الكلمات على انتاج أكبر عدد من الصيغ الصرفية اللغوية المتميزة وتشير الى وجود هذه العملية من عدمها في اللغة وقدرتها على توليد كلمات جديدة باستمرار. لذا، تعد مقارنة العمليات الثلاث (الاشتقاق، والتركيب، والتحويل)، استنادا الى مدونة لغوية قائمة على المعاجم، ضرورة لتحليل المجال اللغوي عموما، والمجال الصرفي خصوصا. وتهدف الدراسة الى بحث انتاجية ثلاث عمليات لتكوين الكلمات في اللغة الانجليزية نظرياً وعملياً. اضافة الى ذلك، تقارن الورقة بين هذه العمليات الثلاث من حيث درجة انتاجيتها الصرفية. وبناء على ذلك، تعرض النتائج والاستنتاجات في قسم الخاتمة.

الكلمات المفتاحية: الإنتاجية المورفولوجية، التركيب، الاشتقاق، التحويل، قائم على المدونة

1. Introduction

This study attempts to add a practical comparison among the three-word formation processes [derivation, compounding, and conversion] which other studies have not tackled it yet. Moreover, these three processes are specifically selected because there is not

representative research about them using a quantitative-qualitative method. So, a theoretical background is illustrated concerning the concept of morphological productivity, and the nature of word-formation processes for the most part. As, derivation, compounding, and conversion processes are discussed theoretically with comprehensive instances, later on they are analyzed quantitatively. Meanwhile, Baayen's metric for measuring productivity of each process is applied in terms of type-based instead of token-based. It is meant to be a type-based model because it searches for finding the actual number of distinct words. In other terms, only the distinct number of different word forms which are produced as an outcome of a single word formation process is examined. In the later sections a formula which can be defined as a representation of Baayan's description of word type-based analysis is demonstrated and clarified. Notably, this paper is an extract from Phd dissertation and the used data is its corpus which includes (3000) words. This number is selected from advanced English dictionaries, since all the words of it cannot be tested practically. As the researcher is classifying and analyzing the (3000) words manually. It is worth mentioning, this number is selected after a thorough investigation from other linguists and researchers in the domain. So, the data is collected from (Oxford Advanced Learner's dictionary, 2005) (OALD), and (Merriam-Webster's Dictionary, 2025) so as to represent a broad coverage of English vocabularies resulted from all the studied word formation processes. Besides, the researcher takes the concept of balance into her consideration by avoiding exaggeration in selecting words which are produced by a certain process. As, she attempts to make a balance among all the three processes. The samples are chosen systematically in terms of alphabetical selection and including words from (A to Z) letters. The size of the corpus which is (3000) words is academically reliable since this study emphasizes on type-based analysis rather than token-based. Though, because of space and time issues, the corpus is not illustrated here in this paper. Subsequently, in the later sections of this paper the findings and concluding points will be declared. (Bauer, 2004), (Plag, 2002).

1.1 The Statement of the Problem

There is a gap concerning a linguistic comparison among the most three productive word formation processes in English which are derivation, compounding, and conversion

processes. Other studies may have conducted researches about the mentioned processes but they have not relied on a dictionary-based corpus which is well designed and includes only content words (bases).

1.2 The Aim of the Study

The aim of this research paper is:

1. Finding out the frequency of each word formation process in terms of producing more words.

2. discovering the word formation process which is most productive among the three selected processes.

3. providing a quantitative-qualitative analysis of the concept of productivity in these three processes in English.

1.3 The Methodology

The study follows these steps so as to attain its goal:

1. Declaring each process's productivity degree practically (quantitatively) by examining the (3000) data words from the corpus.

2. The words are selected by the researcher alphabetically from English dictionaries to designing the corpus. Besides, the selected words are defined in terms of content words (bases) only, including (nouns, adjectives, verbs, and adverbs).

3. The data is analyzed in terms of word-type based analysis which means the frequency of the different word forms is counted that is resulted from each single process.

4. Comparing the three selected processes' productivity and illustrating it with a chart.

5. Eventually, uncovering the findings and concluding points.

1.4 Significance of the Study

This study is outstanding and beneficial for linguists and language specialists because it demonstrates a quantitative-qualitative investigation about morphological productivity of the three widely used word formation processes in English.

