

A CASE FOR CIRCUMFIXATION IN ENGLISH

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Abstract

The study is an attempt to revisit the generalization that circumfixes are far-less common and productive in English than in other languages. The specific objectives of the study include: to highlight and establish the spread of circumfixes in English and determine the distinctive characteristics of circumfixes using descriptive research method. Data were generated through recorded verbal conversations and existing extant literatures in English grammar. Contrary to previous views, the study found that circumfixation is dominant, widespread, productive and a universal phenomenon in English as in many other languages. This affixational process, from the findings, is derivational, class-changing and category-preserving. Circumfixes apply on content (lexical) words and not grammatical words as found in some other languages. The study concludes that earlier generalizations about nonexistence and unproductivity of this affixational process were based on the traditional view of the phenomenon and not from the Binary Branching hypothesis.

Keywords: Morphology, Affixation, Circumfixation, English language.

Introduction

Morphology is one of the levels of language study that investigates how morphemes are concatenated or modified to form new words. This can involve the morphological processes of reduplication, affixation, compounding, backformation, clipping, acronym, etc. The two major divisions of word formation process include: concatenative and non-concatenative morphology. Affixation and compounding are concatenative processes,

while other processes fall under non-concatenative morphology. In concatenative morphology, words are formed by joining or linking two morphemes (bound and free or free and free). The result of such combinatorial endeavour is a new, and more complex, word. In the case of affixation, a bound morpheme is attached to a base (free morpheme) to either change its word class or modify its meaning; but in compounding, two free morphemes are joined to form a new word. When the word class of the base is altered, derivation takes effect; but when the meaning is only modified without alteration in the word class, it is inflectional. Inflectional affixes are used to mark grammatical categories, such as person, tense, aspect, comparative and superlative, mood, and case (Kari, 2015). Derivational affixes are subcategorized into category-changing and category-preserving which exist to create new words in a language. While category-changing derivational affixes result in the creation of new words which do not belong to the same syntactic word classes of the base they are affixed to, category-preserving derivational affixes are those that result in the creation of new words that belong to the same syntactic classes of words they are attached to.

Category preserving derivational affixes are referred to as extensional affixes because they only modify the lexical meaning of the base without changing its lexical category. When a derivational affix is attached to a linguistic unit, the latter is referred to as derivational base or base of derivation. When the affix employed in the word-building process is inflectional, the unit the inflectional affix attaches to is referred to as an inflectional stem (Ruszkiewicz, 2003).

The traditionally-acknowledged modes of affixational processes include: suffixation (attached after the base), prefixation (attached before the base), infixation (attached in the middle of the base) (Ruszkiewicz, 2003). Among the affixational features mentioned above, prefixes and suffixes are to a great extent widespread among languages of the world. Circumfixation is the least morphological process discussed in English language.

Circumfixation is a process whereby a word is derived by means of the simultaneous attachment of prefix-like and suffix-like formatives to a single base to give them the form (Pre + X+ Suff) (Scalise, 1998, p.147). Other terms used to refer to circumfixes in extant literature include: Collective morpheme (Murasic, 2003); discontinuous affix (Ndimele, 1999); ambix or confix (Mbah, 2012); and parasyntesis (Scalise, 1998; Kari, 2015). In some languages, the discontinuous affix (the prefix and the suffix that encircle, say, a base) could be used on different sets of bases (roots) to generate different words. Example, the word "**un-teach-able**", has the prefix "**un-**" which can function as a separate affix in "**un-able**". The suffix, "able" can be affixed to the root, *present* to generate "**present-able**".

Theoretical Framework

This study is contextualized on Item and Process (IP) approach coined by Hocket (1954) and supported by Anderson (1992) and Aronoff (1994). IP is a morphological approach