1.5 Research Questions

This study seeks to answer the following questions:

1. Each of the studied process produce how many words in total from the designed corpus data?

2. Which word formation process is more productive than the other [derivation, compounding, or conversion?

2. Morphological Productivity

Bauer, discusses the productivity concept by referring to (Lyons,1977) who makes a distinction between two related aspects which are productivity and creativity. Since, they are different from each other in terms of following rules. Just as, productivity follows generative grammar's rules and enables native speakers to utter an unlimited number of sentences. While, creativity refers to a native speaker's ability to use the language in an unexpected way that deviates from the rule-governed language.

For instance, he explains the difference between these concepts through an example and states that "The invention of a form *headhunter* to designate a member of a tribe which keeps and preserves the heads of its human victims is a case of productivity…The metaphorical extension of the term *headhunter* to mean 'one who recruits executives for a large corporation', on the other hand, is a case of creativity". Consequently, it can be stated that productivity simply means the invention of novel words by applying the established rules. But, creativity indicates the invention of words by violating semantic rules. In the example of '*headhunter*', when the (*head*) is concrete, the rules are not violated and 'headhunter' stands for a person or somebody who hunts human beings for their heads, so the condition is called productivity.

On the contrary, in an advanced dictionary, (*headhunter*) means that someone looks for executives for a company. In this case, the semantic rule has been violated. As a result, the condition is creativity because there is a semantic shift of the word '*head'*. (2004).

Moreover, (Haspelmath, and Sims) compare productivity and creativity with regard to consciousness and intentionality. Whereupon, they describe productivity as a feature of a particular word-formation process that is unconscious and unintentional. In other words, when a speaker uses a productive rule to form new words, he/she does that unconsciously and unintentionally. While, the creativity property which follows an unproductive structure of word-formation rule happens consciously and intentionally.

For instance, using the suffix (-less) in words such as [childless, joyless, and shoeless] follows a very productive rule which is [noun + suffix –less]. At a time, speakers and hearers are unconsciously applying it. But, utilizing the suffix (*ese*) in words such as [mentalese, motherese, computerese, translationese] refers to the quality of creativity which language users are consciously and intentionally using it having a particular purpose. Other examples of creativity belong to the poetic uses of language. Thus, creativity is concerned with meanings. While, productivity is concerned with meaning and structure. (2010).

For more explanation, below a number of compound words are demonstrated in the two conditions of productivity and creativity (Lieber, 2009), and (Longman Dictionary of Contemporary English, 2014).

Words	Productivity	Creativity
Brunch		√
Greenhouse	√	√
kindness	√	
toothbrush	√	
snowman	√	

Table 1: Comparing Productivity and Creativity Concept of Words

Firstly, the case of word [brunch] is a condition of creativity because it is a creative combination which does not follow an established rule of word structure. Plus, a part of the word [breakfast], and a part of [lunch] are blended then it became [brunch]. This mechanism is called (*blending*) which it requires a creative combination of two words that results in forming a new word. Secondly, the word [greenhouse] has two manifestations. One of them is being productive which is defined as a house where plants are grown and protected from cold weather. Then it follows the rule of combining to make a compound word [Adjective + noun]. Whereas, its other explanation is the outcome of creativity. Since, there is a semantic violation which has a metaphorical meaning that is [brainstorming of ideas]. (Stormz, 2021)

Thirdly, the case of words like [kindness], [toothbrush], and [snowman] are a productive feature of the process since they all follow established rules such as [adjective + suffix –ness], [noun +noun]. (Stageberg, 1981).

In addition to that, (Haspelmath, and Sims) affirm that all the morphological rules are productive regularly but what makes one rule seem more productive than the others is the systematic selecting restriction degree. Disclosing that some of the rules are less restricted, while others are more restricted. As an illustration, the rule of applying the suffix (-ness) to make a noun from an adjective is less restricted.

As a result, it can be attached almost to all the adjective types. On the contrary, there are rules which are strongly restricted such as the 'de-adjectival –en' in [blacken, redden, etc.].

3. Word-Formation Processes

Words as the fundamental units of language can be developed through several processes and techniques. Here, the term [develop] stands for generating and producing new words in the language. So, in English there are numbers of processes which make up-to-date words.

In this way, these processes are built upon a variety of principles such as productivity, regularity, transparency, (historical, and cultural impact), and grammatical rules of

English. (Bauer, 2004). Thus, authors writing about English morphology have various methods for describe processes of forming new words. For instance, Aitchison converses about creating new words and (sentences) by human beings in terms of productivity and patterning in the language. As, one of the man's language features is producing novel words (utterances), and sentences in a patterned way rather than haphazard way. To give an example, she states that 'At breakfast, someone might say 'this is a good coffee', on one day, 'Is this coffee or dandelion tea?' on the next, and 'It would be cheaper to drink petrol' on the next.". Further, she declares that this concept of productivity in the structure of the language is rule-patterned. For instance, if we take sounds like [a, b, s, t], there are a limited number of ways that one can join them to produce meaningful words like [bats, tabs, stab, or bast]. (2014).

While, other groups of writers like (Fromkin, Rodman, and Hyams, 2009), and (Adrian Akmajian, 2012) define word formations in respect of two processes which are derivational and inflectional morphology. These two methods of forming new words are two fundamental processes in English. On one hand, the derivational morphology generates new words like adjectives from nouns, nouns from verbs, adjectives from verbs, etc. In this way, the word class will change by adding derivational morphemes such as [boyish from boy, conformist from conform, readable from read].

On the other hand, inflectional morphology also produces new words but in a distinct way. Just as, it makes new words in terms of grammatical function instead of changing the grammatical category of the original word. For example, when an inflectional morpheme attaches to a word, it alternates the word's tense, number, case like in [(wait-waits, waited, waiting), (eat-eaten)], [donut-donuts, Disa's hair, short-shorter, shortest].

Besides, (Rahayu) defines this process and declares that 'The study of word-formation can be defined as the study of how new complex words are built on the base on other words or morphemes.". So, by combining two or more morphemes, new multiplex words can be built. (2021).

Consequently, it can be deduced that new words (grammatical word forms, or new lexemes) are produced by compounding, inflectional, or derivational affixation such as [*team manager, kicks, employee*]. (Plag, 2002).

3.1 Derivation

It is defined as a prevailing process of forming new words by changing the original word's grammatical category or meaning by adding derivational affixes (prefixes, suffixes, and infixes) such as *emplane, disadvise, deplane, coachdom, counselorship, abso-blooming-lutely*. Thus, this process has a pivotal role in expanding English lexicon Hence, sometimes this process includes compounding two words or blending them together such as [*teapot, weekend, brunch*, etc.] Meanwhile, it includes attaching bound bases basis to existing words. For example, words like *teleplay, chronology, and ecosystem etc.,* are the outcome of such combination. As, the bound bases are [tele, chrono, and eco] and [play, logy, and system] are the existing words. Oppositely, sometimes derivational affixes are added to a word without changing its specific grammatical category such as adding [suffix –dom] to the noun [king (n)] and becoming [kingdom (n)].

Moreover, derivational process can take place with multiple affixes like in the word [untouchable] which consists of the prefix [un-] and the root [touch], along with the suffix [-able]. (Stageberge,1981), (Katamba, & Stonham, 2006), (Nordquist, 2019).

Eventually, a list of words which are the outcome of derivational processes are presented with their detailed procedure:

Base	**Derivational Process**	**The Outcome Word**
1. Break (v)	Suffix Addition	Breakable (adj)
2. Happy (adj)	Suffix Addition	Happiness (n)
3. Help (n)	Suffix Addition	Helpful (adj)
4. Helpful (adj)	Suffix Addition	Helpfulness (n)
5. Hope (n)	Suffix Addition	Hopeful (adj)

6. Joy (n)	Suffix Addition	Joyful (adj)
7. Joy (n)	Suffix Addition	Joyless (adj)
8. King (n)	Suffix Addition	Kingdom (n)
9. King (n)	Suffix Addition	Kingly (adj)
10. Nation (n)	Suffix Addition	National (adj)
11. National (adj)	Suffix Addition	Nationalize (v)
12. Nationalize (v)	Suffix Addition	Nationalization (n)
13. Normal (adj)	Suffix Addition	Normality (n)
14. Perform (v)	Suffix Addition	Performance (n)
15. Read (v)	Suffix Addition	Readable (adj)
16. Slave (n)	Prefix Addition	Enslave (v)
17. Tie (v)	Prefix Addition	Untie (v)
18. Touch (v)	Suffix Addition	Touchable (adj)
19. Touchable (adj)	Prefix Addition	Untouchable (adj)

As, it is clear from the above examples that words which undergo the derivation process change in a way or another. Some of them changed in terms of their grammatical category from noun to adjective such as [nation to national], [joy to joyful, joyless], [hope to hopeful], etc. Or, changing from verbs to nouns, or adjectives like [perform to performance, break to breakable, read to readable]. while others have changed their quality characteristic from having a quality to loosing that quality feature such as [touchable to untouchable, joyful to joyless]. Plus, a resulting word like [enslave] which is created by adding the prefix [en-] to a root [slave] is a manifestation of a causative verb. Also, the word [untie] is demonstrating negation of the root [tie] that is produced by the prefix [un-] and the root [tie].