that maps morphosyntactic (and semantic) information. IP falls under lexeme-based morphology which sees a word form as a result of operation (Word Formation Rule) as against Item and Arrangement (IA) which analyses word forms as arrangements of morphemes in sequence. The assumption of this approach is that a word formation rule applies to a root paired with a set of morphosyntactic features, and modifies its phonological form (Bonet, 2008). The four basic aspects of IP include: it allows for a clear distinction to be drawn between what is morphological and what is syntactic in word formation; it assumes that only three basic processes are involved in word formation: compounding, derivation, and conversion. Each of them is morphosyntactic because of the two major subcases: a morphological process resulting in stem forms, and a syntactic process resulting in word forms. It construes all processes involved in word formation in a unified way and it interlinks with a specific Word and Paradigm Model (Lieb 1963, cited in Mengerti, 2010). Word forms, from this approach, result through application of rules that alter a stem in order to produce a new word. This approach is relevant to this study because circumfixes, the thrust of this study, are in some languages derivational, while in others inflectional, applying to roots to form new words. The derivative obeys the word formation rules; and phonologically, it's a single piece, not a composite of two morphs. In English, for example, a word like **un-believ-able** would be represented thus:

$$\left\{ \begin{array}{l} + \text{prefix} \\ + \text{verb}(\text{root}) \\ + \text{suffix} \end{array} \right\}$$

The circumfix 'un...able' is hosted by the verb root 'believe' which loses the final vowel sound /e/ before affixation. 'Unbelievable' is considered a single derivative and not a composite of the negative affix (un-), the verb root (believe) and adjectival suffix (able). Mbah (2012) observes that the type of stem or root that may host the circumfix varies from language to language.

Circumfixation in other Languages

Circumfixation as a morphological process has been highlighted in many languages of the world to achieve inflectional and derivational functions. Researchers observe that circumfixes have different grammatical functions (Murasic, 2003; Mbah, 2012).

In German, the circumfix

'ge-...-ne' is used to form past participle of regular verbs, example:

sung 'sing'	ge-sung-en	'sang'
drunk drink	ge-drunk-en	'drunk'

In Dutch, the frame *ge ...te* which encircles noun stems is used as a plural marker, as in:

berg 'mountain' ge-berg-te 'mountains'
been 'bone' ge-been-te 'bones'

In Degema, an Edoid language spoken in Southeastern Nigeria, according to Kari (2015), the circumfixal frames *o...(a)m*, *o....m*, *o....ə* and *ɔ....ám* are agentive affixes used in deriving agentive nominals from verb bases, example:

mene 'do' **o**-me né-**m** 'doer'
kɛl 'begin' ɔ-kɛ **lám** 'beginner'
kotú 'call' **o**-kotú-**əm** 'caller'

In Chickasaw, a Muskogean language spoken in Oklahoma, as reported by Fromkin, Rodman and Hyams (2007, p.81), negatives are formed by affixing the frame *ik-...-o* to the base.

palli 'it is hot' ik-pall-o 'it isn't hot'
tiwwi 'he opens' ik-tiww-o 'he (it) doesn't open'

In Chickasaw, as exemplified above, the final vowel of the affirmative is dropped before the affixation. The last segment of the discontinuous affix, /o/ is a rounded vowel, while the elided vowel is unrounded /i/. This may have informed the elision.

In Malay-Indonesia, the circumfixal frame *se-...-nya* derives an adverb from an adjective, example:

benar 'true' se-benar-nya 'actually'

and the circumfix *ke-...-an* derives nouns from adjectives, example:

baik 'good, kind' ke-baik-an 'kindness'

The examples above reveal that circumfixes in Malay-Indonesia are derivational; they change the word class of the base they are attached to, resulting in the creation of a new word. In other languages like Athabaskan (Dene), circumfixes are inflectional, expressing possession. The circumfixes, *se-...-é*, *ne-...-é*, and *me-...-é* are used in the following examples to indicate possessive pronoun:

mbeh 'knife' se-mbeh-é 'my knife'
tl'uh 'rope' ne-tl'uh-é 'your rope'
li 'dog' me-li-é 'his/her dog'

The phenomenon of circumfixation is observable and productive in Igbo language (Anagbogu, 1990; Anagbogu, Mbah and Eme, 2010; Ihezuonu, 2011 and Mbah, 2012). Anagbogu et al (2010) posit that circumfixation in Igbo has a head, which is the initial part of the discontinuous affix. The head, as they further recorded, does not change its morphological shape when it changes its position or when the host changes. The other part of the discontinuous circumfix may change but it is subject to the vowel harmony. The circumfix *à...-m* derives gerundives from the verbs 'to be' and 'to do'. Examples:

dí 'be' à-di-m 'being'

zà 'sweep' à-zà-m 'sweeping'

Mbah (2012) observes that some Igbo roots with inherent high tones change to low tones when the circumfix is affixed to them. Example:

dí 'be' á-dì-m 'am I...?'

gá 'go' à-gà-m 'will... I?'

The resultant change in tone of the roots after circumfixation gives rise to meaning change of the roots from aspects to interrogative constructions.

Tagalog is another language that creates collective nouns through the process of circumfixation (Liebner, 2017). The circumfix '*ka---an*' is used to create such nouns, as shown below:

intsik -Chinese person ka-intsik-an 'the Chinese'

pulo -'island' ka-pulu-an 'archipelago'

Tagalog 'Tagalog person' ka-Tagalog-an 'the Tagalogs'

Tagalog has a circumfix that doubles as a verbal phrase affix and a verbal object focus circumfix. Examples:

ma-bilis-an -required speed

ma-limut-an 'forget'

ma-tanda-an - 'remember'

Murasic (2003) observes that both parts of the Tagalog circumfix are separate morphemes (or are at least similar in form to separate morphemes). Both are derivational affixes used to form adjectives from nouns: e.g. ma-bigat "heavy" from bigat "weight", and putik-an "virtually covered with mud" from putik "mud". The examples above reveal the peculiar property of circumfixes in Tagalog. The individual parts of the circumfix do not

participate in a morphological operation with the same stem, although the parts may exist individually. The meaning of a circumfix in Tagalog is non-compositional (Murasic, 2003). This implies that the two parts are used as separate morphemes with different meanings and on different set of words. From the review above, circumfixes, morphologically have distinctive characteristics based on the language in question. While they are derivational affixes in some languages, they are extensional or even inflectional in others.

The objectives of this study, therefore, include: To highlight the spread of circumfixes in English and establish their distinctive characteristics in the language; that is: what are the alignment constraints of circumfixes in English? And on what stems can these affixes apply?.

Methodology:

The study adopts a descriptive research method to highlight the spread of circumfixes in English. Descriptive research method is preferred for this study because it enables a researcher to gather in-depth information that may be either quantitative (surveys) or qualitative (observations or case studies) in an unchanged environment. Data were generated through recorded verbal conversations of English speakers and from already existing works on circumfixes in the extant literature, and annotated using descriptive method.

DATA PRESENTATION

Circumfixation in English

Circumfixation is a very common productive affixational process in English as in many languages of the world where it is illuminated. It is one of the word formation processes through which nouns are formed from adjectives using the frame "*il----*ity" and "*im---*ity", as illustrated in table 1 below:

Table 1

Root	Word class	Circumfixation	Gloss	Word class
Legal	Adjective	Il-legal-ity	Illegality	Noun
Liberal	Adjective	Il-liberal-ity	Illiberality	Noun
Mortal	Adjective	Im-mortal-ity	Immortality	Noun
Mobile	Adjective	Im-mobil-ity	Immobility	Noun
Moral	Adjective	Im-moral-ity	Immorality	Noun
Mature	Adjective	Im-matur-ity	Immaturity	Noun

The last vowel of some roots (mobile, mature) are elided before circumfixation as observed in other languages like Chickasaw, a Muskogean language spoken in Oklahoma (Fromkin, 2003).

The circumfix, "*un---able*" and "*im---able*" form adjectives from verbs and nouns as shown in the table below:

Table 2

Roots	Word class	Circumfixation	Gloss	Word class
Imagine	verb	un-imagin-able	unimaginable	adjective
Accept	verb	un-accept-able	unacceptable	adjective
Question	verb/noun	un-question-able	unquestionable	adjective
Account	verb	un-account-able	unaccountable	adjective
Attain	verb	un-attain-able	unattainable	adjective
Bear	verb	un-bear-able	unbearable	adjective
Divide	verb	un-divid-able	undividable	adjective
Reason	verb/noun	un-reason-able	unreasonable	adjective
Practice	verb/noun	im-practic-able	impracticable	adjective
Probe	verb/noun	im-prob-able	improbable	adjective
Perturb	verb	im-perturb-able	imperturbable	adjective
Surmount	verb	in-surmount-able	insurmountable	adjective

The table above reveals that some roots (divide, imagine, practice, probe) elide the final vowel sounds before circumfixation applies on them.