3.2 Compounding

It is a process of combining two words and making a one new word. As, it is defined by (Stageberg, 1981) like "Compounding is simply the joining of two or more words into a single word, as in *hang glider, airstrip, cornflakes, busybody, downpour, cutoff, skywarn,*

alongside, breakfast, long-haired, devil-may-care, high school.". Additionally, the styles that are applied for writing a resulted compound word are writing it as one word such as [airstrip], a word with a hyphen like [long-haired], or like two words as [high school]. According to most of the authors mentioned above compounding process has several characteristics. First, it adopts right-hand headed rule since the word that is written in the right hand is going to be the head like in [schoolteacher] the word [teacher] is the head which the whole word shows the kind of the [teacher]. Another example, in the word [greenhouse], the word [house] is the head and the [green] states the type of the [house].

Moreover, the head word decides on the syntactic category of the whole compound word. At a time, in the word [greenhouse], the head is a noun so the syntactic category of the whole word will be a noun.

Second, compound process has a number of distinct combinations such as [noun + noun, adjective + noun, verb + noun, preposition + noun, and preposition + verb]. For example, these combinations can be found in [rattlesnake, toothpaste, blackboard, high school, pickpocket, and overdose]. Third, this process possesses two sub-types which are endocentric and exocentric. As, endocentric stands for those compound words which have a transparent head and their semantic meaning can be extracted from the meaning of the head. For example, the meaning in the word [doghouse] can be declared from the word head [house] and as a whole indicates a type of house. Whereas, exocentric compounds' meaning cannot be derived directly from their constituents such as the word [pickpocket]. As, its meaning is not picking a pocket rather it symbolizes a person who steals money from other's pockets. Consequently, more compound words are demonstrated in the table below along with their structure:

Compound Words	**The Structure**
1. Car thief (n)	Car + thief (noun + noun)
2. Color blind (adj)	Color + blind (noun + adjective)
3. Flour mill (n)	Flour + mill (noun +noun)
4. Firetruck (n)	Fire + truck (noun + noun)

5. Fire-man (n)	Fire + man (noun + noun)
6. High school	High + school (adjective + noun)
7. Information Office (n)	Information + office (noun + noun)
8. Manservant (n)	Man + servant (noun + noun)
9. Mailman (n)	Mail + man (noun + noun)
10. Overdo (v)	Over + do (preposition + verb)
11. Overshoot (v)	Over + shoot (preposition + verb)
12. Sea breeze (n)	Sea + breeze (noun + noun)
13. Sunshine (n)	Sun + shine (noun + noun)
14. Underarm (n)	Under + arm (preposition + noun)
15. Windmill (n)	Wind + mill (noun + noun)
16. Wide-awake (adj)	Wide + awake (adjective + adjective)

Subsequently, as it is explained in the above table there are distinct compounding structures like combining two nouns together to make a single compound noun, adjective plus noun [high school], preposition plus noun [underarm], preposition plus verb [overdo], adjective plus adjective wide-awake, noun plus adjective [color blind]. (Merriam-Webster's Dictionary, 2025)

3.3 Conversion

This process refers to adding no affixes to the word base and changing its function such as from noun to verb, adjective to verb, verb to noun, adjective to noun, and preposition to verb. Consequently, the conversion process results in creating new words without any change in the form of the original word. For example, [Bottle (n), To bottle (v)], [To guess (v), A guess (n)], [To call (v), A call (n)], [Empty (adj), Empty (v)], [blind (adj), The blind (n)], [Down (prep), To down (v)]. Therewithal, (Katamba, and Stonham) defines this process as "Words may be formed without modifying the form of the input word that serves as the base. Thus, *head* can be a noun or verb. This is called conversion.". (2006). Accordingly, the grammatical category of the outcome word is declared by the syntactic position since, there is no change in the shape and pronunciation of the converted word compared to the original word. In addition to that, the process of

conversion can occur in closed-system words to nouns, from phrases to nouns, phrases to adjectives, etc. For example, the auxiliary verb [must] is converted to a noun as in this sentence "This book is **a must** for the student of aerodynamics.". Another example, is when a phrase is converted to a noun such as "Whenever I gamble, my horse is one of the also-rans.", so the phrase [also ran] is converted to a noun and used as a noun in the sentence. Further, conversion from a phrase to an adjective can be seen in "I feel very under-the-weather.". In this case, the whole phrase is used in the position of an adjective.

Moreover, this process possesses a number of features like providing words flexibility so as to be used in different syntactic contexts such as using the word [water] as a noun and as a verb according to the syntactic situation. Hence, the form of the original word does not change when it is converted to the new word. Thus, semantically, the new word's meaning that is produced from conversion process is just the same as the base word's meaning with little particularization. Besides, the outcome word from conversion is less used compared to the original word. For instance, the word [water (n)] is more frequently used than the converted word [water (v)]. For further clarification, more examples of conversion are displayed along with their originals, and their types in the table below:

Original Word	**Conversion Type**	**The Resulted Word**
1. Answer	Verb to noun	Answer
2. Better	Adjective to verb	To better
3. Calm	Adjective to verb	Calm
4. Catch	Verb to noun	Catch
5. Cheat	Verb to noun	Cheat
6. Comic	Adjective to noun	Comic
7. Cover	Verb to noun	Cover
8. Daily	Adjective to noun	Daily
9. Doubt	Verb to noun	Doubt

10. Dry	Adjective to verb	Dry
11. Hammer	Noun to verb	To hammer
12. Jump	Verb to noun	A jump
13. Laugh	Verb to noun	Laugh
14. Love	Verb to noun	Love
15. Mail	Noun to verb	Mail
16. Mask	Noun to verb	Mask
17. Poor	Adjective to noun	The poor
18. Rich	Adjective to noun	The rich
19. Ship	Noun to verb	Ship
20. Skin	Noun to verb	To skin
21. Spy	Verb to noun	A spy
22. Throw	Verb to noun	Throw
23. Turn	Verb to noun	Turn
24. Walk	Verb to noun	Walk
25. Wrap	Verb to noun	Wrap

4. Discussion and Findings

Since a word formation process's productivity depends on how many distinct word forms it will produce, the selected processes in this paper are examined according to the designed corpus (3000 words) chosen from the (OALD), and (Merriam Webster's online, 2025) dictionary by the researcher. Hence, after analyzing the whole data and classifying it according to the chosen word formation processes (derivation, compounding, and conversion), it is declared that each process produces a distinct amount of words. As, it is demonstrated in the (figure: 1) below, the number of resulting words from derivation process reaches (784) words. So, by Baayan's description for type-based word analysis it will be like [R=$\frac{Vprocess}{Vtotal}$]. Obviously, Baayan has not provided this formula but when we translate his type-based analysis description to a mathematical equation, we will get this formula. As a result, the proportion for derivation process will be [R (ratio)] equals to [V process] which is [784] words divided by [V total] that is the number of the whole corpus-

data that is [3000] words. As a result, the ratio will be [R=0.261]. While, the words which are considered as the outcome of compounding process are (852) words which means [R=$\frac{852}{3000}$] that is [0.284] percentage. Whereas, the conversion process has produced (160) words which means [R=$\frac{160}{3000}$] and equals to [0.053] percentage. In consonance with the analyzed data, the most productive word formation process is compounding. The second most productive process is derivation. Plus, the third and the least productive process is conversion. The sorting table of the (3000) word's analysis is not illustrated here in this extracted paper because of time and space limitations, while they are all declared in detail in the dissertation. (Bauer,2004), (Plag, 2001).