Adverbs are formed from adjectives and nouns through circumfixation, using the frames "*in---ly*" and "*un---ly*". Table 3 below exemplifies the affixation:

Table 3

Stem	Word class	Circumfixation	Gloss	Word class
Advisable	adjective	in-advisab-ly	inadvisably	adverb
Correct	adjective	in-correct-ly	incorrectly	adverb
Adequate	adjective	in-adequate-ly	inadequately	adverb
Effective	adjective	in-effective-ly	ineffectively	adverb
Different	adjective	in-different-ly	indifferently	adverb

Exact	adjective	in-exact-ly	inexactly	adverb
Coherent	adjective	in-coherent-ly	incoherently	adverb
Common	adjective	un-common-ly	uncommonly	adverb
Changeable	adjective	un-changeab-ly	unchangeably	adverb
Equal	adjective	un-equal-ly	unequally	adverb
Expected	adjective	un-expected-ly	unexpectedly	adverb
Faithful	adjective	un-faithful-ly	unfaithfully	adverb
Fortunate	adjective	un-fortunate-ly	unfortunately	adverb
Friend	adjective/noun	un-friend-ly	unfriendly	adverb
Gain	noun	un-gain-ly	ungainly	adverb

Table 3 above shows that the last vowel sound of the base "advisable" is elided before circumfixation is applied on it. It is not unusual for languages to form nouns from verbs and adjectives through derivational processes.

Table 4 below reveals instances where English nouns are derived from verbs and adjectives through circumfixation.

Table 4

Roots	Word class	Circumfixation	Gloss	Word class
Approve	verb	dis-approv-al	disapproval	noun
Locate	verb	dis-locat-ion	dislocation	noun
Able	adjective	dis-able-ment	disablement	noun
Courage	adjective	dis-courage-ment	discouragement	noun
Agree	verb	dis-agree-ment	disagreement	noun
Appoint	verb	dis-appoint-ment	disappointment	noun
Annul	verb	dis-annul-ment	disannulment	noun
Approbate	verb	dis-approbat-ion	disapprobation	noun
Arrange	verb	dis-arrange-ment	disarrangement	noun
Commend	verb	dis-commend-ation	discommendation	noun
Connect	verb	dis-connect-ion	disconnection	noun
Act	Verb/noun	counter-act-ion	counteraction	noun
Move	verb	counter-move-ment	countermovement	noun
Accuse	verb	counter-accus-ation	counteraccusation	noun

From the table above, some roots (approve, locate, approbate and accuse) elide their final vowel sounds before taking on circumfixes. The circumfixes involved in the derivation include: *dis...al*, *dis...ion/tion/ation*, *dis...ment*, *counter...ion/ation*, and *counter...ment*.

In English, as illustrated below, nouns are also easily derived from adjectives using the circumfixal frames "*in---ness*", "*im---ion*", and "*un---ness*" as shown in table 5 below:

Table 5

Roots	Word class	Circumfixation	Gloss	Word class
Adequate	adjective	in-adequate-ness	inadequateness	noun
Correct	adjective	in-correct-ness	incorrectness	noun
Complete	adjective	in-complete-ness	incompleteness	noun
Perfect	adjective	im-perfect-ion	imperfection	noun
Considerate	adjective	in-considerat-ion	inconsideration	noun
Appropriate	adjective	in-appropriate-ness	inappropriateness	noun
Apt	adjective	in-apt-ness	Inaptness	noun
Fit	adjective	un-fit-ness	unfitness	noun
Cautious	adjective	in-cautious-ness	incautiousness	noun

From the tale above, the root "considerate" elides the final vowel sound /e/ before the last segment of the circumfix is applied on it.

These are other instances where nouns are derived from other nouns through circumfixation. In this case, the circumfixes solely extend the meaning of the root/stem but do not alter the word class of the stems they are attached to, e.g.