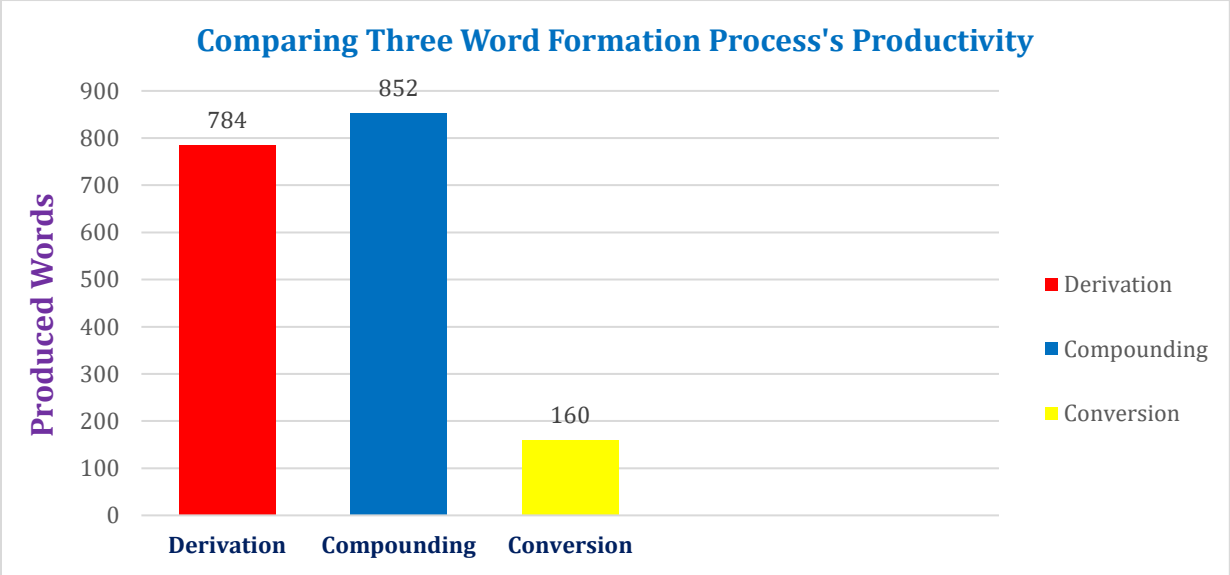

Figure 1: Derivation, Compounding, and Conversion Word Formation Processes in English

5. Conclusion

Concluding the results and the essential points which this paper has reached is that morphological productivity can be described as the availability of a specific word formation process in the language. Along with that, it is discovered that there are differences between productivity of a process and creativity concept. Since, one of the reasons is that productivity is an unconscious feature of a process, while creativity is a conscious one. In other words, when a process is productive, it results in a large number of

distinct word forms without an effort from the language users. On the contrary, creativity of a process refers to the language user's conscious usage of that particular process. In addition to that, according to the analyzed (3000) word data, it is discovered that compounding process in English is the most productive process. And, derivation process comes after it. Then, at the third level comes conversion process.

References

Adrian Akmajian, R. A. D. A. K. F. R. M. H., 2012. *An Introduction to Language and Communication.* sixth ed. Massachusetts: Library of Congress Cataloging-in-Publication Data.

Aitchison, J., 2014. *Understand Linguistics.* London: Great Britain for Hodder Education .

BAUER, L., 2004. *English Word-formation.* Cambridge: Cambridge University Press.

Fromkin, R. a. H., 2009. *An Introduction to Language.* Tenth ed. New York: Michael Rosenberg.

LIEBER, R., 2009. *Introducing Morphology.* New York: Cambrige University Press.

Martin Haspelmath, a. A. D. S., 2010. *Understaning Morphology.* Second ed. London: Hodder Education, an Hachette UK Company.

Merriam-Webster, 2025. *Boom, crash, tick-tock, whistle, buzz,* Online: Merriam-Webster.com Dictionary.

Nordquist, R., 2020. *ThoughtCo..* [Online]
Available at: https://www.thoughtco.com/echo-word-language-and-composition-1690628
[Accessed 2 1 2025].

Plag, I., 2002. *Word-formation in English.* Cambridge: Cambrige University Press.

Rahayu, F. E. S., 2021. *INTRODUCTION TO ENGLISH MORPHOLOGY.* Samrinda: Samarinda: Repository Universitas Mulawarman.

Stageberg, N. C., 1981. *An Introuctory English Grammar.* fourth ed. Florida: Library of Congress Cataloging in Publication Data.

Stormz, 2021. *Stormz/What is "greenhousing" and how it can help with idea development.* [Online]
Available at: https://about.stormz.me/en/blog/article/what-is-greenhousing-idea-

development/
[Accessed 21 September 2024].

Francis Katamba, a. J. S., 2006. *Morphology.* second ed. London: Palgrave MACMILAN.