Table 6

Roots	Word class	Circumfixation	Gloss	Word class
Human	noun	in-human-ity	inhumanity	noun
Hospital	noun	in-hospital-ity	inhospitality	noun
Prison	noun	im-prison-ment	imprisonment	noun
Sound	noun	un-sound-ness	unsoundness	noun
Righteous	noun	un-righteous-ness	unrighteousness	noun
Health	noun	un-healthi-ness	unhealthiness	noun
Illusion	noun	dis-illusion-ment	disillusionment	noun
Figure	noun	dis-figure-ment	disfigurement	noun
Witch	noun	be-witch-ment	bewitchment	noun

Table 6 above reveals the addition of a vowel sound /i/ to the root (health) before the affixation of the last segment of the circumfix. In other languages where circumfixation is highlighted, its application results in addition and subtraction of the final vowel of the root (s) as equally illustrated above.

Discussion

The generalizations that circumfixes are not morphologically realized or widespread are essentially based on the traditional view of the phenomenon. Reviewing this generalization from the generative morphological perspectives, with particular reference to Binary Branching Hypothesis (BBH), formulated by Scalise (1986), which sees word structure as binary irrespective of the complexity of the morphologically-derived word, the two parts of the English circumfix used in deriving nouns from adjectives, adjectives from verbs, adverbs from adjectives, and nouns from nouns as exemplified in Tables 1-3 above, do not represent the exact cases of prefixational-suffixational derivation found in languages like German.

This argument is in keeping with Kari (2015) who observes that circumfixes in Degema do not strictly conform to the likes of German circumfixes. Based on BBH, the process which generates nouns from adjectives, i.e., circumfixation of "*il---ity*" and "*im---ity*" on roots (e.g. legal to illegality and mortal to immortality, respectively) could be assumed to derive in two stages. The first stage involving the attachment of the suffixes to the stem and the second stage involving the attachment of the prefixes to the stem to generate the derived form. Secondly, there is a simultaneous process of prefixation and suffixation.

Although the two parts of the circumfixes used in deriving new words in English could, in other circumstances, be used either independently or collectively in generating other words, they constitute a single morphological unit and express a single meaning on the stems they are attached to. Unlike in other languages where the use of one part of the circumfix could lead to ungrammaticality, in English, such use does not alter the grammaticality of most stems (e.g. legal - legal-ity). In some roots/bases, circumfixation induces the elision of the last vowel sounds as evident in languages like Chickasaw, a Muskogean language spoken in Oklahoma, e.g.

palli 'it is hot' ik-pall-o 'it isn't hot'

imagine un-imagin-able (English)

In other environments, it induces addition of another vowel or change of a short front vowel to another short monophthongal vowel. E.g.

health un-healthi-ness

accuse

counter-accus-ation (/e/ changes to /a/

Following from tables 1 to 6, circumfixes are derivational and class-changing in English. Although both parts of the English circumfix are separate morphemes in English, a composite application of the discontinuous morpheme, as found in other languages of the world, qualify them to be called circumfixes. This observation aligns with Murasic (2003), who recorded that both parts of the Tagalog circumfix are separate morphemes. Circumfixes are also category-preserving derivational affixes as shown in table 6, where the process of circumfixation results in the creation of new words that belong to the same syntactic class.

Conclusion

The study, which aimed to highlight the spread of circumfixes in English and their distinctive characteristics, reveals that circumfixation, as in many other languages of the world, is a common phenomenon. The two segments of the English circumfix derive nouns from adjectives, nouns from verbs, adverbs from adjectives, adjectives from verbs, and nouns from other nouns. This affixational process, from the findings above, is derivational, class-changing and category-preserving. The findings further reveal that they share some of the distinctive characteristics as evident in languages like German, and Chickasaw, a Muskogean language spoken in Oklahoma as well as many other languages of the world (where the roots add or subtract linguistic elements before circumfixes are applied on them).

The findings also show that circumfixes apply on content (lexical) words and not grammatical words, performing, mostly, derivational roles unlike in Dutch, where they perform inflectional functions of pluralizing the nouns, e.g. *berg*-‘mountain and *gebergte*-‘mountains’. Reviewing the earlier generalizations about nonexistence and non-productivity of circumfixes, this study concludes that such assertions were based on the traditional view of the phenomenon and not from the Binary Branching Hypothesis.

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